

# New regulations for the prudential supervision of banks

Circular 263 of 27 December 2006

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**Revisions** (1):

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<sup>(1)</sup> List of revised pages.

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# TITLE I (common provisions)

# TITLE I

# Chapter 1

# **COMMON PROVISIONS**

TITLE I - Chapter 1

#### **COMMON PROVISIONS**

PART 1

#### 1. Overview and the principles underlying the new supervisory regulations

**1.1** This document lays down the new supervisory regulations governing banks and banking groups, which have been comprehensively revised following the changes that have been introduced in international regulations<sup>1</sup> to take account of developments in the risk management methodologies adopted by banks and the new policies and criteria underpinning supervisory activity.

The regulations – which take effect as from 1 January  $2007^2$  – are based on the amendments made to the 1993 Banking Law with a decree law approved by

<sup>&</sup>lt;sup>1</sup> More specifically, these are contained in *International Convergence of Capital Measurement and Capital Standards, A Revised Framework. Comprehensive Version*, published by the Basel Committee on Banking Supervision June 2006 (the "New Basel Capital Accord", or "Basel II"), and the Directives 2006/48/EC and 2006/49/EC of 14 June 2006 (published in the *Official Journal of the European Union* no. L177 of 30 June 2006), regarding the taking up and pursuit of the business of credit institutions (CRD) and the capital adequacy of investment firms and credit institutions (CAD).

<sup>&</sup>lt;sup>2</sup> Banks and banking groups that, exercising the option envisaged in Community regulations, elect to continue to observe (until 1 January 2008) the previous supervisory rules for credit risk shall continue to apply the rules governing solvency ratios, market risks, the total capital requirement and risk concentration set out in the *Istruzioni di Vigilanza per le banche* (Bank of Italy Circular 229 of 21 April 1999). Accordingly, the new provisions contained in this document shall not apply to such entities for that period, with the exception of those regarding supervisory capital (Title I, Chapter 2), which shall be applicable immediately. As a result, Title IV, Chapter 1, of Circular 229 is repealed.

Applications for authorization to use an internal risk measurement system for calculating capital requirements for market risks submitted in 2007 by banks and banking groups that elect the option mentioned above to continue to apply the previous rules will be assessed on the basis of the regulations governing market risks in this document (Title II, Chapter 4).

The banks and banking groups that intend to apply the new supervisory rules, adopting the foundation IRB approach for calculating the capital requirement for credit risk, may continue to apply (for 2007 only) the previous rules governing credit risk for certain portfolios in accordance with Title II, Chapter 1, Part 2, Section VI. The capital requirement for operational risk for these banks and banking groups shall be reduced by the percentage representing the ratio between the value of their exposures subject to the previous method for calculating the capital requirement for credit risk and the total value of their exposures, in accordance with methods to be established by the Bank of Italy.

the Council of Ministers on 22 December 2006<sup>3</sup> and the criteria set out in the decree adopted as a matter of urgency on 27 December 2006 by Minister for the Economy and Finance as Chairman of the Interministerial Committee for Credit and Savings (the Credit Committee), acting on a proposal of the Bank of Italy.

The new supervisory framework is founded on three "pillars". The first introduces capital requirements to support the risks that characterize banking and financial activity (credit risk, counterparty risk, market risk and operational risk). To this end, the regulations provide for alternative methods for calculating capital requirements featuring different levels of complexity in the approaches taken to measuring risk and in organizational and control requirements. The second pillar requires banks to adopt a strategy and control process for assessing current and prospective capital adequacy, charging supervisory authorities with the task of ascertaining the reliability and consistency of results and of adopting, where necessary, appropriate corrective measures. The third pillar introduces disclosure requirements concerning capital adequacy, risk exposure and the general features of the related risk management and control systems.

The new regulatory approach, based on a revised system of rules and incentives, enables more effective pursuit of the objectives of prudential supervision, set out in Article 5 of the 1993 Banking Law. It provides for the precise measurement of a broader range of risks and ensures that capital requirements are linked more closely to the actual risk exposure of each intermediary. Moreover, it provides incentives for banks to improve their management practices and risk measurement techniques, including possible reductions in the amount of capital they are required to hold. The new system also ensures a more level competitive playing field, with the expanded harmonization of activities and techniques, and enhances the role of market discipline with the introduction of specific disclosure requirements.

The improved regulatory framework also offers potential benefits for the persons indirectly affected by it (enterprises, individual savers, investors and customers) thanks to the stimulus it provides to increasing efficiency and competition in the banking sector.

The framework consists of a modular system of rules for calculating capital requirements that incorporates the best practices developed by banks in risk management methodologies. In implementation of the <u>principle of proportionality</u>, which informs much of the new system, the regulations take account of the diversity of banks in terms of size, complexity and other features, laying down different rules in certain areas and, more generally, encouraging the application of the regulations in a manner consistent with the specific characteristics of each intermediary. Where possible, they also seek to avoid an excessively prescriptive approach, establishing general principles supplemented by guidelines for application and recommendations on acceptable practices in widespread use by banks. The regulatory framework also adopts a <u>gradual</u> approach: each intermediary can adopt different methods for each type of risk and gradually

<sup>&</sup>lt;sup>3</sup> Decree Law 297 was published in the *Gazzetta Ufficiale della Repubblica Italiana* no. 299 of 27 December 2006.

implement more advanced methodologies and processes over time. In general, the adoption of these principles and criteria ensures flexibility in application and reduces the compliance burden.

Part 3 of this Chapter, which contains the simplest and most readily implemented regulatory options, is consistent with the aims delineated above. It provides a cross-cutting exposition of the basic provisions concerning the three pillars with the aim of providing a comprehensive regulatory framework for banks – most likely smaller institutions with less complex organizational structures – that intend to adopt the less sophisticated methodologies to comply with regulatory requirements. Part 3 offers simply a survey of methodologies and does not establish any restrictions on banks' freedom of choice.

The regulatory framework strengthens the link between capital requirements and organizational aspects, exploiting synergies in the management of banks and in supervisory assessments and actions. Banks' governing bodies play a key role in risk management and control. They are required, inter alia, to develop risk management strategies and policies, verify their continuing effectiveness and efficiency, specify the duties and responsibilities of the various corporate functions and units and, more generally, ensure that all the risks to which banks could be exposed are adequately covered. The role of the governing bodies is examined in full in this Chapter (Part 4) to ensure that it is treated consistently and comprehensively and to enhance bank officers' involvement in and awareness of the issues associated with risk management and control. The chapters devoted to each type of risk examine the organizational and control arrangements that the banks must adopt. In this regard, the specific issues associated with each type of risk take on greater importance. These arrangements form part of the more general regulation of banks' organization and internal control systems, which seeks to ensure that banks are managed efficiently, effectively and with integrity.<sup>4</sup> More stringent requirements are envisaged for the adoption of internal risk assessment systems for calculating capital requirements.<sup>5</sup> In these systems, the integration of capital requirements and management arrangements is even more pronounced: the effective use of such systems in bank operations is in fact a condition for their recognition for supervisory capital purposes (the use test).

**1.2** The <u>scope of application</u> of the regulations (Part 2 of this Chapter), without prejudice to the regulations governing banks that do not belong to a group, is primarily on a consolidated basis, as the rules governing individual members of a group<sup>6</sup> have been reduced in order to ensure the neutrality of supervisory

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<sup>&</sup>lt;sup>4</sup> See the *Istruzioni di Vigilanza per le banche* contained in Circular 229, Title IV, Chapter 11, which govern matters not regulated by these provisions.

<sup>&</sup>lt;sup>5</sup> Inter alia, banks must establish a unit devoted to the development of the system, an internal validation process to assess its efficiency and effectiveness and a programme of periodic assessments conducted by their internal audit units to ascertain its continuing compliance with regulations.

<sup>&</sup>lt;sup>6</sup> Following the amendments to <u>the notion of banking group</u> contain in the 1993 Banking Law (Articles 59 ff.), the decisive factor in the application of supervision on a consolidated basis is the presence of at least one bank in a group whose parent is a financial company. The implementing measures (resolutions of the Credit Committee and measures of the Bank of Italy) will specify the criteria for determining the configuration of a group and identifying its members, partly with a view to ensuring that the same person does not act as both a banking group parent undertaking and a parent undertaking of a financial conglomerate.

regulations with respect to the organizational choices of banks, while capital requirements have been lowered for the individual members of the group. In order to take account of the integration of banking systems in different countries, especially in Europe, Community regulations establish rules governing coordination and cooperation between supervisory authorities<sup>7</sup> in order to increase the effectiveness of controls and reduce the compliance burden for the persons subject to supervision. In line with these provisions and the policies established at the international level, the Bank of Italy shall enter into agreements and cooperate with the other competent supervisory authorities of the European Union with regard to cross-border groups.<sup>8</sup> Coordination efforts also include the establishment of "operational networks" of supervisors to specify the duties and roles of each authority.

As regards the <u>authorization of internal systems for all advanced methods</u>, the procedure governed by Part 5 of this Chapter provides for a joint decision by the supervisory authorities involved. If they should fail to reach agreement, the decision adopted by the competent authority for supervision on a consolidated basis shall be binding for the entire group. For the purposes of the supervisory review process (the second pillar), responsibility continues to lie with the supervisory authorities of the individual countries, which nevertheless shall operate within the general provisions governing coordination and cooperation between the authorities.

<u>Supervisory capital</u> (Title I, Chapter 2) is the primary tool for managing the risks associated with banking and the main reference parameter for the prudential assessments of the supervisory authorities. The regulations establish the methods to be used in calculating supervisory capital and the criteria and restrictions on calculating the elements of which capital is composed. They also expand the scope for the use of innovative capital instruments. In line with developments in Community regulations, including in the field of financial conglomerates, the regulations also envisage the deduction of banks' holdings in insurance undertakings from supervisory capital. Specific provisions ("prudential filters") have been established to safeguard the quality of supervisory capital and attenuate the potential volatility associated with the adoption of the new international accounting standards (IFRS/IAS). A number of adjustments apply solely to banks that adopt the internal ratings-based (IRB) approach for calculating capital requirements for credit risk.

Banks may choose between two methodologies for calculating their capital requirement for <u>credit risk</u> (Title II, Chapter 1): the standardized approach, which is a development of the system established in the 1988 Capital Accord, and the IRB approach, which is in turn breaks down into a foundation approach and an advanced approach. The sensitivity of the standardized approach to credit risk is enhanced by means of increased segmentation of exposures and the use of ratings issued by export credit agencies (ECAs) or specialized external credit assessment institutions (ECAIs) recognised for this purpose by the supervisory authorities.

<sup>&</sup>lt;sup>7</sup> See Articles 131 and 132 of Directive 2006/48/EC.

<sup>&</sup>lt;sup>8</sup> See Articles 7, paragraph 10, and 69 of the 1993 Banking Law.

The more favourable regulatory treatment of retail exposures, which captures the effective risk of this portfolio, is especially important for economies in which small and medium-sized enterprises are a major presence. The regulations also define past-due exposures, which should prompt banks to improve their loan management practices.

The primary change in the calculation of capital requirements for credit risk is the introduction of the IRB approaches, in which the risk weightings are a function of the banks' internal assessments of their borrowers (or, in certain cases, transactions); under the advanced IRB approach the banks calculate a larger number of their own risk parameters. The rules lay down the essential notions and criteria that the banks must adopt in developing their rating systems (risk components, default, asset classes, risk weighting rules) and establish the organizational and quantitative requirements that the banks must comply with for recognition of their methods for supervisory capital purposes. The former concern the rules governing organization and controls, the internal validation of rating systems, the characteristics of rating systems (e.g. replicability, integrity, and consistency), their use in operations (use test), information systems and data flows. The primary quantitative requirements regard the structure of rating systems, the determination of risk parameters, stress tests and the use of models developed by third-party vendors. The use of IRB approaches for the purposes of calculating capital requirements is subject to approval by supervisory authorities.

The new framework also establishes comprehensive rules governing credit risk mitigation (CRM) and securitizations (Title II, Chapter 2). The scope for using CRM techniques for supervisory capital purposes (for example, on-balance sheet netting of positions) has been expanded, while eligibility requirements (legal, economic and organizational) and methods for calculating the riskmitigating effect have been specified in greater detail. The provisions regarding CRM techniques apply to all banks. Those that adopt the advanced IRB approach benefit from a broader range of eligible guarantees and greater flexibility in calculating the risk reduction. The requirements governing the use of guarantees are divided into general provisions that seek to ensure their legal certainty and effectiveness and specific measures for the individual forms of CRM.

The framework addresses issues concerning both traditional and synthetic securitizations, regulating the effects for the originating banks, especially as regards the exclusion of securitized assets from the calculation of capital requirements and the capital treatment of exposures acquired by investing banks. A number of methods for calculating the risk-weighted amount of securitization positions are envisaged, depending on the approach that the bank would have adopted in calculating credit risk for the securitized assets.

<u>Counterparty risk and market risk</u> (Title II, Chapters 3 and 4) are also subject to specific capital requirements, which can be calculated with a number of methods. The risk that the counterparty in a transaction involving financial instruments should default before settling the transaction can be considered a specific form of credit risk. The regulations focus on rules for quantifying the amount of the exposure while referring to those governing credit risk for the determination of risk weightings. The framework provides for the uniform treatment of counterparty risk regardless of the portfolio in which the exposures

have been classified (the banking or supervisory trading books). Banks may choose from among the mark-to-market method, the standardized method and, subject to authorization by the supervisory authorities, the expected positive exposure (EPE) method, for which specific organizational requirements have been established. For the purposes of reducing exposures, recognition of various types of contractual netting arrangements is permitted, subject to compliance with statutory requirements.

As regards market risks, the capital requirement is intended to cover losses incurred in operations on markets for financial instruments, currencies and commodities. These can be calculated using a standardised approach or an internal models approach, subject to compliance with organizational and quantitative requirements and authorization by the supervisory authorities. The framework regulates the treatment of the different types of risk for the supervisory trading book (position risk, settlement risk and concentration risk) and the full bank balance sheet (foreign exchange risk and commodity risk). The standardized method adopts a building block approach to calculating the requirement. Internal models are based on the daily monitoring of exposures, calculated using statistical methods (Value at Risk), supplemented by other forms of risk measurement and control. The most significant changes in the regulations governing market risks regard the establishment of specific organizational requirements for managing the supervisory trading book, the refinement of methods for calculating capital requirements and the treatment of settlement risk, with the establishment of incentives for adopting delivery-versus-payment settlement procedures.

The regulations also establish a capital requirement for operational risk (Title II, Chapter 5) in order to support banks' increased exposure to this form of risk, to avoid competitive disparities among banks with different operational specializations and strengthen their management and control arrangements. The framework envisages three methods for calculating the requirement. Under the Basic Indicator Approach (BIA), the requirement is calculated by multiplying an indicator of a bank's volume of business, gross income, by a specified factor. Under the Standardized Approach, the separate regulatory factor is applied for each of eight lines of business. Under the Advanced Measurement Approach (AMA), the amount of the requirement is determined using models based on operational loss data and other information gathered and processed by the bank. Banks are required to satisfy access thresholds and a range of qualifying criteria in order to adopt the Standardized and Advanced Measurement Approaches. For the AMA, the requirements concern both the management and measurement systems. While more complex, the advanced methods permit banks to reduce the capital requirement in relation to provisions made, correlation estimates, and the use of risk mitigation techniques (insurance). These methods also provide the greatest benefits in terms of preventing and mitigating operational risk. Recognition of AMAs for supervisory capital purposes is subject to authorization by the supervisory authorities. The combined use of more than one method is permitted in the circumstances and under the conditions set out in the regulations.

<u>The total capital requirement</u> (Title II, Chapter 6) is the sum of the individual requirements for the individual risk categories, as well as those in respect of real estate and holdings acquired in debt collection (the "building block" approach). If the capital requirement is met on a consolidated basis, banks belonging to a

banking group may benefit from a reduction of 25% in their individual total capital requirement.<sup>9</sup>

The regulations governing the "<u>second pillar</u>" (Title III) require banks to implement processes and tools (the internal capital adequacy assessment process, ICAAP) to assess the level of internal capital adequate to support each type of risk, including those not captured by the total capital requirement (first pillar), within the scope of an assessment of the bank's current and future exposure, taking account of its strategies and developments in its business environment. The framework specifies the stages of the process, the frequency of assessments and the main risks to be evaluated, specifying the methods to be used for certain of these. In application of the principle of proportionality, the banks are divided into three classes that reflect, in general, differences in size and operational complexity. The banks' governing bodies are responsible for the ICAAP.

On their part, the supervisory authorities are responsible for reviewing the internal capital assessment process, ascertaining the consistency of the results, forming an overall assessment of the bank and, where necessary, taking appropriate remedial action (supervisory review and evaluation process, SREP). This process is conducted through interaction with the banks and the use of the supervisor's system for analysing and assessing the banks subject to its supervision. The dialogue with banks enables supervisors to acquire a more extensive understanding of the ICAAP and the methodological hypotheses underpinning it, while giving banks the opportunity to describe the rationale supporting their capital adequacy assessments. Where necessary, the supervisory authorities can require the banks to adopt corrective measures, in the form of organisational improvements or additional capital, indicating the measures most appropriate to the circumstances from among the range of those available.

The "third pillar" of the capital adequacy framework is market discipline, fostered through the establishment of specific <u>disclosure requirements</u> to enable market participants to develop a more accurate assessment of the capital adequacy and risk exposures of banks (Title IV). The Community regulations have been transposed with the preparation of tabular classifications of the quantitative and qualitative information that banks must disclose. This approach increases the transparency and comparability of information, limits the burden of identifying the information to be disclosed and ensures greater competitive equality. On the basis of the principle of proportionality, the level of detail of the disclosures shall be commensurate with the organizational complexity of the banks and the type of business they engage in. Certain disclosures represent eligibility requirements for the adoption of advanced methods and for recognition of CRM techniques for capital adequacy purposes. The rules also specify the manner and frequency with which the disclosures are to be made, any related derogations as well as the controls to be carried out to validate the disclosures.

<sup>&</sup>lt;sup>9</sup> For banks and banking groups using the IRB approach and AMAs, between 2007 and 2009 the sum of the capital requirements for credit risk, counterparty risk, market risk and operational risk may not be less than specified percentages (the capital floor) of the capital requirement as calculated with the rules set out in Circular 229 (Basel I).

The regulations governing <u>risk concentration</u> (Title V) seek to limit the threat to bank stability associated with loan exposures that are large relative to supervisory capital. The rules establish restrictions on the size of exposures to individual borrowers and the overall level of large exposures. The changes mainly regard the quantification of the exposures to be carried out using the standardized approach for calculating the capital requirement for credit risk and the manner in which CRM techniques may be used.

**1.3** The development of the regulatory framework took account of best practices and standards at the international level, with special regard to the guidelines established by the Basel Committee on Banking Supervision and the Committee of European Banking Supervisors (CEBS), as well as the findings of the extensive public consultation that preceded the issue of the new rules. The consultation made it possible to take account of the comments and proposals of market participants and other persons affected, ascertain the consistency and effectiveness of the regulations and develop regulatory approaches that reduce the compliance burden.

#### 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, which gives the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, permissible holdings, administrative and accounting procedures and internal control mechanisms, and disclosure;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:

- a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy

within six months of the submission of the application for authorisation;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 59, which, for the purposes of conducting supervision on a consolidated basis, defines the notions of "*control*", "*financial companies*" and "*instrumental companies*" and establishes the applicability of the provisions governing supervision on a consolidated basis to electronic money institutions;

• Article 60, which defines the composition of banking groups;

• Article 61, which specifies the characteristics of the parent undertaking of a banking group;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 66, which gives the Bank of Italy the power to require persons subject to supervision on a consolidated basis to transmit reports, figures and any other relevant information on a periodic or other basis;

• Article 67, paragraphs 1, 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy, the limitation of risk in its various forms, permissible holdings, administrative and accounting procedures and internal control mechanisms, and disclosure;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that permit the use by banking groups of:

- a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorisation;
companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

and:

- Decree 242633 issued by the Minister of the Treasury of 22 June 1993;
- the resolution of the Credit Committee of 12 January 1994 concerning the supervisory capital and solvency ratio of banks and banking groups (Articles 1 to 4);
- the resolution of the Credit Committee of 2 August 1996 and the Decree of the Minister for the Economy and Finance of 5 August 2004;
- the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

- Legislative Decree 87 of 27 January 1992 on the annual accounts and consolidated accounts of banks and other financial institutions;
- Legislative Decree 38 of 28 February 2005 on the exercise of the option envisaged in Article 5 of Regulation (EC) 1606/2002 on the application of international accounting standards;
- the international agreement *International Convergence of Capital Measurement and Capital Standards. A Revised Framework*, published by the Basel Committee for Banking Supervision in June 2006;
- the guidelines issued by the Committee of European Banking Supervisors.<sup>10</sup>

<sup>&</sup>lt;sup>10</sup> Committee of European Banking Supervisors, established with Commission Decision 2004/5/EC of 5 November 2003 (*Official Journal of the European Union* L 3 of 7 January 2004, pp. 28-29).

PART 2

# **SCOPE OF APPLICATION**

### SECTION I

### GENERAL PROVISIONS

# 1. Foreword

In compliance with Directives 2006/48/EC and 2006/49/EC, Italy's supervisory regulations differentiate the supervisory regime to which banks are subject on the basis of whether banks operate on a stand-alone basis or belong to groups of varying degrees of complexity.

The regulatory system is focused on the consolidated application of supervisory requirements at the group level, reducing the number of rules with which persons included in the scope of consolidation must comply at the same time. Other options permit the attenuation of requirements on the basis of membership in a group.

Banking groups are subject on a consolidated basis to the rules governing supervisory capital, the total capital requirement, the internal capital adequacy capital assessment and risk concentration. Similar rules are in place for Italian banks that do not belong to groups that hold, together with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial or instrumental companies. Compliance with disclosure requirements on the part of groups differs depending on whether they are controlled by an EU parent undertaking.

Italian banks belonging to banking groups must also comply, on an individual basis, with the rules governing supervisory capital, the total capital requirement and risk concentration. However, the total capital requirement for such banks is reduced by 25 per cent and risk concentration limits are less stringent than the ordinary limits.

The rules governing supervisory capital, the total capital requirement, internal capital assessment process and risk concentration shall be applied on an individual basis to Italian banks that do not belong to a banking group. Their compliance with disclosure requirements varies depending on whether they are controlled by a EU parent undertaking.

In harmony with Community regulations, the framework establishes new rules for the application on a consolidated basis of capital adequacy rules. Italian banks and parent undertakings that, in accordance with the definition in sub-Section 2, qualify as "reference undertakings" shall comply with capital adequacy

rules on a consolidated basis taking account of the persons controlled by the parent financial company having its registered office in another Member State.

The rules governing supervisory capital, the total capital requirement, the internal capital adequacy assessment and risk concentration shall apply, on a subconsolidated basis, to the banks and financial companies, other than the parent undertaking, that control banks or financial companies of non-Member States ("sub-consolidating members of the group").

The Italian branches of non-EC banks shall be subject to the same supervisory regulations as Italian banks that do not belong to a banking group. However, the Italian branches of banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy shall not be subject to the rules regarding total capital requirements, the internal capital adequacy assessment, disclosure and risk concentration.

# 2. Definitions

For the purposes of these regulations:

- "*parent undertaking*" shall be the Italian bank or the financial company having its registered office in Italy referred to in Article 61 of the 1993 Banking Law;
- "banking group" shall be the group of undertakings referred to in Article 60 of the 1993 Banking Law;
- "*EU parent credit institution*" shall mean a parent credit institution in a Member State other than Italy which is not a subsidiary of another bank or a financial company set up in any Member State;
- "*EU parent financial holding company*" shall mean a parent financial holding company in a Member State other than Italy which is not a subsidiary of a bank or another financial company set up in any Member State;
- "*EU parent undertaking*" shall mean:
  - the EU parent credit institution that controls an Italian bank or a parent undertaking;
  - the bank controlled by an EU parent financial holding company, where both have their registered office in the same Member State, or the EU parent financial holding company, where it is subject to the same supervision as banks, that control an Italian bank or parent undertaking;
  - the bank of a Member State other than Italy controlled directly by an EU parent financial holding company having its registered office in another Member State, where it is not subject to the same supervision as banks, that also controls an Italian bank or parent undertaking that are not a reference undertaking;

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- "reference undertaking" shall mean the Italian bank or parent undertaking controlled directly by an EU parent financial holding company that is not subject to the same supervision as banks, where such company also controls one or more banks having their registered office in Member States other than its home Member State and the balance sheet total of each of these banks is less than that of the subsidiary Italian bank or parent undertaking;
- "sub-consolidating members of the group" shall mean the Italian banks and financial companies belonging to banking groups, other than the parent undertaking, that control banking and financial companies having their registered office in a non-Member State.

For the purposes of these definitions, the provisions regarding banks shall also apply, insofar as they are compatible, to electronic money institutions as defined in Article 1, paragraph 2, subparagraph h-*bis*), of the 1993 Banking Law.

### SECTION II

# SUPERVISION ON AN INDIVIDUAL BASIS

### 1. Italian banks that do not belong to a banking group

Italian banks that do not belong to a banking group shall comply, on an individual basis, with the regulations governing the following:

- a) supervisory capital (see Title I Chapter 2);
- b) credit risk (see Title II Chapter 1);
- c) credit risk mitigation techniques and securitizations (see Title II Chapter 2);
- d) counterparty risk (see Title II Chapter 3);
- e) market risks (see Title II Chapter 4);
- f) operational risk (see Title II Chapter 5);
- g) calculation of total capital requirement (see Title II Chapter 6);
- h) supervisory review process (see Title III Chapter 1);
- i) disclosure (see Title IV Chapter 1);
- j) risk concentration (see Title V Chapter 1).

However, Italian banks not belonging to a banking group that are reference undertakings shall comply, on an individual basis, with the regulations listed in sub-section 2 below.

# 2. Italian banks belonging to a banking group

Italian banks belonging to a banking group shall comply, on an individual basis, with the regulations governing the following:

- a) supervisory capital (see Title I Chapter 2);
- b) credit risk (see Title II Chapter 1);
- c) credit risk mitigation techniques and securitizations (see Title II Chapter 2);
- d) counterparty risk (see Title II Chapter 3);
- e) market risks (see Title II Chapter 4);
- f) operational risk (see Title II Chapter 5);
- g) calculation of total capital requirement (see Title II Chapter 6);
- h) risk concentration (see Title V Chapter 1).

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Italian banks excluded from the scope of consolidation pursuant to Section III, sub-section 1, shall comply with the requirements established in sub-section 1 of this Section.

# 3. Italian branches of non-EC banks

The Italian branches of non-EC banks shall comply, on an individual basis, with the regulations governing the following:

- a) supervisory capital (see Title I Chapter 2);
- b) credit risk (see Title II Chapter 1);
- c) credit risk mitigation techniques and securitizations (see Title II Chapter 2);
- d) counterparty risk (see Title II Chapter 3);
- e) market risks (see Title II Chapter 4);
- f) operational risk (see Title II Chapter 5);
- g) calculation of total capital requirement (see Title II Chapter 6);
- h) supervisory review process (see Title III Chapter 1);
- i) disclosure (see Title IV Chapter 1);
- j) risk concentration (see Title V Chapter 1).

The branches of banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy shall not be subject to rules b) to j).<sup>11</sup>

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<sup>&</sup>lt;sup>11</sup> The exemption from rule g) does not regard capital requirements for exposures in respect of real estate and holdings acquired in debt collection (see *Istruzioni di Vigilanza per le banche*, Title IV, Chapter 10, Section II, sub-section 3 and Chapter 9, Section V, sub-section 2), which shall continue to apply to the Italian branches of non-EC banks.

### SECTION III

# SUPERVISION ON A CONSOLIDATED BASIS

### 1. Parent undertakings and reference undertakings

The parent undertakings of banking groups shall comply, on a consolidated basis, with the regulations governing the following:

- a) supervisory capital (see Title I Chapter 2);
- b) credit risk (see Title II Chapter 1);
- c) credit risk mitigation techniques and securitizations (see Title II Chapter 2);
- d) counterparty risk (see Title II Chapter 3);
- e) market risks (see Title II Chapter 4);
- f) operational risk (see Title II Chapter 5);
- g) calculation of total capital requirement (see Title II Chapter 6);
- h) supervisory review process (see Title III Chapter 1);
- i) disclosure (see Title IV Chapter 1);
- j) risk concentration (see Title V Chapter 1).

Reference undertakings shall also comply, on a consolidated basis, with the above regulations with regard to banking, financial and instrumental companies controlled by EU parent financial holding companies.

The above requirements shall apply, on a consolidated basis, to Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies.

The Bank of Italy may also apply, on a consolidated basis, these regulations to banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank.

Without prejudice to the provisions concerning individual risk categories, companies whose balance sheet total is less than the smaller of the following amounts may be excluded from the scope of consolidation:

- — 1 per cent of the balance sheet total (including guarantees issued, commitments to disburse funds and third-party securities on deposit) of the parent undertaking or the individual bank that owns the holding in the company;
- 10 million euro.

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Exclusion is not permitted when the total of the holdings in the companies specified in the two previous indents is five times greater than one of the above exemption thresholds.

# 2. Sub-consolidating members of the group

Sub-consolidating members of the group shall comply, on a consolidated basis, with the regulations governing the following:

- a) supervisory capital (see Title I Chapter 2);
- b) credit risk (see Title II Chapter 1);
- c) credit risk mitigation techniques and securitizations (see Title II Chapter 2);
- d) counterparty risk (see Title II Chapter 3);
- e) market risks (see Title II Chapter 4);
- f) operational risk (see Title II Chapter 5);
- g) calculation of total capital requirement (see Title II Chapter 6);
- h) supervisory review process (see Title III Chapter 1);
- i) risk concentration (see Title V Chapter 1).

### PART 3

### SIMPLIFIED METHODOLOGIES

The regulations set out in this document envisage a range of methods that the banks may use for calculating the capital requirement for credit risk, counterparty risk, market risks and operational risk. The complexity of these approaches varies in relation to a bank's capacity to manage risk.

Banks, especially those with smaller institutions or those with less complex operations, may adopt simplified methodologies for calculating capital requirements based on the standardized approaches provided for in the general regulatory framework. These simplified approaches are discussed briefly in this Part for the sole purpose of providing a coherent vision of the architecture of the framework. The applicable regulations are those provided for in the individual chapters to which reference is made below.

Banks may also adopt simplified approaches, making reference, *inter alia*, to a number of methodological recommendations proposed by the Bank of Italy, to comply with the requirements associated with their internal capital adequacy assessment within the framework of the supervisory review process (the second pillar).

### Credit risk

Banks may use the standardized approach (Title II, Chapter 1, Part 1), which provides for the subdivision of exposures into different classes ("portfolios"), depending on the nature of the counterparty or the technical characteristics of the exposure or the manner in which it is implemented, and the application of diversified risk weights to each portfolio.

Where banks do not intend to adopt the assessments of recognized rating agencies, they shall apply a risk weight of 100% to credit exposures, with the following exceptions:

- exposures to central governments and central banks of the Member States of the European Union denominated and funded in the domestic currency of those entities shall receive a risk weight of 0% (preferential risk weight);
- exposures to supervised institutions with an original maturity of three months or less shall receive a risk weight of 20%;
- exposures in the retail portfolio<sup>12</sup> shall receive a risk weight of 75%;

<sup>&</sup>lt;sup>12</sup> This class includes unsecured exposures that satisfy the following criteria:

a) the exposure is either to an individual person or persons, or to a small or medium-sized entity;

- exposures secured by mortgages on residential property and those in respect of leases of certain types of property shall receive a risk weight of 35%;
- exposures secured by mortgages on commercial property (property intended for use as offices, trade or other economic activity) and those in respect of leases of certain types of property shall receive a risk weight of 50%;
- the unsecured portion of past due positions shall receive a risk weight of 150% if value adjustments are less than 20% of the unsecured part of the exposure gross of value adjustments. The same risk weight shall apply to exposures to collective investment undertakings not subject to restrictions on the use of leverage (hedge funds).

### Credit risk mitigation techniques

Supervisory regulations permit the recognition for supervisory capital purposes of credit risk mitigation techniques (CRM; Title II, Chapter 2, Part 1) for all banks, regardless of the method chosen for calculating their capital requirement, albeit with a number of differences concerning the type of recognized techniques and the method for calculating the capital impact.

The various CRM techniques must satisfy specific and general eligibility requirements, which must be met at the time the guarantee is established and be maintained over its entire duration.

More specifically, banks may use simplified methods for both funded and unfunded credit protection arrangements. In both cases, in accordance with the "principle of substitution", the secured part of the exposure shall receive the risk weight applied to the instrument provided as credit protection or to the guarantor (Title II, Chapter 2, Part 1, Section III, sub-sections 1 and 2).

### **Securitizations**

Banks shall calculate the risk weighted exposure amount for securitization positions using a method that normally attributes a weight to the positions that depends on the rating assigned by a recognized rating agency (Title II, Chapter 2, Part 2, Section III, sub-section 2).

For the originator and sponsor, the risk weighted amount of all positions in a securitization may not exceed the weighted value of the securitized assets calculated as though they had not been securitized (the 'cap').

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b) the exposure to an individual customer (or group of connected customers) does not exceed 1% of the total exposure for the class;

c) the total amount owed to the bank (or banking group) by the customer (or group of connected customers), excluding exposures secured by residential property, does not exceed  $\in 1$  million. Past due positions shall be included in the calculation.

Exposures to unrated securitizations shall receive a risk weight of 1250%,<sup>13</sup> unless the bank knows the current composition of the securitized assets at all times. In this case, the exposures to securitizations other than those regarding the bank's first-loss position shall receive a risk weight equal to the weighted-average risk weight for the securitized exposures multiplied by a concentration ratio (the look-through approach).

# Counterparty risk

Specific provisions set out methodologies for calculating the value of exposures subject to counterparty risk:<sup>14</sup> 1) OTC financial and credit derivatives; 2) repurchase agreements in securities or commodities, securities or commodities lending or borrowing transactions and margin lending transactions (SFT transactions); 3) long settlement transactions (Title II, Chapter 3).

As regards exposures under points 1) and 3) banks may use the mark-tomarket method (Title II, Chapter 3, Section II, par. 5), which can be used to compute the market value of the bank's claim using an approach that approximates the cost that it would incur to find another counterparty willing to assume the contractual obligations of the original counterparty in the event of the latter's insolvency.

For repurchase transactions in securities or commodities, securities or commodities lending transactions and margin lending transactions (point 2) banks may use the calculation methods set out in the regulations governing credit risk mitigation techniques (Title II, Chapter 2, Part 1, Section III, sub-section 1, paragraph 2.2).

# Market risks

In order to support market risks (position risk, settlement risk and concentration risk in respect of the supervisory trading book; foreign exchange and position risk on commodities in respect of the entire balance sheet), banks may adopt a standardized method to calculated an overall capital requirement, which is obtained using a building-block approach, summing the capital requirements for the individual risks (Title II, Chapter 4, Part 2).

Position risk (Title II, Chapter 4, Part 2, Section II) has two components:

*a) general risk,* which is the risk of loss caused by a general adverse movement in the prices of financial instruments traded. For debt securities, this risk depends on an adverse variation in interest rates; for equities it regards a generally unfavourable movement in the market;

*b) specific risk*, which is the risk of loss caused by an adverse movement in the price of the financial instruments traded due to factors associated with the circumstances of the issuer.

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<sup>&</sup>lt;sup>13</sup> Alternatively, banks may deduct such exposures from supervisory capital.

<sup>&</sup>lt;sup>14</sup> The capital requirement is calculated using the counterparty weights in the rules governing credit risk.

Position risk and the associated capital requirements are calculated separately for:

- debt securities and other financial instruments whose prices depend on interest rates and creditworthiness, including credit derivatives;
- equity securities and other financial instruments whose prices depend on developments in the stock market;
- shares/units in collective investment undertakings (CIUs) and other financial instruments whose prices depend on movements in the value of CIUs.

Banks that are unable to measure and manage effectively the risks associated with financial instruments sensitive to multiple risk factors shall not engage in trading in such instruments.

The capital requirement for settlement risk is calculated for positions in the supervisory trading book that have not been settled after their due delivery dates (Title II, Chapter 4, Part 2, Section III).

The capital requirement for concentration risk (Title II, Chapter 4, Part 2, Section IV) regards positions in the supervisory trading book that cause the bank to exceed individual exposure limits established by the regulations governing risk concentration.

### **Operational risk**

Banks may calculate the capital charge for operational risk using the Basic Indicator Approach (BIA), under which the requirement is equal to 15% of an indicator of banks' volume of business (gross income) (Title II, Chapter 5, Part 2, Section I).

## Supervisory review process

The internal capital adequacy assessment process (ICAAP) must be conducted by all banks regardless of the approach used for calculating capital requirements. The steps that banks must take differ depending on their size and the complexity of their operations, which are broken down into three classes. Smaller banks that use standardized methods for calculating capital requirements may follow the instructions for class 3 (Title III, Chapter 1, Section II, paragraph 2).

More specifically, in order to measure risks and calculate the internal capital supporting each of them, such banks may: use the supervisory capital requirement calculation methods for risks in the first pillar; use the simplified algorithms set out in the regulations governing the measurement of concentration risk and interest rate risk for the banking book; follow the guidelines established for liquidity risk (Title III, Chapter 1, Section II, sub-section 3.2).

For the purposes of stress testing, the banks shall conduct sensitivity analyses of the main risks they support, including, at the least, credit risk, concentration risk for the loan portfolio and interest rate risk for the banking book. As regards the latter two risk classes, the regulations establish simplified methods that the banks may adopt (Title III, Chapter 1, Section II, sub-section 3.2.1).

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Banks in this class may calculate their total internal capital using a simplified building block approach, which consists in summing the supervisory capital requirements for the first pillar with any allocations of internal capital to support other material risks (Title III, Chapter 1, Section II, sub-section 3.3).

Without prejudice to the breakdown of disclosures into six areas (Title III, Chapter 1, Section I, paragraph 6),<sup>15</sup> ICAAP reporting by these banks may be less detailed than the general framework set out in the regulations (Title III, Chapter 1, Annex E).

# Disclosure

Banks that adopt standardized approaches are subject to reduced disclosure requirements compared with those for banks using advanced methods. The scope of the disclosures varies in relation to the bank's actual operations, the use of credit risk mitigation techniques and the methods used for calculating capital requirements (Title IV, Chapter 1).

<sup>&</sup>lt;sup>15</sup> 1) strategy and forecasting horizon adopted; 2) corporate governance, organizational arrangements and internal control systems connected with the ICAAP; 3) methods and criteria used for the identification, measurement and aggregation of risks and for conducting stress tests; 4) estimation and components of internal capital at the end of the previous financial year and, prospectively, for the current year; 5) reconciliation of internal capital and supervisory capital requirements; 6) ICAAP internal assessment.

PART 4

# RISK MANAGEMENT AND CONTROL. THE ROLE OF GOVERNING BODIES

### 1. Foreword

In order to support the risks to which they are exposed, banks shall establish appropriate corporate governance arrangements and adequate management and control mechanisms. These arrangements are part of the more general regulation of bank organization and internal control systems to ensure operations are managed efficiently, effectively and with integrity.<sup>16</sup>

The above-mentioned arrangements shall cover all forms of risk in a manner consistent with the characteristics, size and complexity of the business conducted by the bank.

Banks shall establish formal risk management policies, periodically reviewing such policies in order to ensure their continuing effectiveness and monitoring the actual operation of risk management and control processes.

The primary responsibility for these tasks lies with the bank's governing bodies, each in accordance with its specific duties. The structure of tasks and lines of responsibility of corporate functions shall be clearly specified. Regardless of the governance and control system adopted (traditional structure; two-tier structure; one-tier structure), the strategic supervision, management and control functions shall be assigned to the governing bodies in compliance with the provisions of the Civil Code and these regulations.

Strategic supervisory and management functions jointly regard the management of the undertaking and can therefore be performed by the same governing body. The distinction made in the following sections takes account of the various configurations that governing bodies may assume and, in particular, the possibility that strategic guidance and supervisory functions may be kept separate from the management of current operations. The expression "supervisory body" shall therefore refer to the governing body that, pursuant to the provisions of the Civil Code or corporate bylaws, is responsible for establishing management policy (for example, by way of the examination and approval of business or financial plans, or strategic corporate operations); the expression "management body" shall refer to the governing body responsible, either by legal entitlement or delegation, for the management of current operations, which shall involve the implementation of the policies established by the supervisory body. The board of

<sup>&</sup>lt;sup>16</sup> See *Istruzioni di Vigilanza per le banche* (Circular 229), Title IV, Chapter 11, which shall apply for matters not governed by these regulations.

auditors, the supervisory board and the management control body are "control bodies" in the different systems.<sup>17</sup>

In the case of banking groups, the regulations shall apply to the bodies and functions of the parent undertaking and, within the scope of their responsibilities, the individual group companies. In this regard, banking groups shall establish and document appropriate procedures for ensuring the adequate involvement and accountability of the individual group companies.

# 2. The role of governing bodies in risk management and control

### 2.1 Supervisory body

The supervisory body plays a key role in an effective and efficient risk management and control system.

In particular, this body:

- shall establish strategic risk management guidelines and policies, periodically reviewing them in order to ensure their continuing effectiveness. It shall be aware of the risks to which the bank is exposed, and understand and approve the procedures for identifying and assessing risks;
- shall ensure on a continuing basis that tasks and responsibilities are assigned in a clear and appropriate manner, with special regard to mechanisms for delegating powers;
- shall verify that risk control functions have been established in a manner consistent with strategic policies, that such functions have appropriate independence of judgement and have been provided with qualitatively and quantitatively adequate resources;
- shall ensure the establishment of a system providing accurate, complete and timely information concerning risk management and control;
- shall ensure that the functionality, efficiency and effectiveness of the risk management and control system are periodically reviewed and that the findings of such review are reported to the strategic oversight body; where shortcomings or irregularities are found, the oversight body shall adopt appropriate remedial measures;
- shall, with regard to the ICAAP, establish and approve the general structure of the process, ensure its prompt adaptation to significant changes in strategic policies, organizational arrangements and the business environment and shall take steps to ensure the full use of the results of the ICAAP for strategic and decision-making purposes.

<sup>&</sup>lt;sup>17</sup> In two-tier or one-tier governance systems, in compliance with the provisions of law, the control body may also be responsible for strategic oversight functions.

With regard to credit risk, the supervisory body shall approve the general structure of the system for managing risk mitigation techniques that governs the entire process of acquiring, assessing, controlling and implementing CRM tools.

At banks that adopt internal risk measurement systems for calculating capital requirements, the supervisory body shall also:

- approve the adoption of such systems. In particular, it shall approve the choice of an appropriate system and the related plan setting out the activities associated with the preparation and implementation of the system, identifying responsibilities, specifying the timetable for implementation and the planned investment of human, financial and technological resources;
- periodically verify the continuing validity of the decisions taken, approving significant modifications to the system and exercising overall supervision of its correct operation;
- monitor, with the support of the competent internal control units, the effective use of internal systems for management purposes (use test) and their conformity with other regulatory requirements;
- examine, at least once a year, the annual report prepared by the internal audit unit and the reports of the validation function and shall issue, having received the opinion of the control body, a formal statement of compliance with the requirements for the use of the systems selected.

# 2.2 Management body

The management body shall be responsible for the establishment and maintenance of an effective risk management and control system, implementing strategic policies. In particular, it shall:

- verify on a continuing basis the overall efficiency and effectiveness of the risk management and control system, taking remedial action to correct any shortcomings or irregularities and adapt the system to changes in the business environment or the introduction of significant new products, lines of business or processes;
- specify the responsibilities of the units and functions involved in a manner that clearly assigns their tasks and avoids potential conflicts of interest. It shall also ensure that the related activities are directed by qualified personnel with adequate independence of judgement, and experience and knowledge commensurate with the tasks they must perform;
- establish the internal reporting flows necessary to ensure the governing bodies and control functions have the information necessary to fully understand and govern risk factors;
- implement the ICAAP, ensuring that the process complies with strategic policies and meets the following requirements: it shall consider all material risks; incorporate prospective assessments; use appropriate methodologies; be understood and agreed with internal units; be adequately formalized and documented; specify the roles and responsibilities assigned to bank functions

and units; be supported by a sufficient number of qualified personnel with the authority necessary to enforce compliance with plans; and be an integral part of management activity.

With specific regard to credit risk, the management body, in line with the strategic policies, shall approve specific guidelines designed to ensure the effectiveness of the system for managing credit risk mitigation techniques and guarantee compliance with the general and specific requirements of such techniques.

The management body of banks that adopt internal risk measurement systems for calculating capital requirements shall also:

- assume responsibility for the establishment and operation of the systems selected. In order to perform this task, the members of the body shall have an adequate understanding of the significant issues involved;
- issue instructions to ensure that the system selected is implemented in accordance with the strategic policies, assigning tasks and responsibilities to the various company functions and ensuring the formalization and documentation of all the phases of measuring, managing and controlling risk;
- take steps to ensure that the risk measurement system is integrated into decision-making and operational management processes (use test).

In performing the tasks for which it is responsible, the management body shall have regard to the recommendations produced following the validation process and the review conducted by the internal audit unit.

# 2.3 Control body

The control body shall monitor the adequacy and compliance of the risk management and control system as well as the ICAAP with the requirements laid down by applicable law and regulations.

In the performance of its functions, the control body shall receive adequate information from the other company bodies and internal control functions.

The control body of banks that adopt internal risk measurement systems for calculating capital requirements, acting with the support of the internal control functions, shall assess – within the framework of its broader duties of reviewing the risk management and control process – the functionality and adequacy of the system as well as its compliance with the requirements of applicable law and regulations.

### 3. Risk management and control in banking groups

Banking groups shall implement effective and efficient processes for the management and control of the risks to which the group as a whole is or could be exposed. Such processes shall cover every aspect of group operations in a manner

consistent with the group's organizational structure and size and the complexity of the business it conducts.

Strategic decisions on risk management at the group level shall be the responsibility of the governing bodies of the parent undertaking. Such decisions shall have regard to the specific operations and associated risks of each of the companies in the group so as to establish an integrated, consistent risk management policy. In order to achieve this objective, the governing bodies of the parent undertaking shall perform their functions having regard not only to the circumstances of the parent undertaking but also the overall operations of the group and the risks to which it is exposed.

The governing bodies (both those responsible for strategic supervision and management) of the group companies shall be aware of the risk profile and the risk management policies established by the governing bodies of the parent undertaking. In addition, the analogous bodies of the subsidiaries, each within the scope of its duties, shall be responsible for implementing, in a manner consistent with the circumstances of each group member, the risk management strategies and policies established by the governing bodies of the parent undertaking. To this end the parent undertaking shall involve, in the manner felt most appropriate, the governing bodies of the subsidiaries in the decision-making process concerning risk management procedures and policies.

As regards internal risk measurement systems for calculating capital requirements, the parent undertaking shall be responsible for taking the strategic decision to adopt such systems and to establish their essential features. It shall also be responsible for implementing the project and overseeing the proper functioning of the system and the on-going upgrading of the methodological, organizational and procedural aspects of the system.

To this end, the parent undertaking shall exercise its management and coordination powers over the companies and structures of the group to ensure the cohesion of the overall management of the system and to guarantee compliance with the requirements of applicable law and regulations. PART 5

# AUTHORIZATION OF THE USE OF INTERNAL RISK MEASUREMENT SYSTEMS FOR CALCULATING CAPITAL REQUIREMENTS FOR CREDIT, COUNTERPARTY, MARKET AND OPERATIONAL RISKS

# SECTION I

# GENERAL PROVISIONS

# 1. Definitions

For the purposes of these regulations, the definitions in sub-section 2 of Part 2 shall apply.

# 2. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Part:

— authorization and revocation of authorization for banking groups and banks not controlled by a EU parent undertaking to adopt internal risk measurements systems for calculating capital requirements for credit, counterparty, market and operational risks (Section II): Banking Supervision Department.

### SECTION II

### AUTHORIZATION PROCEDURES

### 1. Foreword

The Bank of Italy shall authorize the use of internal systems developed by banks for calculating capital requirements for credit, counterparty, market and operational risks subject to compliance with the organizational and quantitative requirements envisaged for each of such systems (see Title II, Chapters 1, 3, 4 and 5 respectively).

The scope of the authorization measure shall be exclusively prudential in nature, and shall not represent, either in subject or purpose, a more general assessment of the business decisions of the banks, which remain the responsibility of their governing bodies.

As regards the characteristics of the administrative procedures, the provisions of Law 241 of 7 August 1990 and Article 24 of Law 262 of 28 December 2005 and the related implementing regulations shall apply for those matters not otherwise regulated herein.

# 2. Authorization procedure for banking groups and banks not controlled by a EU parent undertaking

### 2.1 Submission of application

The application for authorization shall be submitted to the Bank of Italy by a bank authorized in Italy or by the parent undertaking where they are not controlled by a EU parent undertaking.

The application shall be accompanied by the documentation specified in the annexes to the Chapters regarding each form of risk. The Bank of Italy may request all other information or documentation it shall consider necessary to conduct a complete assessment of the application.

In view of the considerable complexity and significant organizational impact of internal systems, banks may submit their plans and the related documentation to the Bank of Italy before submitting a formal application. The preliminary submission of plans shall not constitute the start of the administrative procedure.

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### 2.2 Examination by the Bank of Italy

The authorization procedure shall be completed within six months of the date of receipt by the Bank of Italy of the application for authorization and the complete accompanying documentation.

The Bank of Italy shall examine the application, verifying compliance with the organizational and quantitative requirements provided for in the regulations for each internal system.

The salient aspects of the plan may be examined in greater detail with the corporate officers of the applicant, including by means of on-site verifications.

### 2.3 Decision and notification of the measure

The Bank of Italy shall decide with an express, reasoned measure to be notified to the applicant.

The authorization may be accompanied by specific prescriptions, including with regard to the amount of the capital requirement, concerning aspects of the system that are not fully consistent with the operational complexity and risk profile of the applicant, as long as the general validity and reliability of the system is not affected.

# 2.4 Subsequent verifications and revocation of authorization

The Bank of Italy shall verify the continuing compliance with the requirements for the adoption of internal risk measurement systems for calculating capital requirements.

Where a bank intends to make significant modifications to such systems, it shall notify the Bank of Italy, providing all relevant information. Banks shall also provide the Bank of Italy with detailed information regarding the impact of significant corporate events or external factors on such systems (for example, mergers, reorganizations, regulatory changes).

The Bank of Italy shall adopt all necessary measures to ensure that banks preserve the overall reliability and functionality of the systems and ensure the correct calculation of capital requirements. Where banks should no long comply with the requirements for the use of such systems, the Bank of Italy may revoke the authorization, specifying the methodology to be adopted for calculating capital requirements.

### 2.5 Cooperation between supervisory authorities

With regard to banking groups not controlled by a EU parent undertaking that control banks in other Member States, the Bank of Italy, as the authority

responsible for authorization, shall establish cooperation and coordination arrangements with the foreign supervisory authorities involved.

The documentation accompanying the application shall be drafted in Italian or in a language agreed between the Bank of Italy and the foreign authorities.

After verifying that the application is complete, the Bank of Italy shall forward it to such authorities. The latter shall be notified promptly of the submission of the application even where the documentation is incomplete.

The Bank of Italy and the foreign authorities shall cooperate in reaching a joint decision. To this end, they shall determine their respective tasks and responsibilities, establishing operational criteria and procedures;<sup>18</sup> the Bank of Italy shall notify such criteria and procedures to the parent undertaking. Where, on the basis of the programme established by the parent undertaking, the foreign subsidiaries do not immediately adopt such internal systems, the joint decision procedure shall only be initiated subsequently. The Bank of Italy shall in any case notify the foreign authorities of the details of the model development plans and the state of progress of the project.

Where the Bank of Italy and the foreign authority do not adopt a joint decision within six months of the submission of the application for authorization, the Bank of Italy shall decide on the application within thirty days of the expiry of said time limit.

The measure of the Bank of Italy, which shall have regard to any comments or reservations expressed by the foreign authorities, shall be notified to the parent undertaking and shall be binding on all the components of the group. The measure shall be transmitted to the foreign supervisory authorities involved.

The provisions of this section shall also apply to reference undertakings.

# 3. Authorization procedure for banking groups and banks controlled by a EU parent undertaking

Banking groups and Italian banks controlled by a EU parent undertaking shall submit applications for authorization to the foreign authority responsible for the supervision of such undertaking in accordance with the procedures established by that authority.

The procedure for cooperation and coordination between the supervisory authorities involved, including the Bank of Italy, shall be undertaken at the initiative and under the coordination of the foreign authority responsible for supervising the EU parent undertaking. The Bank of Italy shall notify the banking

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<sup>&</sup>lt;sup>18</sup> As part of the division of tasks, the Bank of Italy may agree to the carrying out of specific activities by other authorities, such as, for example, the assessment of the systems developed and applied in their respective countries, the verification of the use by subsidiaries of such systems and systems developed at the central level, the analysis of the databases and information systems used locally, the verification of the functionality of local control systems and coordination of specific activities.

groups and the Italian banks of the salient features of the criteria and operational procedures of the cooperation arrangements.

Where the authorities involved do not adopt a joint decision within six months of the submission of the application for authorization, the foreign authority responsible for supervising the EU parent undertaking shall decide on the application.

The measure, which shall have regard to any comments or reservations expressed by the authorities, shall be notified by the Bank of Italy to the parent undertaking or the Italian banks and shall be binding on them.

# TITLE I

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# Chapter 2

# SUPERVISORY CAPITAL

TITLE I - Chapter 2

# SUPERVISORY CAPITAL

### SECTION I

### GENERAL PROVISIONS

# 1. Introduction

The rules governing bank capital play a central role in supervisory regulations.

Capital represents the primary safeguard against the risks associated with banking in general. An adequate level of capital enables bankers to pursue their entrepreneurial activity with an appropriate degree of autonomy while at the same preserving bank stability.

Capital is also the main reference parameter for the supervisory authority's assessments of the soundness of banks. It is the foundation of the most important tools of prudential supervision (capital requirements and rules on risk concentration). Banks' operations in various segments are also linked to the amount of their capital.

In compliance with Community legislation, these regulations establish the procedures for calculating supervisory capital. This shall be the sum of Tier 1 capital – included in the calculation without any limitation – and Tier 2 capital, which is included up to 100 per cent of Tier 1 capital. Holdings of equity, innovative capital instruments, hybrid capital instruments and subordinated assets in other banks and financial companies shall be deducted. Holdings of equity in insurance companies and subordinated liabilities issued by the latter shall also be deducted.

These regulations incorporate the guidelines established at the international level to take account of the impact deriving from application of international accounting standards (IAS/IFRS) on the calculation of supervisory capital.

Specifically, it has been agreed that a number of "prudential filters" will be introduced, to be applied to balance-sheet values in order to safeguard the quality of supervisory capital and attenuate the potential volatility associated with the introduction of the new accounting standards.

In general, the approach recommended at the international level envisages, for non-trading assets, full deduction from Tier 1 capital of losses stemming from fair value measurement and the partial inclusion in Tier 2 capital of gains arising from fair value measurement (the so-called asymmetric approach).

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, subparagraph a), which gives the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia, to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1 - subparagraph a), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

 the resolution of the Credit Committee of 12 January 1994 concerning the supervisory capital and solvency ratio of banks and banking groups (Articles 1 to 4).

Other relevant sources are:

- Legislative Decree 87 of 27 January 1992 on the annual accounts and consolidated accounts of banks and other financial institutions;
- Legislative Decree 38 of 28 February 2005 on the exercise of the options envisaged in Article 5 of Regulation (EC) 1606/2002 on the application of international accounting standards;
- the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

### 3. Definitions

In these regulations:

- *"insurance company*" shall mean an insurance undertaking, a re-insurance undertaking or an insurance holding company;
- "financial company" shall mean a company that, on an exclusive or predominant basis, engages in: the activity of acquiring holdings<sup>1</sup>; one or more of the activities subject to mutual recognition referred to by Article 1, paragraph 2, subparagraph f), points 2 to 12, of the 1993 Banking Law; other financial activities referred to under point 15 of the said subparagraph; the activities referred to by Article 1, paragraph 1, subparagraph n) of Legislative Decree 58 of 24 February 1998 (Article 59, paragraph 1, subparagraph b) of the 1993 Banking Law);
- "*participating interest*": shall mean the possession on the part of the bank or banking group of shares or capital parts:
  - a) in subsidiaries<sup>2</sup> or which, by creating a long-term relationship with other companies, is intended to develop the holder's business;
  - b) or which in any case confers voting rights at the ordinary shareholders' meeting or a share of capital of at least 10 per cent, in the case of holdings in banks or financial companies, or 20 per cent, in the case of holdings in insurance companies. For the purpose of calculating the voting rights or capital held, any shares or capital parts in respect of holdings allocated to the supervisory trading book shall also be considered.<sup>3</sup>
- "*latent gain (loss)*" shall mean the positive (negative) difference between market value and book value of the securities to which it refers.

<sup>&</sup>lt;sup>1</sup> Participating interests shall have the characteristics specified by the Bank of Italy.

<sup>&</sup>lt;sup>2</sup> For such purposes situations of joint control with other parties under specific agreements shall also be considered.

<sup>&</sup>lt;sup>3</sup> See Title II, Chapter 4, Part 1, Section I, sub-section 3.1.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy;<sup>4</sup>
- on a consolidated basis,
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

# 5. Units responsible for administrative proceedings

The following units shall be responsible for the administrative procedures referred to in the Chapter:

- authorization to redeem innovative capital instruments (Section II, subsection 3, and Section III, sub-section 1.2): Banking Supervision Department;
- *authorization to redeem hybrid capital instruments (Section II, sub-section 4.1):* Banking Supervision Department;
- authorization to effect early repayment of subordinated liabilities (Section *II*, sub-section 4.2): Banking Supervision Department;
- authorization to repurchase hybrid capital instruments and subordinated liabilities (Section II, sub-section 4.4, and Section III, sub-section 1.4): Banking Supervision Department;
- authorization not to deduct from supervisory capital holdings, innovative capital instruments, hybrid capital instruments and subordinated liabilities acquired for the purpose of reorganizing and rescuing the investee entity (Section II, sub-section 8.1): Banking Supervision Department.

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<sup>&</sup>lt;sup>4</sup> Where calculating capital, Italian banks shall also consider capital elements pertaining to their foreign branches.

### SECTION II

# INDIVIDUAL SUPERVISORY CAPITAL

# 1. Composition of individual supervisory capital

Individual supervisory capital is the sum of a series of positive and negative elements that, depending on the quality of capital they represent, may be included in the calculation subject to certain limitations.

The positive elements making up capital shall be fully available to the bank, so as to be utilizable without restriction to cover the bank's risks and losses. The amount of these elements shall be calculated net of any tax liabilities.

Supervisory capital is composed of Tier 1 capital and Tier 2 capital, net of deductions.

1.1 Tier 1 capital

The following are the prime quality constituents of capital:

- a1) paid-up share capital;<sup>5</sup>
- a2) reserves, including the share premium account;
- a3) innovative capital instruments (see sub-section 3);
- a4) net income for the period;
- a5) positive Tier 1 capital prudential filters (see sub-section 5). The following negative components shall be deducted:
- b1) own shares;
- b2) goodwill;
- b3) intangible assets;<sup>6</sup>
- b4) losses carried forward and losses for the current financial year;
- b5) value adjustments calculated on the supervisory trading book;<sup>7</sup>
- b6) negative Tier 1 capital prudential filters.

Tier 1 capital shall be equal to the sum of elements from a1) to a5) less the sum of those from b1) to b6).

<sup>&</sup>lt;sup>5</sup> Capital may also include shares or capital parts that entitle their holders to an increased dividend with respect to ordinary shareholders, except for those where the right to an increase may be exercised without time limits, which can be included in the Tier 2 capital under hybrid capital instruments.

<sup>&</sup>lt;sup>6</sup> If measured at fair value, net of related reserves.

<sup>&</sup>lt;sup>7</sup> This item includes any material writedowns calculated for supervisory purposes that should arise during the months subsequent to December and June.

The Bank of Italy may request the deduction of additional elements which, in view of their characteristics, might dilute Tier 1 capital.

# 1.2 Tier 2 capital

Tier 2 capital shall comprise the following elements up to the limit referred to in sub-section 1.4:

- a1) valuation reserves;<sup>8</sup>
- a2) innovative capital instruments not eligible for inclusion in Tier 1 capital;
- a3) hybrid capital instruments and subordinated liabilities (see sub-section 4);
- a4) net gains on participating interests (see sub-section 7);
- a5) positive Tier 2 capital prudential filters (see sub-section 5);
- a6) any total net value adjustments in excess of expected losses;<sup>9</sup>
- a7) other positive elements.<sup>10</sup>

The following negative components shall be deducted:

- b1) net losses on participating interests;
- b2) negative Tier 2 capital prudential filters;
- b3) other negative elements.

Tier 2 capital shall be equal to the sum of elements from a1) to a7) less the sum of those from b1) to b3).

### 1.3 Deductions

The elements listed in sub-section 8 shall be deducted from Tier 1 and Tier 2 capital in accordance with the procedure specified therein.

### 1.4 Limits on inclusion in supervisory capital

There is no limit on the inclusion of Tier 1 capital for the purpose of calculating supervisory capital.

Innovative capital instruments may be included in Tier 1 capital up to the limit of 20 per cent of total Tier 1 capital, including the innovative instruments themselves. Within such ceiling, instruments that provide for an automatic interest

<sup>&</sup>lt;sup>8</sup> Valuation reserves comprise: a) tangible assets: i) reserves pursuant to special revaluation laws; ii) tangible assets used in operations; b) positive reserves on available-for-sale securities: i) debt securities; ii) equities and units/shares in CIUs.

<sup>&</sup>lt;sup>9</sup> Only for banks authorized to use the IRB approaches, up to 0.6 per cent of credit risk-weighted assets (see Title II, Chapter 1, Part 2, Section V, sub-section 8).

<sup>&</sup>lt;sup>10</sup> This refers to "foreign exchange differences" recognized in the financial statements, where positive.

rate adjustment (so-called step-up clauses) in connection with redemption options or other types of clause designed to encourage repayment on the part of the issuer shall not exceed 15 per cent of total Tier 1 capital including the instruments themselves.

Any surplus amounts may be included in Tier 2 capital as hybrid capital instruments.

Tier 2 capital may be included in calculating supervisory capital up to an amount equal to 100 per cent of Tier 1 capital.

Subordinated liabilities shall be limited to 50 per cent of Tier 1 capital in calculating Tier 2 capital.

### 1.5 Tier 3 subordinated loan capital

Tier 3 subordinated loan capital meeting the following criteria may be included for supervisory purposes:

- it has an original maturity of at least two years; where there is no set maturity, repayment shall be subject to at least two years' prior notice;
- it is fully paid up;
- it meets the other conditions envisaged for similar liabilities eligible for inclusion in Tier 2 capital, except, obviously, for the condition concerning the maturity of the loan;<sup>11</sup>
- it is not included in the calculation of Tier 2 capital;
- it is subject to a "lock-in" clause under which principal and interest may not be repaid where repayment would reduce the overall amount of the bank's capital to less than 100 per cent of total capital requirements.

Tier 3 subordinated loan capital shall be deducted from the capital requirements required to support market risks<sup>12</sup> in an amount<sup>13</sup> not to exceed 250 per cent of "free" capital. At least 30 per cent of the requirements shall be covered by free capital.

Free capital shall be conventionally determined by deducting the following amounts from Tier 1 capital:

- 50 per cent of the sum of the "deductions" and the capital requirement for credit and counterparty risk;
- any surplus beyond 50 per cent of the "deductions" and the capital requirement for credit and counterparty risk with respect to eligible Tier 2 capital.

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<sup>&</sup>lt;sup>11</sup> See sub-section 4.

<sup>&</sup>lt;sup>12</sup> See Title II, Chapter 4.

<sup>&</sup>lt;sup>13</sup> Where the instruments are measured at fair value or are designated as hedged transactions under a hedge relationship, the book value shall be adjusted to exclude the related gains/losses, which shall be recognized within the framework of the prudential filters (see sub-section 5).

# 2. Minimum supervisory capital

Individual supervisory capital shall not be less than the initial capital required for authorization to engage in banking.<sup>14</sup>

\* \* \*

The following provides a detailed description of the composition of some of the elements of supervisory capital.

### 3. Innovative capital instruments

Innovative capital instruments, such as preference shares, shall be eligible for inclusion in Tier 1 capital subject to the presence of conditions that fully ensure the stability of banks' capital base. Such conditions are as follows:

- a) the issuing bank or financial company belonging to the banking group is based in a Member State or a country belonging to the Group of Ten;
- b) the securities are irredeemable. Any repayment option on the part of the issuer shall vest no fewer than 10 years from the date of issue, and repayment shall be subject to prior authorization by the Bank of Italy;
- c) any automatic step-up clauses do not take effect until after the 10th year of the instrument's life. The amount of the step-up may not exceed either 100 basis points or 50 per cent of the initial spread on the reference basis rate, less the differential between the initial reference basis rate and that on which the rate increase is calculated;
- d) the contract provides for an option to suspend interest payments to the holders of the securities if, during the previous period, the bank directly or indirectly controlling the issuer did not generate distributable profits and/or did not pay dividends to shareholders. Payment of interest shall be suspended in the event that the bank's total capital ratio falls below 5 per cent as a result of losses and the bank has not paid dividends to shareholders;
- e) interest is not cumulative: if not paid, the entitlement to remuneration lapses definitively;
- f) the contract establishes that the funds raised with the issuing of securities are fully available to the bank where the bank's total capital ratio should fall below 5 per cent as a result of losses;
- g) in case of the bank's liquidation, the security holders, who have priority over shareholders, are subordinated to all other creditors;
- h) where the issue is effected through a foreign subsidiary, a specific on-lending agreement must be in place providing for the transfer to the bank of the funds raised on terms and conditions analogous to those of the issue.

<sup>&</sup>lt;sup>14</sup> See Istruzioni di Vigilanza per le banche, Title I, Chapter 1.

The Bank of Italy shall authorize requests to repay innovative capital instruments, considering the bank's ability to comply with the total capital requirement. The Bank of Italy shall notify its decision within ninety days of receiving the application.

Where the bank is part of a banking group, requests for authorization shall be submitted by the parent undertaking.

### 4. Hybrid capital instruments and subordinated liabilities

Tier 2 capital may include – in the maximum amount of the funds actually received by the issuing bank – the following:

- hybrid capital instruments, such as irredeemable liabilities and other instruments repayable at the issuer's request subject to prior authorization by the Bank of Italy;
- subordinated liabilities.

In both cases the liabilities may also be issued by banks in the form of convertible and non-convertible bonds, certificates of deposit, interest-bearing notes and other securities. The rules set out in *Istruzioni di Vigilanza per le banche*, Title V, Chapter 3, shall apply.

Where the bank is part of a banking group, requests for repayment authorization shall be submitted to the Bank of Italy by the parent undertaking.

Where the instruments are measured at fair value or are designated as hedged transactions under a hedge relationship, the book value shall be adjusted to exclude the related gains/losses, which shall be recognized within the framework of the prudential filters (see sub-section 5).

The contracts for such instruments shall meet the conditions set forth in the following sub-sections.

### 4.1 Hybrid capital instruments

Hybrid capital instruments shall be included in Tier 2 capital where the contract envisages that:

- a) in the case of losses that lead to a reduction in paid-up share capital and reserves below the minimum capital level required for authorization to engage in banking, the amounts in respect of such liabilities and the accrued interest may be used to absorb such losses in order to permit the issuer to continue operating;
- b) in the case of adverse operating performance, payment of interest on the liability may be deferred in the amount necessary to prevent or limit to the greatest possible extent the emergence of losses;
- c) in the case of the liquidation of the issuing bank, the debt shall be repaid only after all other creditors not equally subordinated have been satisfied.

Hybrid capital instruments that are not irredeemable must have a maturity of at least 10 years. The contract must clearly specify that repayment is subject to authorization by the Bank of Italy.

The securities representing the hybrid capital instruments shall refer to the clause indicated in point a) above and to the condition that repayment is subject to authorization by the Bank of Italy.

The Bank of Italy shall issue its decision concerning early repayment requests within ninety days of receiving the application, taking into consideration the bank's ability to comply with the overall capital requirement.

### 4.2 Subordinated liabilities

Subordinated liabilities issued by banks shall form part of the Tier 2 capital provided that the contracts governing their issue expressly envisage that:

- a) in the case of the liquidation of the issuer, the debt shall be repaid only after all other creditors not equally subordinated have been satisfied;
- b) the debt has an original maturity of at least five years; where there is no set maturity, repayment shall be subject to at least five years' prior notice;
- c) early repayment of the liabilities may take place only at the initiative of the issuer and shall be subject to authorization by the Bank of Italy.

The contracts shall not contain clauses whereby, in cases other than those referred to in points a) and c), the debt may become redeemable prior to maturity.

The contracts may contain automatic step-up clauses associated with early redemption options provided that they do not take effect until after the 5th year of the liabilities' life and the amount of the step-up is less than 100 basis points.

The securities representing the subordinated liabilities shall refer to the clause indicated in point a) above and to the condition that repayment is subject to authorization by the Bank of Italy.

The Bank of Italy shall issue its decision concerning early repayment requests within ninety days of receiving the application, taking into consideration the bank's ability to comply with the overall capital requirement.

The amount of subordinated liabilities eligible for inclusion in Tier 2 capital shall be reduced by one fifth in each of the last five years before maturity, in the absence of a repayment plan that produces a similar effect.

Repayments shall be calculated on the basis of the original loan amount independently of any repurchases or conversions.

Subordinated liabilities may be included in the calculation of capital only in the amount of the funds actually received and still available to the bank.

In case of conversion or repurchase of portions of the subordinated liability, the latter shall be reduced by the greater of the amount converted or repurchased and the amount of accrued repayments.

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# 4.3 Guarantees securing issues and consequent "on-lending" transactions

The eligibility requirements for hybrid capital instruments and subordinated liabilities set forth in this Section shall be met in all contracts related to the pledging of guarantees securing the issue of such instruments.

The pledging of guarantees securing issues of hybrid capital instruments and subordinated liabilities involves two separate but coordinated acts:

- with the first, the bank assumes the position of guarantor of a subordinated liability issued by one of its subsidiaries (or by another person);
- with the second, the bank issues its own hybrid capital instruments or subordinated liabilities (with identical terms and conditions to the first instruments or liabilities), which are subscribed by the issuer of the other liabilities. The funds raised with the first issue are thereby made available to the final beneficiary (on-lending transaction).

The pledging of the guarantee shall not oblige the bank to repay the loan earlier than specified in the terms of the on-lending contract.

The contract governing the first issue shall also specify the subordinated nature of the guarantee granted by the bank and that performance on the part of the guarantor discharges the obligations of the main obligor (the first issuer).

The on-lending agreement shall in turn contain a clause whereby any amounts paid by the bank in connection with the guarantee shall be deducted from any amounts due to the subscriber of the subordinated debt issued by the bank.

# 4.4 Repurchase of portions of hybrid capital instruments or subordinated liabilities by the issuing bank

Banks may repurchase portions of hybrid capital instruments or subordinated liabilities they have issued in an amount not to exceed 10 per cent of the value of each issue.<sup>15</sup>

Such amounts, even if momentarily present in the portfolio, shall not be eligible for inclusion in Tier 2 capital.<sup>16</sup>

Any repurchase in excess of the above percentage or in any way intended to cancel certificates shall be subject to authorization by the Bank of Italy: the latter case shall be considered a formal prepayment of a portion of the loan.<sup>17</sup> Where the

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<sup>&</sup>lt;sup>15</sup> The limit of 10 per cent shall be calculated on the basis of the original value of the instrument or liability. For the purpose of compliance with this limit, a bank's forward purchase commitments in respect of its own hybrid capital instruments and subordinated liabilities shall be treated as spot purchases.
<sup>16</sup> Repurchased subordinated liabilities and hybrid capital instruments shall be deducted from supervisory capital

<sup>&</sup>lt;sup>10</sup> Repurchased subordinated liabilities and hybrid capital instruments shall be deducted from supervisory capital at their book value.

<sup>&</sup>lt;sup>17</sup> By virtue of an illegality clause the creditor or the issuer has the right to request early repayment of a subordinated claim/liability whenever a provision of law or regulations prohibits the possession of assets or liabilities in such form or, more generally, prevents the discharge of obligations undertaken on the basis of the issue agreement. Although strictly speaking this clause represents a case of early repayment outside the control of the issuer, it is considered admissible wherever it is clear that the repayment depends upon an act of State with which the debtor (creditor) must comply. In this case it is not necessary to request prior authorization by the Bank of Italy to repay the liability early.

bank belongs to a banking group, requests for authorization shall be submitted to the Bank of Italy by the parent undertaking.

The Bank of Italy shall notify its decision within ninety days of receiving the repurchase request.

Where portions of subordinated liabilities are repurchased, the deduction from supervisory capital is calculated as the difference, if positive, between the value of the repurchased securities and the amount of accrued repayments.

Advances on hybrid capital instruments or subordinated liabilities as well as financing granted by the bank for the purpose of repurchasing such liabilities shall be treated as a repurchase of the liabilities. A repurchase is considered to have occurred where, from the standpoint of the contractual terms and the actual characteristics of the transaction, the timing of the issuance of the bank's liability with consequent raising of capital and the granting of financing to the subscriber are, in terms of amount and timing, a coordinated action.

These regulations shall also apply in the case where securities issued in respect of bank's own subordinated liabilities are pledged as collateral in circumstances where the transactions effectively constitute the repurchase of those liabilities in view of the combined features of the operation (contractual terms and conditions, repetitiveness, overall size).

# 5. Prudential filters

The following elements associated with the application of international accounting standards in preparing the financial statements of banks shall be taken into consideration for the purpose of calculating supervisory capital subject to the specified limitations and conditions.<sup>18</sup>

### 5.1 Redeemable shares

Shares that an issuing banca di credito cooperativo has undertaken to redeem/repurchase at a specified price shall be included in Tier 1 capital.

### 5.2 Available-for-sale financial assets

The following provisions shall apply to revaluation reserves in respect of the debt securities and equities (including units/shares of CIUs) held as "available-for-sale financial assets":

 50 per cent of any positive balance between positive and negative reserves shall be included in Tier 2 capital;

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<sup>&</sup>lt;sup>18</sup> For instructions regarding the recognition of prudential filters in supervisory reports reference shall be made to the provisions of *Istruzioni per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali.*
any negative balance between positive and negative reserves shall be deducted in full from Tier 1 capital.

Any positive or negative valuation reserves associated with cash flow hedges in respect of the assets in question shall also be included in the calculation.<sup>19</sup>

Any writedowns prompted by a deterioration in issuers' creditworthiness shall be excluded from the calculation of such differences, as they are recognized through the income statement.

# 5.3 Property

Tier 2 capital shall include 50 per cent of gains from measurement at the revalued amount of property used in operations (recognized directly in an equity reserve).

The balance between cumulative gains and losses on investment property and cumulative losses from measurement at the revalued amount of property used in operations, if positive, shall be deducted in full from Tier 1 capital, while 50 per cent of that amount shall be included in Tier 2 capital.

Any writedowns for wear and tear shall not count towards the balance.

#### 5.4 Forward purchase commitments in respect of banks' own capital instruments

Capital resources forming the object of forward purchase commitments that involve the immediate assumption of its own business risk on the part of the bank<sup>20</sup> shall be deducted from capital (Tier 1 in the case of shares or Tier 2 in the case of hybrid capital instruments or subordinated liabilities),<sup>21</sup> regardless of the manner of settlement (net or gross) of the commitment or of their presentation in the financial statements.

Capital resources forming the object of a forward purchase commitment that do not require the immediate assumption of its own business risk on the part of the bank because such risk is retained by the counterparty for the entire duration of the transaction shall be included in supervisory capital in accordance with the type of underlying instrument and the contractual maturity of the transaction. Specifically:

a) where the commitment involves the bank's shares:

 if the maturity is at least 10 years and settlement of the transaction is subject to prior authorization by the Bank of Italy, the capital resources shall be included in Tier 1 capital;

<sup>&</sup>lt;sup>19</sup> Excluding valuation reserves relating to equities, innovative capital instruments, hybrid capital instruments and subordinated liabilities, including those pertaining to Tier 3, issued by banks, financial and insurance companies, classified as "available-for-sale financial assets" and deducted from the supervisory capital of the reporting bank.
<sup>20</sup> For example, the forward purchase of a specified number of shares at a predetermined unit price with settlement

on a net basis (difference between that price and the current value of the shares at maturity).

<sup>&</sup>lt;sup>21</sup> In such case the deduction shall be made net (or gross) of any cumulative loss (gain) recognized in the financial statements as a result of the fair value measurement of the forward commitment.

- if the maturity is at least 10 years but settlement of the transaction is not subject to prior authorization by the Bank of Italy, or is less than 10 years, the capital resources shall be deducted from Tier 1 capital;<sup>22</sup>
- if the maturity is at least 10 years but settlement of the transaction is not subject to prior authorization on the part of the Bank of Italy, or is between 5 and 10 years, the capital resources shall be included in Tier 2 capital;
- b) where the commitment involves hybrid capital instruments or subordinated liabilities issued by the bank, if the maturity is less than 10 years for hybrid capital instruments or 5 years for subordinated liabilities, the forward commitment shall be deducted from Tier 2 capital.

In all cases, if the transaction is a "sight" transaction (for example, American-style options), the forward commitment shall be deducted from Tier 1 capital in the case of shares and from Tier 2 capital in the case of hybrid capital instruments and subordinated liabilities.

The provisions of this sub-section shall apply to all transactions of this type. For transactions entered into before 31 December 2004 (including any renewals agreed during 2005), banks shall adopt a gradual approach, consisting in the deduction of the forward repurchase commitments on a straight-line basis over their residual life from the sum of Tier 1 and Tier 2 capital.

#### 5.5 Fair value option: changes in banks' own creditworthiness

The effects of the fair value measurement of financial liabilities issued by the bank other than those eligible for inclusion in supervisory capital or deductible from the capital requirement for market risk (Tier 3 subordinated loan capital) shall only be considered for the component associated with changes in the bank's creditworthiness. Specifically:

- the related cumulative net loss shall be included in Tier 1 capital;
- the related cumulative net gain shall be deducted from Tier 1 capital.

# 5.6 Other prudential filters

The following elements shall be included in Tier 1 capital:

— any negative balance between cumulative gains and losses in respect of hybrid capital instruments and subordinated instruments (including Tier 3 subordinated loan capital) issued by the bank and eligible for inclusion in supervisory capital (or deductible from the capital requirement for market risk), where such instruments are classified in the financial statements as "financial liabilities held for trading" or "financial liabilities measured at fair value" or have been hedged;

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 $<sup>^{22}</sup>$  In such case the deduction shall be made net (or gross) of any cumulative loss (gain) recognized in the financial statements as a result of the fair value measurement of the forward commitment.

 any cumulative loss from the fair value measurement of the holding in the Bank of Italy classified under "available-for-sale financial assets" or "financial assets measured at fair value".

The following elements shall be deducted from Tier 1 capital:

- any positive balance between cumulative gains and losses in respect of hybrid capital instruments and subordinated instruments (including Tier 3 subordinated loan capital) issued by the bank and eligible for inclusion in supervisory capital (or deductible from the capital requirement for market risk), whenever such instruments are classified in the financial statements as "financial liabilities held for trading" or "financial liabilities measured at fair value" or have been hedged;
- any cumulative gain from the fair value measurement of the holding in the Bank of Italy classified under "available-for-sale financial assets" or "financial assets measured at fair value.

# 6. Other negative elements

Other negative elements include any writedowns of the loan portfolio required for supervisory purposes.<sup>23</sup> Such writedowns shall include any loan losses of significant size that should emerge in the months subsequent to December and June.

The negative elements shall also include any negative "foreign exchange differences" recognized, as well as adjustments relating to unexpected reductions in assets, shortfalls and robberies not yet charged to the income statement.

# 7. Net gains or losses on participating interests

Latent gains and losses on participating interests in companies other than banking, financial and insurance companies that are listed on a regulated market and not measured at fair value shall be offset.

Where the resulting balance is positive, 35 per cent of the amount shall be included in Tier 2 capital.

The amount of net gains on participating interests included in Tier 2 capital shall not exceed 30 per cent of Tier 1 capital.

Where the resulting balance is negative, 50 per cent of the amount shall be deducted from Tier 2 capital.

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 $<sup>^{23}</sup>$  The rules governing the financial statements of banks and financial institutions require that loan losses – in itemized or general form – be directly deducted from the value of the loans reported in the balance sheet under assets.

# 8. Deductions

Of the elements listed below, 50% shall be deducted from Tier 1 capital and 50% from Tier 2 capital:

- a) participating interests in banks and financial companies exceeding 10% of the share capital of the investee entity and innovative capital instruments, hybrid capital instruments and subordinated assets in respect of such entities;
- b) participating interests in insurance companies, as well as the subordinated assets issued by such companies, if considered by the issuer for capital purposes;
- c) participating interests of registered securities in excess of 20,000 shares<sup>24</sup> in SICAVs;
- d) participating interests in banks and financial companies that do not exceed 10% of the capital of the investee entity and innovative capital instruments, hybrid capital instruments and subordinated assets in respect of banks and financial companies, other than those referred to in point a) above, even where the bank has no participating interest in the entity. The portion of the sum of such interests exceeding 10% of the value of Tier 1 and Tier 2 capital shall be deducted;
- e) positions in securitizations;
- f) solely in respect of banks authorized to use IRB approaches to calculate the capital requirement for credit risk, expected losses in excess of total net value adjustments (Title II, Chapter 1, Part 2, Section V, sub-section 8). As regards reports for March and September, the amount of the adjustments to be taken into consideration shall be that for December and June, respectively;
- g) the holding in the capital of the Bank of Italy.<sup>25</sup>

Participating interests, innovative capital instruments, hybrid capital instruments and subordinated instruments shall be deducted in the amount of their book value.

However, for the assets referred to in points a), b), c) and d) above that are classified in the financial statements as "available-for-sale financial assets", the amount to be deducted shall be gross (or net) of the negative reserve (positive reserve) recognized in respect of such assets.

The innovative capital instruments, hybrid capital instruments and subordinated assets referred to in points a) and d) above shall be deducted where they are included in the supervisory capital of the issuers.<sup>26</sup>

<sup>&</sup>lt;sup>24</sup> Participating interests represented by unregistered shares shall not be deducted.

<sup>&</sup>lt;sup>25</sup> The holding in the capital of the Bank of Italy shall be deducted in the amount shown in the balance sheet as at 31 December 2004, or at purchase cost if acquired after such date.

<sup>&</sup>lt;sup>26</sup> Tier 3 subordinated loan capital issued by the banks shall also be deducted.

Any shares, innovative capital instruments, hybrid capital instruments and subordinated liabilities allocated to the supervisory trading book shall also be deducted.

Notwithstanding the general provisions, until 31 December 2012 the elements referred to in point b) acquired by banks before 20 July 2006 shall be deducted from the total amount of Tier 1 and Tier 2 capital.

# 8.1 Assets not deducted from supervisory capital

The Bank of Italy may authorize banks, on a temporary basis, not to deduct from supervisory capital any participating interests, innovative capital instruments, subordinated liabilities or hybrid capital instruments acquired for the purpose of reorganizing or rescuing the investee entity.

The banks shall not deduct from capital:

- i. participating interests in banks and financial companies that are consolidated (fully or proportionately) in the supervisory capital of the group to which they belong as well as innovative capital instruments and irredeemable or subordinated instruments in respect of the same entities;
- ii. participating interests in banking and financial companies which, given their economic characteristics, represent financing or investment operations in non-capital instruments. This shall apply provided that, on the basis of the provisions of its bylaws or contractual clauses, there is no possibility that the issuer might become indebted or such instruments cannot be included in the calculation of such issuer's supervisory capital;<sup>27</sup>
- iii. investments in the shares of banking and financial companies based in countries of the European Union or the Group of Ten for which the bank supervisory authorities of such countries have specifically granted their authorization.

# 9. Frequency of reporting and procedures for calculating individual supervisory capital

9.1 Calculation of supervisory capital for December and June

Supervisory capital shall be calculated on a quarterly basis.<sup>28</sup>

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<sup>&</sup>lt;sup>27</sup> This serves to prevent double gearing.

<sup>&</sup>lt;sup>28</sup> Except in the cases provided for in specific measures of the Bank of Italy, banks in special administration shall continue to report, on a quarterly basis, the balance-sheet data for the last quarter prior to commencement of special administration. Such data shall be updated with the balance-sheet data reported for the quarter in which the closing financial statements for the special administration procedure were approved by the Bank of Italy. Starting from that quarter, balance-sheet data shall be reported in compliance with the calculation procedures established in these regulations (especially as regards the calculation of supervisory capital for December and June and quarterly changes in supervisory capital).

Supervisory capital for December each year shall be calculated in accordance with the criteria established in the annual financial statements, even where the latter have not yet been approved.

For this purpose, the supervisory and management bodies, within the scope of their respective responsibilities, shall measure the assets held at 31 December, determine provisions and quantify the reserves on the basis of the expected allocation of net profit for the year ended on that date.

Any changes subsequently made during approval of the financial statements and allocation of profit shall be communicated promptly to the Bank of Italy.

These regulations shall also apply to banks which, for the purpose of preparing their financial statements, close their accounts on a date other than 31 December. Accordingly, in calculating the supervisory capital for the end of the year, such entities shall perform their measurements and adjustments of provisions and reserves with reference to the situation as at 31 December.

The above provisions shall also apply to the calculation of supervisory capital for June each year. The supervisory and management bodies, within the scope of their respective responsibilities, shall therefore, for the sole purpose of calculating capital and based on the same criteria used to prepare the financial statements, measure the assets held at 30 June, determine provisions, quantify the reserves and allocate the half-year net profit.

# 9.2 Verification of annual and half-year profit or loss for the calculation of supervisory capital for December and June

The amount of annual and half-year profit that, in accordance with the procedures set out above, is included in the calculation of supervisory capital for December and June shall be verified by external auditors or, in their absence, by the bank's control body as follows:

- where the accounting control function is outsourced by law,<sup>29</sup> the annual and interim profit shall be verified by the external auditor;
- where accounting control duties are entrusted by the bylaws to the board of auditors the verification shall be performed by the latter.

For the calculation of supervisory capital for December no further controls are required other than those performed for accounting control or auditing purposes.

# 9.3 Italian branches of non-EU banks

As an alternative to the provisions set out above, the Italian branches of non-EU banks may, for capital reporting purposes, calculate annual profit with

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<sup>&</sup>lt;sup>29</sup> See Article 2409-*bis*, first paragraph, of the Civil Code and Articles 155 *et seq* of the Consolidated Law on Financial Intermediation.

reference to the closing date of the parent undertaking's financial period even where this differs from 31 December.

The branches may modify supervisory capital and report changes in capital at the time annual profit is allocated by their parent undertaking on the occasion of approval of the financial statements for the entire company.

In such case, the verification of profit allocated to the branches in Italy shall be included within the scope of that carried out in respect of overall profit by the parent undertaking's external or internal control body.

Consequently, for capital reporting purposes, such branches shall use the automated prudential returns (*matrice dei conti*) for the last month of the quarter in which the financial statements were approved.

For the calculation of the half-year profit or loss to be included in the report on individual supervisory capital, where the parent undertaking calculates halfyear profit or loss the branches may modify supervisory capital when such profit or loss is quantified by the parent undertaking.

Once again, the verification of profit allocated to the branches in Italy shall be included within the scope of that carried out in respect of overall profit by the parent undertaking's external or internal control body.

Where the parent undertaking of Italian branches of non-EU banks does not prepare a half-year report, in the report for June such branches:<sup>30</sup>

- shall include any loss incurred for the six-month period following the close of the financial year only if it is material;
- may include the profit accruing during the six-month period in the calculation of supervisory capital. The amount of such profit shall be verified by external auditors or, in their absence, by the bank's control body.

# 9.4 Quarterly changes in supervisory capital

In addition to the requirements for the December and June measurements, the quarterly reports of the positive and negative elements of supervisory capital shall also include changes occurring during the quarter due to:

- modification of share capital and related changes in the share premium account and reserves;
- purchases and sales of shares, capital parts, hybrid capital instruments or subordinated liabilities issued by the bank;
- significant increases in loan losses;
- issues and repayments of innovative capital instruments, hybrid capital instruments and subordinated liabilities;

 $<sup>^{30}</sup>$  Where the approval of the financial statements is reported in a quarter other than the quarter ending in December, the half-year situation may be submitted six months after such report.

- acquisitions and disposals of holdings in banks, financial companies and insurance companies;
- acquisitions and disposals of innovative capital instruments, subordinated assets and hybrid capital instruments issued by banks, financial companies and insurance companies;
- corporate reorganization processes, such as mergers, amalgamations, transfers, demergers, etc.;
- acquisitions and disposals of positions in securitizations subject to deduction from supervisory capital;
- changes in the expected losses referred to in sub-sections 1.1. and 1.2;
- changes in commitments for forward purchases of the bank's own capital instruments;
- significant increases in value adjustments of assets allocated to the supervisory trading book.

\* \* \*

In preparing the report for individual supervisory capital, reference shall be made to the *Istruzioni per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali* of the Bank of Italy.

#### SECTION III

# CONSOLIDATED SUPERVISORY CAPITAL

# 1. Methodology for calculating consolidated supervisory capital

Consolidated supervisory capital shall be calculated in accordance with the following instructions.

# 1.1 Composition of capital

In addition to the constituents of individual supervisory capital, consolidated supervisory capital shall include the items characteristic of consolidation operations.<sup>31</sup>

Specifically, each item of Tier 1 capital and Tier 2 capital shall include both the portion pertaining to the banking group and the portion pertaining to minority shareholders (minority interests).

Minority interests in respect of instrumental companies may be included in consolidated Tier 1 capital only in the amount necessary to comply with the capital requirement for each company (8 per cent of risk-weighted assets, net of any intercompany assets). Any excess shall be excluded from the calculation of consolidated supervisory capital. Unless otherwise regulated, the same rules used for individual supervisory capital shall be used in calculating consolidated supervisory capital.<sup>32</sup>

Participating interests not eliminated in the consolidation process shall be deducted in accordance with the same criteria established for individual supervisory capital.

# 1.2 Innovative capital instruments

Innovative capital instruments shall only be included in consolidated Tier 1 capital in the presence of conditions that fully safeguard the stability of the banking group's capital base. Such conditions shall be the same as those specified in Section II, sub-section 3, with the exception of the condition set out in point h).

# 1.3 Verification of consolidated profit or loss

For the purposes of calculating group supervisory capital, annual and halfyear consolidated profit or loss shall be verified by the same bodies or persons

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 <sup>&</sup>lt;sup>31</sup> For instructions regarding the recognition of individual items, reference shall be made to the provisions of *Istruzioni per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali*.
 <sup>32</sup> For the purposes of the regulations governing consolidated supervisory capital, loans for the acquisition of

<sup>&</sup>lt;sup>32</sup> For the purposes of the regulations governing consolidated supervisory capital, loans for the acquisition of subordinated liabilities issued by group companies shall be treated as loans for the acquisition of the bank's own issues of subordinated liabilities.

responsible for controlling profit or loss for the period of the parent undertaking, using the same procedures established in Section II.

# 1.4 Repurchase of subordinated liabilities and hybrid capital instruments

In the event of repurchases carried out with a view to canceling the certificates representing a transaction, prior authorization from the Bank of Italy shall be requested by the parent undertaking even where the repurchase is carried out by a group subsidiary.

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# TITLE II (capital requirements)

# TITLE II

.....

Chapter 1

**CREDIT RISK** 

TITLE II - Chapter 1

# CREDIT RISK

# PART ONE

# STANDARDIZED APPROACH

# SECTION I

# GENERAL PROVISIONS

# 1. Introduction

The application of the basic method for calculating the capital requirement for credit risk (the "standardized approach") entails:

- 1) the assignment of exposures to different classes based on the nature of the counterparty or the technical characteristics of the transaction or the manner in which it is carried out. The exposure classes are as follows:
  - central governments and central banks;
  - supervised institutions;
  - regional governments and local authorities;
  - non-commercial and public sector entities;
  - multilateral development banks;
  - international organizations;
  - corporates and other persons;
  - retail exposures;
  - short-term exposures to supervised institutions and corporates;
  - collective investment undertakings (CIUs);
  - securitization positions;
  - exposures secured by real estate property;
  - exposures in the form of covered bonds;
  - past due exposures;
  - exposures belonging to regulatory high-risk categories;
  - other exposures.

2) the assignment of diversified risk weights to each portfolio, possibly based on credit assessments issued by a third party recognized by the Bank of Italy (ECAI) or by an export credit agency (ECA) recognized by the Bank of Italy or by a competent authority of another Member State.

Specifically, the risk weights for central governments and central banks shall be based on the ratings assigned by ECAIs or ECAs to the individual countries. Supervised institutions shall receive the rating assigned to the jurisdiction in which they are established. Public sector entities shall receive the same treatment as supervised institutions. The risk weight for corporates shall be based on the specific rating of the undertaking.

The retail portfolio shall comprise exposures to individuals and small and medium-sized enterprises meeting specific requirements. Such exposures shall be assigned a risk weight of 75%.

Exposures secured by real estate shall be assigned to a specific class. The exposures shall be assigned a risk weight of 35% or 50%, depending on whether the property is residential or commercial, respectively.

CIUs, past due exposures, covered bonds and high-risk exposures shall receive specific treatment.

For securitized exposures see Chapter 4.

A risk weight of 100% shall be assigned to exposures in classes for which risk weights based on external ratings may be used where one of the following conditions obtains:

- a) the bank does not intend to use a rating assigned by an ECAI/ECA;
- b) where the bank uses ratings, no ECAI/ECA selected by the bank has issued a rating for the exposure. The bank may benefit from the use of credit risk mitigation techniques (see Chapter 2).

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, letters a), b) and d) which gives the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:

- a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraph 1, letters a), b) and d) and paragraphs 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking or to the components of the banking group with regard to capital adequacy, the limitation of risk in its various forms, and administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph a) that permit the use by banking groups of:

- a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee of 27 December 2006.

Other relevant sources are:

— the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

# 3. Definitions

For the purposes of these regulations:

- "*External Credit Assessment Institution (ECAI)*" shall mean a credit assessment agency recognized by the Bank of Italy (see Section VIII);
- "*central government*" shall mean the central government of a sovereign state;
- "public sector entities", shall mean public entities, other than central governments, regional governments and local authorities, that primarily perform administrative activities or deliver services on a non-commercial basis, other unincorporated national or local public bodies. Public sector entities shall not include incorporated public bodies that produce goods and services intended for sale, even where this activity is performed under statutory requirement or on a non-profit basis;
- *"regional governments and local authorities"* shall mean regional and other local authorities;
- "exposures" shall mean on-balance sheet assets (for example, loans, shares, bonds, subordinated loans) and off-balance-sheet assets (for example, guarantees issued). Exposures shall not include assets deducted from supervisory capital and those allocated to the supervisory trading book subject to capital requirements for market risk (see Chapter 4);

- *"supervised institutions"* shall mean banks, electronic money institutions (EMI), investment firms and financial companies;
- "CIUs" shall mean Italian or foreign collective investment undertakings, as defined in Article 1, paragraph 1, letter m) of Legislative Decree 58 of 24 February 1998;
- "small and medium-sized enterprises" shall mean undertakings with annual sales of less than € 5 million (the sales limit shall be calculated including all connected entities);<sup>1</sup>
- *"rating"* shall mean the credit assessment assigned by an ECAI;
- *"institutional protection scheme"* shall mean a contractually agreed arrangement under which the participating banks provide mutual protection against liquidity and solvency risk in order to prevent or avoid bankruptcy;
- "financial company" shall mean the financial intermediaries entered in the special register referred to in Article 107 of the 1993 Banking Law as well as entities established in another jurisdiction provided that: 1) they are subject to the supervisory capital requirements equivalent to those established for banks under Directive 2006/48/EC; 2) are subject to forms of supervision equivalent to those established for Italian banks;
- *"solicited rating"* shall mean a rating assigned for a fee following a request from the entity evaluated. Ratings assigned without such a request shall be treated as equivalent to solicited ratings if the entity had previously obtained a solicited rating from the same ECAI;
- *"unsolicited rating"* shall mean a rating assigned without a request from the entity evaluated and without payment of a fee.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

<sup>&</sup>lt;sup>1</sup> For the definition of "connected customers", see Title V, Chapter 1, Section I, sub-section 3.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

# 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Part:

- recognition and revocation of recognition of an institutional protection system for the purposes of applying a 0% risk weight to exposures between participating banks (Section III, sub-section 2.1): Banking Supervision Department;
- application of a 150% risk weight to individual CIUs (Section III, sub-section 10.1): Banking Supervision Department;
- recognition of external credit quality assessment agencies (Section VIII): Banking Supervision Department.

#### SECTION II

# CALCULATION OF THE CAPITAL REQUIREMENT

# 1. Calculation of the capital requirement for credit risk

Banks shall maintain at all times an amount of supervisory capital<sup>2</sup> for credit risk (the risk of loss due to default on the part of borrowers) equal to at least 8% of their risk-weighted exposures.

The risk-weighted exposure amount shall be determined in accordance with the rules established in Sections III through VII. Specifically, the exposure value shall be calculated as the balance-sheet value of each exposure, taking account of the prudential filters, the existence of funded or unfunded credit protection (guarantors/protection sellers).

Exposures to an entity resident in or having its registered office in another Member State or a G-10 country, unless otherwise specified in this Chapter, shall be assigned to the class equivalent to that to which they are assigned in the borrower's home country. Equivalence shall be determined in accordance with Annex VI of Directive 2006/48/EC.

Exposures to an entity not resident or not having its registered office in another Member State or a G-10 country to a class shall be assigned to a class by analogy using the criteria envisaged for Italian entities.

The use of credit assessments issued by an ECAI or by an ECA shall be governed by the provisions of sub-section 2.

Without prejudice to the requirement to assign past due items to the past due class, where an exposure may be assigned to more than one portfolio, the following allocation rules shall apply:

- exposures to individuals and small and medium-sized enterprises shall be classified as exposures to undertakings and other entities where the requirements for classification as retail exposures are not met;
- exposures that can be assigned to the "exposures secured by a mortgage on real estate" class and to another class based on the nature of the borrower shall be assigned to the portfolio with the lowest risk weight.<sup>3</sup>

<sup>&</sup>lt;sup>2</sup> See Title I, Chapter 2.

<sup>&</sup>lt;sup>3</sup> For example, in the case of an exposure to a regional or local government with a 20% risk weight secured by a residential real estate, the exposure shall be classified in the "regional governments and local authorities" portfolio.

# 2. Use of ratings

#### 2.1 General criteria

Banks that intend to use credit assessments from ECAIs or ECAs shall provide the Bank of Italy with a list of the ECAIs and ECAs they plan to use.

Banks may not use credit assessments issued by ECAIs with which they are connected by a relationship of control or association.<sup>4</sup>

Credit assessments shall be used consistently and non-selectively. A bank that decides to use credit quality assessments from a ECAI or a ECA for a certain class of exposures shall use them for all the exposures belonging to that class.

A bank may use only credit quality assessments of ECAIs and ECAs that take account of total amounts due to it, including principal and interest.

Membership of an undertaking in group is not in itself a sufficient condition for assimilating its overall risk profile with that of any other undertaking belonging to the same group. Credit assessments assigned to entities belonging to a group of undertakings may not therefore be automatically used with another entity belonging to the same group.

Where only one credit assessment is available from a nominated ECAI or ECA, that credit assessment shall be used to determine the risk weight for that item.

Where two credit assessments are available from two nominated ECAIs and/or ECAs and the two correspond to different risk weights for a rated item, the higher risk weight shall be applied.

Where credit assessments are available from more than two ECAIs and/or ECAs, the two assessments generating the two lowest risk weights shall be referred to. If the two lowest risk weights are different, the higher risk weight of the two shall be assigned. If the two lowest risk weights are the same, that risk weight shall be applied.

Where the nominated ECAIs include more than one agency that has received recognition for unsolicited credit assessments, the assessment shall be requested of all those ECAIs that, based on the methodology selected and the information sources to which they have access, are able to issue such assessment.

Where a bank has notified the supervisory authorities that it intends to use the credit assessments of more than one ECAI and/or ECA, and these include agencies that have obtained recognition for solicited ratings or unsolicited ratings, unsolicited ratings shall be taken into consideration only where solicited ratings are unavailable.

<sup>&</sup>lt;sup>4</sup> For a definition of the notions of association and control, refer to Article 2359 of the Civil Code and Article 23 of the 1993 Banking Law, respectively.

Where the recognition of an ECAI is revoked, banks that have stated that they use the ratings of this ECAI shall adjust their exposure risk weights within 30 days.

# 2.2 Credit quality assessments by borrower and by issue

Where a credit assessment exists for a specific issuing program or facility to which the item constituting the exposure belongs, this credit assessment shall be used to determine the risk weight to be assigned to that exposure.

In the absence of a specific rating, where a credit assessment exists for another issuing program or facility or a general credit assessment exists for the borrower, one of those ratings shall apply:

- a) when the exposure ranks pari passu or senior to the issuing program/facility or it is a senior unsecured exposure of the borrower, if it carries a risk weight of less than 100%;
- b) in all cases, where one of these entails a risk weight equal to or greater than 100%.

In all cases, the provisions of Section V concerning covered bonds shall apply.

# 2.3 Domestic and foreign currency exposures

A credit assessment that refers to an item denominated in the borrower's domestic currency cannot be used to derive a risk weight for another exposure to that same borrower that is denominated in a foreign currency.

Notwithstanding the above, where an exposure arises through a bank's participation in a loan extended by a multilateral development bank whose preferred creditor status is recognized in the market, the credit assessment on the borrower's domestic currency item may be used for risk weight purposes.

The foregoing requirements shall not prejudice the application of the regulations governing covered bonds (see Section V).

#### 2.4 Short-term and long-term credit assessments

Short-term credit assessments shall be used for weighting short-term exposures to supervised institutions and corporates (see Section III, sub-section 9).

Each short-term assessment shall only apply to the exposure to which it refers and shall not be used to derive risk weights for other types of exposures. Nevertheless:

 if a short-term exposure is assigned a 150% risk weight, all unrated exposures to the counterparty whether short-term or long-term shall receive a 150% risk weight;

— if a short-term exposure is assigned a 50% risk weight, no unrated short-term exposure shall receive a risk weight of less than 100%.

# SECTION III

# **RISK WEIGHTS FOR EXPOSURES**

#### 1. Exposures to central governments and central banks

Exposures to central governments and central banks shall be assigned risk weights based on the rating assigned by an ECAI in accordance with Table 1.

		Table 1
Credit quality step	Risk weight	
1	0%	
2	20%	
3	50%	
4 and 5	100%	
6	150%	

Where a bank does not use ratings issued by an ECAI or the nominated ECAIs do not assign a rating, as an alternative, it shall alternatively apply:

- the risk weights provided for in Table 2 on the basis of risk scores assigned by SACE S.p.A. or other ECAs recognized by the supervisory authorities of other Member States if the bank has stated that it intends to use such scores;
- a 100% risk weight.

Score	Risk weights
0 - 1	0%
2	20%
3	50%
4-6	100%
7	150%

Exposures to the central governments and central banks of Member States denominated and funded in the domestic currency shall receive a risk weight of 0% (preferential risk weight).

Where the supervisory authority of a non-Member State assigns a risk weight that is lower than that indicated in Table 1 to exposures to their central

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# **PROVISIONAL TRANSLATION - THE ITALIAN TEXT ALONE IS AUTHENTIC**

Table 2

government or central bank denominated and funded in the domestic currency, banks shall assign the same risk weight to such exposures.

Exposures to the Italian State shall comprise exposures to constitutional bodies, ministries, the Bank of Italy and the Ufficio Italiano dei Cambi.

Exposures to the Central European Bank shall be assigned a 0% risk weight.

# 2. Exposures to supervised institutions

Exposures to supervised institutions shall be assigned a risk weight corresponding to the credit quality step assigned to exposures to the central government of the jurisdiction in which these institutions are established, as set out in Table 3.

Where the bank does not use credit assessments issued by ECAIs or where a rating has not been assigned, a risk weight of 100% shall be applied.

# Table 3

Credit quality step	Risk weight
1	20%
2	50%
3	100%
4 and 5	100%
6	150%

The following preferential risk weights shall apply to short-term exposures:

- exposures to supervised institutions with an original maturity of three months or less: 20%;
- exposures to supervised institutions established in a Member State with a residual maturity of three months or less, denominated in the currency of the debtor's home country, provided that the corresponding funding is denominated in the same currency: 20%;
- exposures to supervised institutions established in a non-Member State with a residual maturity of three months or less, denominated in the currency of the debtor's home country, provided that the corresponding funding is denominated in the same currency: the risk weight immediately less favourable, as set out in Table 1, to the preferential risk weight assigned to exposures to the corresponding central governments.

Exposures to supervised institutions connected with the reserve requirement established by the ECB or another central bank (indirect compliance with reserve requirements) shall be treated as exposures to central banks (see sub-section 1). Such preferential treatment shall apply provided that:

- a) the reserves are held in accordance with Regulation (EC) No. 1745/2003 of the European Central Bank of 12 September 2003;
- b) in the event of the bankruptcy or the insolvency of the supervised institution that holds the reserves, the reserves are fully repaid to the supervised institution and are not made available to meet other liabilities of the defaulting institution.

Shareholdings, innovative capital instruments and hybrid and subordinated capital instruments issued by supervised institutions shall be assigned a risk weight of 100% where they are not deducted from supervisory capital.<sup>5</sup>

Italian branches of foreign banks and foreign branches of Italian banks shall be assigned the risk weight applicable to the parent bank.

2.1 Special risk weights

The exposures of a bank to companies belonging to the same banking group established in Italy shall be risk weighted at 0% in calculating individual capital requirements, provided that the following conditions are met:

- a) the counterparty is subject to risk management and measurement procedures at the consolidated level;
- b) the transaction is documented in writing.<sup>6</sup>

Exposures between Italian banks belonging to the same institutional protection system shall be risk weighted at 0% in calculating the individual capital requirements, provided that they meet the following requirements:

- i) the contract is in writing;
- ii) there is broad participation of banks with a predominantly homogeneous business profile which are obliged to give advance notice of at least 24 months notice if they wish to end the arrangements;
- iii) the arrangements ensure that the institutional protection scheme has sufficient financial resources - including readily available funds – to meet the commitments undertaken in respect of its purpose;
- iv) disposes of suitable systems and shared methodologies for controlling and classifying risk (which give a complete overview of the risk situations of all the individual members and the institutional protection scheme as a whole), with corresponding possibilities to take corrective action in respect of participating banks; the institutional protection scheme conducts its own risk assessment, which is communicated to the individual participants;

<sup>&</sup>lt;sup>5</sup> Excluding shareholdings, innovative capital instruments, hybrid capital instruments and subordinated instruments subject to capital requirements for market risk.

<sup>&</sup>lt;sup>6</sup> The expression "in writing" shall also refer to writing in electronic form or any other durable medium, in compliance with applicable law.

- v) publishes an annual report containing an aggregated balance sheet and aggregated income statement as well as a situation report and risk report concerning the institutional protection system as a whole;
- vi) the multiple use of elements eligible for the calculation of supervisory capital and any other inappropriate creation of own funds between members of the same institutional protection system shall have been eliminated.

The Bank of Italy shall adopt implementing measures, partly with a view to ensuring the compatibility of the activities of the institutional protection system with the rules governing banking crises and the performance of supervisory functions.

The recognition of the 0% risk weight shall be subject to the verification by the Bank of Italy of the adequacy of the systems and methodologies referred to in point iv) and compliance with all other requirements under applicable law.

The Bank of Italy shall regularly verify the adequacy of the systems and methodologies referred to in point iv) and shall revoke recognition of the 0% risk weight should it discover non-compliance with one of the requirements provided for in points i) through vi).

# 3. Exposures to non-commercial and public sector entities

# 3.1 Non-commercial entities

Exposures to entities referred to in Book I, headings II and III, of the Civil Code (associations, foundations, unrecognized associations, committees) and social enterprises<sup>7</sup> shall be assigned a 100% risk weight.

# 3.2 Public sector entities

Exposures to public sector entities shall receive the risk weights applicable to supervised institutions established in the same jurisdiction (see sub-section 2). The preferential risk weights for exposures with residual maturities of three months or less shall not be applied.

The Bank of Italy may establish that the risk weight of the central government in whose jurisdiction a public sector entity is established shall apply to the public sector entity provided that an appropriate guarantee by the central government exists.

Exposures to a public sector entity established in a Member State or G-10 country which applies the risk weights envisaged for supervised institutions or the

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<sup>&</sup>lt;sup>7</sup> Social enterprises are organizations subject to Legislative Decree 115 of 24 March 2006 governing social enterprises.

central government to public sector entities shall be risk weighted using the same risk weights applied in the home country in which the entity is established. The Bank of Italy may extend this treatment to public sector entities established in other countries with a system of supervision equivalent to that in Italy.

# 4. Exposures to regional governments and local authorities

Exposures to regional governments and local authorities shall receive the same risk weights as public sector entities in the home country in which they are established.

The Bank of Italy may allow regional governments and local authorities to be receive the same risk weight as the central government in whose jurisdiction they are established where there is no significant difference in the risk of the exposures because of the revenue-raising powers of the regional governments and local authorities.

Where a Member State or a G-10 country applies the same risk weight for the central government to regional governments and local authorities established in its jurisdiction, banks may use the same risk weight.

# 5. Exposures to international organizations

This class includes only exposures to the European Community, the Bank for International Settlements and the International Monetary Fund, risk-weighted at 0%.

# 6. Exposures to multilateral development banks

Exposures to multilateral development banks (MDB)<sup>8</sup> shall be risk weighted on the basis of the rating assigned by an ECAI, as set out in Table 4. Where no rating has been assigned or the bank does not use credit assessments issued by ECAIs, a 50% risk weight shall be applied.

<sup>8</sup> For the purposes of this Chapter, the Inter-American Investment Corporation is considered to be an MDB.

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# Table 4

Credit quality step	Risk weight
1	20%
2	50%
3	50%
4 and 5	100%
6	150%

A 100% risk weight shall apply to shareholdings, innovative capital instruments, hybrid capital instruments and subordinated instruments.<sup>9</sup>

A 0% risk weight shall apply to exposures to the following MDBs, regardless of any external credit rating assigned:

- a) International Bank for Reconstruction and Development (IBRD);
- b) International Finance Corporation;
- c) Inter-American Development Bank;
- d) Asian Development Bank;
- e) African Development Bank;
- f) Council of Europe Development Bank;
- g) Nordic Investment Bank;
- h) Caribbean Development Bank;
- i) European Bank for Reconstruction and Development (EBRD);
- j) European Investment Bank (EIB);
- k) European Investment Fund (EIF);<sup>10</sup>
- 1) Multilateral Investment Guarantee Agency.

# 7. Exposures to corporates and other persons

This class includes exposures to entities other than those referred to in subsections 1), 2) 3), 4), 5) and 6) as well as exposures to natural persons and small and medium-sized enterprises that cannot be classified under retail exposures as provided for in sub-section 8.

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<sup>&</sup>lt;sup>9</sup> Equity interests, innovative capital instruments, hybrid capital instruments and subordinated instruments subject to market risk capital requirements are excluded.

 $<sup>^{10}</sup>$  A risk weight of 20% shall be assigned to the portion of unpaid capital subscribed to the European Investment Fund.

Exposures to corporates other than small and medium-sized enterprises shall be risk weighted on the basis of a credit assessment assigned by an ECAI, as set out in Table 5. Where the bank does not use credit assessments issued by ECAIs or no rating has been assigned, a 100% risk weight shall be applied. The risk weight of such undertakings may not be more favourable than that assigned to the central government in whose jurisdiction the undertaking is established.

#### Table 5

Credit quality step	Risk weight
1	20%
2	50%
3 and 4	100%
5 and 6	150%

The remaining exposures classified in this portfolio shall be assigned a risk weight of 100%.

# 8. Retail exposures

This class includes unsecured exposures<sup>11</sup> that meet the following requirements:

- a) the exposure is to natural persons or small and medium-sized enterprises;
- b) the exposure to a single customer (or group of connected customers)<sup>12</sup> does not exceed 1% of the total portfolio;
- c) the total amount due to the bank (or banking group) by an single customer (or group of connected customers), excluding exposures secured by residential real estate, shall not exceed €1 million. Past due items shall be included in the calculation (see Section VI, sub-section 1).

A risk weight of 75% shall apply to exposures in the retail class.

The retail class shall not include bonds, other debt securities and financial instruments issued in series, as provided for by the Civil Code.

# 9. Short-term exposures to supervised institutions and corporates

Where a specific short-term credit assessment from an ECAI of short-term exposures to supervised institutions or corporates is available, banks using the assessments of such ECAI shall apply a risk weight to the exposure in accordance

<sup>&</sup>lt;sup>11</sup> Unsecured exposures are exposures not covered by any form of credit protection, as defined in Chapter 2.

 $<sup>^{12}</sup>$  For the definition of "group of connected customers" see Title V, Chapter 1, Section I, sub-section 3.

with Table 6, even where it differs from the preferential risk weight for supervised institutions provided for in sub-section 2.

# Table 6

Credit quality step	Risk weight
1	20%
2	50%
3	100%
from 4 to 6	150%

### 10. Exposures to collective investment undertakings (CIUs)

# 10.1 Credit assessment based method

Exposures in the form of CIUs shall be risk weighted on the basis of the credit assessment assigned by an ECAI, in accordance with Table 7.

Credit quality step	Risk weight
1	20%
2	50%
3 and 4	100%
5 and 6	150%

Table 7

Where the bank or banking group does not use assessments by ECAI or a rating has not been assigned, a 100% risk weight shall be applied.

The Bank of Italy may require a 150% risk weight for exposures to individual CIUs associated with particularly high risks.

# 10.2 Average risk weight method

Where the bank is aware of the underlying exposures of a CIU, that exposure may receive an average risk weight calculated as the sum of the products of the ratio of each individual exposure to the total exposure and the corresponding risk weight.

Where the bank is not aware of the underlying exposures of a CIU but may obtain information on the maximum investment limits in the various exposure classes established under the fund's mandate, it may apply an average risk weight

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calculated on the basis of such information. In this case the risk weight shall be calculated through the progressive application, in descending order, of the risk weights of the exposure classes attracting the highest capital requirement to the maximum investment allowed under the mandate of the CIUs in each class, until the maximum total investment limit is reached.<sup>13</sup>

Banks may apply the average risk weight of a CIU provided that the following eligibility criteria are met:

- a) the CIU is managed by a company which is subject to supervision in a Member State or G-10 country.
- b) the CIU's prospectus or an equivalent document includes:
  - the categories of assets in which the CIUs is authorized to invest;
  - if investment limits apply, the relative limits and the methodologies to calculate them;
- c) the business of the CIU is reported on at least an annual basis to enable an assessment to be made of the assets and liabilities, income and operations over the reporting period.

Banks may rely on third parties to calculate the capital requirement for the credit risk relating to shares in CIUs. Specifically, this task may be performed by the asset management company that operates the CIU or the depository or subdepository bank. Banks shall evaluate this choice carefully, taking into account the size and complexity of the CIU for which they are granting the engagement.

Banks that intend to rely on a third party to calculate the capital requirement shall:

- assess the ability of the entity to perform the task, taking account of the characteristics of the investments in the fund;
- execute an agreement precisely specifying the tasks to be performed in calculating the requirement. The agreement shall govern the methods, timetable and control processes for the reporting flows with which the person engaged to perform the calculation provides the bank with all information, documentation and outputs from the calculation performed;
- verify ongoing compliance with the terms of the agreement.

The agreement shall govern the revocation of and withdrawal from the engagement, taking account of the need to ensure continuity in calculating the capital requirement.

In order to avoid disruptions in the third party's performance of its tasks, replacement of the entity shall be governed by the agreement granting the engagement, establishing that, where the engagement is granted for an unspecified period of time, it may be revoked by the bank at any time, while the designated

<sup>&</sup>lt;sup>13</sup> For example, if the CIU's rules permit it to invest up to 20% of its assets in shares of undertakings with a 100% risk weight and the remaining amount in government securities risk weighted at 20%, the average risk weight would be: 20%\*100%+80%\*20%=36%.

entity may withdraw subject to provision of at least six months' notice. In addition, the agreement shall provide that revocation or withdrawal shall not take effect until another suitable entity accepts the engagement to replace the previous entity.

# 11. Securitization positions

Risk-weighted exposure amounts for securitization positions shall be determined in accordance with Chapter 2, Part 2.

#### SECTION IV

# EXPOSURES SECURED BY REAL ESTATE PROPERTY

# 1. General rules

Exposures secured by real estate property shall include exposures secured by a mortgage on real estate or connected with real estate leasing contracts, in accordance with the procedures set out in this section, provided that the following conditions, in addition to those contained in sub-sections 2, 3, 4 and 5, are satisfied:

- a) the value of the property does not materially depend upon the credit quality of the debtor;<sup>14</sup>
- b) the property is appraised by an independent valuer<sup>15</sup> at a value that does not exceed the market value;<sup>16 17</sup>
- c) the claim on the collateral is legally enforceable in all relevant jurisdictions and may be realized in a reasonable period of time.
- d) the property value shall be adequately monitored. Accordingly: i) the value of the property shall be verified at least once every three years for residential property and once every year for commercial real estate, or more frequently where the market is subject to significant changes in conditions. Statistical methods may also be used to monitor the value of the property and to identify property that requires verification; ii) where the verifications under point i) reveal a material decline in the value of the property, a valuation shall be made by an independent valuer, based on a value that shall not exceed the market value;<sup>18</sup> <sup>19</sup> the property valuation shall be reviewed by an independent valuer at least once every three years for exposures exceeding €3 million or 5% of the bank's supervisory capital<sup>20</sup>;

<sup>&</sup>lt;sup>14</sup> This requirement does not preclude situations where purely macro-economic factors affect both the value of the property and the performance of the borrower.

<sup>&</sup>lt;sup>15</sup> Independent valuer shall mean a person who possesses the necessary qualifications, ability and experience to perform a valuation and who is independent of the loan granting or monitoring process.

<sup>&</sup>lt;sup>16</sup> Market value shall mean the estimated amount for which the property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion. The market value shall be documented in a transparent and clear manner.

<sup>&</sup>lt;sup>17</sup> The value may be no higher than the "mortgage lending value" (as defined in Annex VIII, Part III, paragraph 64, of Directive 2006/48/EC) if the property is located in a Member State which permits such valuations.

<sup>&</sup>lt;sup>18</sup> Market value shall mean the estimated amount for which the property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion. The market value shall be documented in a transparent and clear manner.

<sup>&</sup>lt;sup>19</sup> The value may be no higher than the "mortgage lending value" (as defined in Annex VIII, Part III, paragraph 64, of Directive 2006/48/EC), if the property is located in a Member State which permits such valuations.

 $<sup>^{20}</sup>$  The initial independent valuation shall be carried out as of the date on which these regulations enter into force for all operations existing for more than 3 years.

- e) the types of property accepted as collateral and the related lending policies shall be clearly documented;
- f) the property serving as collateral shall be adequately insured against damage.

The portion of an exposure secured by residential property (or relating to leasing operations involving residential property) which exceeds the regulatory loan-to-value ratio provided for in this Section shall be assigned to another class in accordance with the criteria established in this Chapter.

Where the exposure is secured by real estate collateral located in another Member State and, for loans secured by residential property, in another G-10 country, it shall be classified as an exposure secured by real estate property if the supervisory authority of the country in which the property is located consider this collateral eligible for classification in the corresponding portfolio.

#### 2. Exposures secured by mortgages on residential property

A risk weight of 35% shall be applied to exposures secured by mortgages on residential property provided that:

- a) the residential property is or will be occupied or is or will be rented by the owner;
- b) the borrower's capacity to repay does not materially depend on cash flows generated by the property serving as collateral, but rather on the capacity of the borrower to repay the debt from other sources;
- c) the amount of the exposure does not exceed 80% of the value of the property;<sup>21</sup> this limit may be raised to 100% if supplemental guarantees are provided (see sub-section 2.1) (the loan-to-value condition).

Condition b) may be dispensed with for exposures secured by mortgages on residential property located in a Member State for which the individual supervisory authorities have evidence that there is a well-developed and longestablished residential real estate market in their territory with sufficiently low loss rates.

# 2.1 Eligible supplemental guarantees

A 35% risk weight may be applied to the entire amount of the loan secured by a mortgage on residential property, in accordance with sub-section 1, where the amount of the loan is greater than 80% and less than 100% of the value of the

 $<sup>^{21}</sup>$  The value of the property is equal to the market value (or mortgage lending value) reduced if necessary to reflect the results of monitoring as well as any earlier mortgages on the property.

mortgaged property and eligible supplemental guarantees have been provided.<sup>22</sup> Supplemental guarantees may be provided by the borrower or by a third party.

Guarantees shall be acquired in such a manner that the ratio between the amount of the loan and the sum of the value of the mortgaged property and the supplemental guarantees does not exceed the 80% limit.

In order to enable lending banks to obtain an effective benefit from the reduction in credit risk, the supplemental guarantees shall meet the general requirements provided for in the rules governing credit risk mitigation (see Chapter 2, Part 1, Section II).

# 3. Exposures related to the leasing of residential real estate

A risk weight of 35% shall apply to transactions involving the leasing of residential real estate under which the tenant has a purchase option, provided that:

- a) any purchase option may be exercised only if all lease instalments have been paid;
- b) the lessor retains title to the leased property up until the moment of payment of the purchase price following the exercise of any purchase option by the tenant;
- c) the borrower's capacity to repay the debt does not materially depend on cash flows generated by the underlying property serving as collateral, but rather on the capacity of the borrower to repay the debt from other sources;
- d) the loan is less than 80% of the property's market value. Accordingly, the amount of the loan shall be equal to the net present value of the sum of the minimum lease payments that the tenant is or may be required to pay over the lifetime of the lease and the payment of any bargain purchase option (i.e. an option whose exercise is reasonably certain).

#### 4. Exposures secured by mortgages on commercial real estate

Exposures secured by mortgages on commercial real estate (property for use as office space, distribution or other economic activities) located in Italy may be risk-weighted at 50% provided that the capacity of the borrower to repay does not materially depend upon the cash flows generated by the property serving as collateral, but rather on the capacity of the borrower to repay the debt from other sources.

This condition may be dispensed with for exposures secured by commercial property located in Members States for which the individual supervisory

<sup>&</sup>lt;sup>22</sup> Supplemental collateral may consist of guarantees in the form of *fideiussioni*, *polizze fideiussorie and* guarantees issued by public guarantee funds or *confidi*, assignment of claims on the government, assignments of annuities or subsidies from the central government or public entities, and pledges on government securities.

authorities have evidence that there is a well-developed and long-established commercial real estate market in their territory with sufficiently low loss rates.

The 50% risk weight shall apply to the portion of the loan that does not exceed 50% of the market value of the property; the remaining portion of the loan shall be assigned a risk weight of 100%.<sup>23</sup>

The 50% risk weight is also permitted for exposures secured by commercial real estate located in another Member State provided that the competent supervisory authorities permit such treatment.

# 5. Exposures related to the leasing of commercial real estate

A 50% risk weight shall apply to transactions involving the leasing of commercial real estate (property for use as office space, distribution or other economic activities) located in Italy in which the tenant has a purchase option.

The 50% risk weight shall apply to the portion of the loan that does not exceed 50% of the market value of the leased property. The 100% risk weight shall be applied to the remaining portion of the loan.<sup>24</sup>

This treatment may be recognized provided that:

- a) any purchase option may be exercised only if all lease instalments have been paid;
- b) the lessor retains title to the leased property up until the moment of payment of the purchase price following the exercise of any purchase option by the tenant;
- c) the borrower's capacity to repay the debt does not materially depend on cash flows generated by the underlying property serving as collateral, but rather on the capacity of the borrower to repay the debt from other sources.

The 50% risk weight is also permitted for exposures relating to leases involving commercial real estate located in another Member State provided that the competent supervisory authorities permit such treatment.

<sup>&</sup>lt;sup>23</sup> The value of the property is equal to the market value (or mortgage lending value, if allowed by the supervisory authority of the country in which the real estate is located) reduced if necessary to reflect the results of monitoring as well as any pre-emption rights held by third parties in the property.

<sup>&</sup>lt;sup>24</sup> The 50% risk weight shall be applied to the entire amount of the loan until 31 December 2012.
### SECTION V

## EXPOSURES IN THE FORM OF COVERED BONDS

Exposures in the form of covered bonds shall include:

- bonds issued by Italian banks in accordance with Articles 7-bis and 7-ter of Law 130 of 30 April 1999, as amended, and the related implementing regulations;
- bonds issued by banks established in a Member State if they possess the characteristics provided for in Article 22, paragraph 4, of Directive 85/611/EEC (as replaced by Article 1 of Directive 2001/108/EC), provided that the supervisory authority of the issuer permits the classification of covered bonds in the corresponding portfolio.

Exposures under the form of covered bonds shall be assigned a lower risk weight than that for ordinary exposures to the issuing bank, in accordance with Table 8.

# Table 8

Risk weight of exposures to the issuing bank	Risk weight of the exposures in the form of covered bonds
20%	10%
50%	20%
100%	50%
150%	100%

#### SECTION VI

# EXPOSURES WITH SPECIAL RISK WEIGHTS

### 1. Past due exposures

The unsecured portion<sup>25</sup> of past due exposures shall be weighted as follows:

- a) 150% if specific value adjustments are less than 20% of the unsecured portion gross of value adjustments;
- b) 100% if specific value adjustments are no less than 20% of the unsecured portion gross of value adjustments.

Past due exposures shall include:

- 1) bad debts, substandard loans, restructured exposures;<sup>26</sup>
- exposures past due by more than 90 days to entities resident or having their registered offices in Italy and assigned to the classes referred to in subsections 3 (exposures to non-commercial and public sector entities), 7 (exposures to corporates and other persons) and 8 (retail exposures)<sup>27 28</sup>;
- 3) exposures past due by more than 90 days, other than those for which a 90day exception is allowed;<sup>29</sup> in this case reference shall be made to the individual exposure (transaction-based approach).

For a definition of the categories referred to in point 1), please refer to the reporting rules.<sup>30</sup> As regards the exposures referred to in point 2), for retail exposures only banks may adopt a transaction-based approach as an alternative to the counterparty-based approach if this is consistent with their management practices.

Past due exposures secured by mortgages on residential real estate or arising from leasing transactions involving such property shall receive a risk weight of 100% or, where the value adjustments are no less than 20% of the gross exposure value, of 50%.

Past due exposures secured by mortgages on commercial real estate or arising from leasing transactions involving such property shall receive a risk weight of 100% or, where the value adjustments are no less than 20% of the gross exposure value, of 50%.

 $<sup>^{25}</sup>$  The unsecured portion of the past due exposure refers to the part not covered by credit protection, as defined in Chapter 2.

<sup>&</sup>lt;sup>26</sup> For definitions, see the *Manuale per la compilazione della matrice dei conti.* 

<sup>&</sup>lt;sup>27</sup> For definitions, see the *Manuale per la compilazione della matrice dei conti*.

<sup>&</sup>lt;sup>28</sup> For these exposures, a 180-day limit shall replace the 90-day limit until 31 December 2011.

<sup>&</sup>lt;sup>29</sup> The criteria for determining the past due exposure are those provided for exposures past due by more than 180 days.

<sup>&</sup>lt;sup>30</sup> For definitions, see the *Manuale per la compilazione della matrice dei conti*.

Where a past due exposure is fully secured by forms of collateral other than those eligible for credit risk mitigation purposes,<sup>31</sup> a risk weight of 100% shall be assigned provided that the bank has in place strict operational criteria to ensure the good quality and legal certainty of the collateral and the related value adjustments are equal to at least 15% of the gross exposure.<sup>32</sup>

## 2. High-risk exposures

Exposures in respect of investments in venture capital firms and private equity initiatives shall be assigned a risk weight of 100%.

Exposures to CIUs not subject to limitations on the use of leverage (hedge funds) shall be assigned a risk weight of 150%.

The Bank of Italy may apply a higher risk weight in the event of adverse market conditions.

## 3. Other exposures

The following shall be risk weighted at 100%:

- tangible assets as defined by the regulations governing financial statements applicable to banks;
- accrued income not assigned to another specific class;
- shares, innovative capital instruments, hybrid capital instruments and subordinated instruments issued by entities other than supervised institutions.<sup>33</sup>

Cash items in the process of collection shall be assigned a 20% risk weight.

Cash in hand and equivalent cash items shall be assigned a 0% risk weight.

Gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities shall be assigned a 0% risk weight.

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<sup>&</sup>lt;sup>31</sup> See Chapter 2.

 $<sup>^{32}</sup>$  For this purpose, in the case of leasing, ownership of the assets is equivalent to collateral.

<sup>&</sup>lt;sup>33</sup> See Section III, sub-section 2.

#### SECTION VII

### **OFF-BALANCE-SHEET TRANSACTIONS**

## 1. Guarantees and commitments

In order to calculate the credit risk associated with guarantees and commitments issued, the bank shall first calculate the credit equivalent amount of the exposure. Next it shall calculate the capital requirement by multiplying the credit equivalent amount by the specific risk weight of the counterparty.

The credit equivalent amount shall be calculated by applying credit conversion factors that take account of the higher or lower probability that the guarantee or commitment could be transformed into an on-balance-sheet exposure.

Specifically, one of the following credit conversion factors shall be applied to the exposures, as provided for in Annex B: (i) low risk, 0%; (ii) medium-low risk, 20%; (iii) medium risk, 50%; (iv) full risk, 100%.

In the case of asset sale and repurchase agreements and outright forward purchases, the risk weights shall be those of the assets in question and not those of the counterparties to the transactions.

Where a bank provides credit protection for a basket of exposures under terms that the nth default among the exposures shall trigger payment and that this credit event shall terminate the contract, and where the product has an external credit assessment from an eligible ECAI, the risk weights prescribed by the regulations governing securitization (see Chapter 2) shall apply. If the product is not rated by an ECAI or if the bank does not use assessments from ECAIs, the risk weights of the exposures included in the basket shall be aggregated, excluding n-1 exposures, up to maximum of 1,250% and multiplied by the nominal amount of the protection provided by the credit derivative to obtain the risk weighted exposure amount. The n-1 exposures to be excluded from the basket shall be determined on the basis that they shall include those exposures each of which produces a lower risk-weighted exposures included in the aggregation.

## 2. Derivatives and long settlement transactions

The exposure value of derivative contracts and long settlement transactions shall be calculated in accordance with the procedures set out in Chapter 3 (counterparty risk).

#### SECTION VIII

# EXTERNAL CREDIT ASSESSMENT INSTITUTIONS

## 1. Introduction

For the purposes of determining risk weights under the standardized approach, the Bank of Italy shall recognize credit quality assessments issued by external credit assessment institutions (ECAIs).

ECAIs shall be recognized on the basis of compliance with requirements concerning the methodology used to formulate opinions (objectivity, independence, regular review, transparency) and the resulting credit assessments (credibility and transparency).

Verification of compliance with the requirements and mapping of ratings to risk weight classes shall be performed by the Bank of Italy on the basis of the criteria set out in this Section.

ECAIs recognized by the supervisory authorities of another Member State may be recognized by the Bank of Italy on the basis of the assessment performed by the supervisory authority in question (indirect recognition).

Recognition may be requested for one of the following categories:

- a) solicited ratings;
- b) unsolicited ratings, provided that the ECAI only issues credit assessments of this kind (however, it is possible to request recognition for solicited ratings and, for public finance ratings only, unsolicited ratings at the same time).

Recognition by the Bank of Italy is intended to allow banks to use external ratings to determine the risk weights for calculating the capital requirement for credit risk. Recognition is based solely upon verification of compliance with the requirements prescribed in this Section and does not in any way intended to represent an assessment of the merit of the ratings issued by ECAIs or indicate support for the methodology employed, for which the ECAIs are solely responsible.

#### 2. Requirements for ECAIs

The Bank of Italy recognizes legal persons as ECAIs.

An ECAI may also request recognition for its subsidiaries in a single application, provided that the latter adopt analogous methodologies such that the assessments they issue can be considered equivalent to those of the applicant.

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ECAIs shall satisfy the following requirements for the purposes of receiving recognition:

- a) Objectivity.
- the methodology adopted shall take account of the factors material to differentiating the specific characteristics of the different positions assessed. The recognition process is not intended to verify the correctness of the methodology; However, the latter shall be supported by statistical evidence from its use in the past;
- the robustness of the methodology shall be adequately supported by the available data concerning the default rates recorded for individual rating grades and the migration rates between different rating grades. The availability of a substantial body of data confirming the robustness of the ratings may permit a less extensive analysis of the overall methodology;
- the methodology shall have been applied in a consistent manner to all exposures in a given class and adequately discriminate between exposures in different classes;
- the methodology shall have been validated internally on the basis of historical experience;
- the methodology is corrected in the light of systematic errors highlighted by the backtesting of outputs.
- b) Independence.
- the formulation of ratings shall be free from external interference, and conflicts of interest with regard to ownership, customers and other activities performed by the ECAI and its analysts shall be managed appropriately. For this purpose, ECAIs applying for recognition shall certify and demonstrate that:
  - measures have been taken to ensure independence from ownership and to prevent external political or economic pressures or constraints from jeopardizing the objectivity of credit assessments;
  - 2) the organizational structure provides for the operational, human resource and, possibly, legal separation of rating activity from other activities, such as consulting and marketing, that could affect the objectivity of the assessments;
  - 3) internal rules are in place to prevent conflicts of interest concerning persons involved in assigning ratings;
  - 4) rating activities are profitable and adequate financial resources are available;
  - 5) the structure of fees charged to the entities rated and of the compensation of staff responsible for assigning ratings is neutral with respect to the outcome of the assessment;

- 6) measures have been taken to ensure the independence of the ratings concerning major customers that generate a significant share of revenues (greater than 5%);
- 7) they have sufficient staff with an appropriate level of professional expertise and experience in performing credit assessments (for example, at least one of the persons participating in a rating decision should have at least three years of experience). The number of staff shall be appropriate to the volume of business conducted, also considering the need to maintain ongoing contact with the entities rated where this is part of the methodology employed;
- 8) internal corporate governance rules are clearly formalized;
- 9) they make adequate disclosure of any conflicts of interest;
- 10) they have an internal audit function (or other similar function) that is hierarchically independent of the persons responsible for assigning ratings and is charged with verifying the effective application of the independence conditions.
- c) Ongoing review.
- ECAIs shall have procedures to monitor any changes in the assessed entity's position that could lead to significant change in the rating and, if necessary, to amend the rating promptly;
- ECAIs shall have a proven back-testing procedure;
- credit assessments shall be reviewed at least once a year.
- d) Market credibility.
- Considering the structure of the credit assessment market, compliance with this requirement is associated with the degree to which an ECAI's ratings are accepted at the international level;
- where an ECAI operates exclusively or primarily in its domestic market, the number of banks that intend to use its ratings in applying the standardized approach shall be taken into consideration (the number of banks shall be at least five, they shall have their registered offices in at least three different regions and shall belong to different banking groups).
- e) Transparency of methodologies and ratings.
- ECAIs shall disclose the principles underlying their rating methodology and any changes in the methodology in a manner that is understandable to users of the credit assessments;
- credit assessments shall be accessible in a timely manner to all banks and, where banks are required to pay a commission, such commission shall be set in a non-discriminatory manner. The effective default rates and, where available, the theoretical probabilities of default associated with the individual rating grades shall also be accessible;

- where an ECAI assigns credit assessments that banks may not use for the purposes of this Chapter, the manner in which credit assessments are announced shall specify which credit assessments banks they may use (for example, if both a solicited and an unsolicited rating are assigned, the latter shall be clearly identifiable).

In assessing compliance with the requirements, the Bank of Italy shall consider any adoption of a code of conduct based on international best practices.

## 3. Recognition process

The application for recognition shall be submitted by the ECAI. For ECAIs already recognized in other Member States, the application for recognition may also be submitted by a bank that plans to use the ECAI's ratings.

The application shall provide the information requested in a questionnaire (see Annex A), in sufficient detail to verify compliance with all the requirements indicated in sub-section 2.<sup>34</sup> If the application is submitted by an ECAI, it shall be accompanied by:

- a) certification in which an independent external entity with proven professional expertise and high standing affirms that it has verified that of all the requirements set out in sub-section 2 have been met. The entity shall also certify that, where the ratings are not accessible to the public, they correspond to those for the period in which they were produced (see sub-section 4);
- b) certification of the banks that plan to use the ratings.

Where the application for recognition is submitted by a bank, the Bank of Italy may request the cooperation of the ECAI for the purposes of recognition as well as the certification referred to in point a) above.

The Bank of Italy may also consider other information in addition to that submitted in the application for recognition if it is deemed material and significant in evaluating the application.

The application shall specify:

for which of the following sectors recognition is requested:<sup>35</sup>

a) public finance;

b) commercial entities;

c) structured finance (including securitization positions and CIUs);

<sup>&</sup>lt;sup>34</sup> Information provided to the Bank of Italy shall be covered by professional secrecy in accordance with Article 7 of the 1993 Banking Law.

<sup>&</sup>lt;sup>35</sup> Recognition may also be requested for sub-categories of borrowers within each class where the ECAI operates in specialised sectors (e.g. by size of the undertaking).

 whether recognition is requested for solicited or unsolicited ratings (see subsection 1).

The Bank of Italy shall take part in joint assessment processes with the supervisory authorities of other Member States where recognition is requested in more than one Member State. In this case, the application may be submitted in accordance with the guidelines approved by the Committee of European Banking Supervisors (available on its website <u>www.c-ebs.org</u>).<sup>36</sup> The joint assessment process also involves the designation of a "process facilitator", who will be responsible for coordination and maintaining contacts with the ECAI. The final decision concerning recognition shall be taken by the Bank of Italy, taking account of the review conducted during the course of the joint assessment process.

The process shall be completed within 180 days of receipt of the application.

The Bank of Italy shall publish the list of recognized ECAIs and the related mapping on its website (<u>www.bancaditalia.it</u>).

# 4. Mapping

The credit assessments issued by ECAIs shall be associated with the risk weight classes established in these regulations (mapping).

Mapping shall be carried out by the Bank of Italy, taking account of quantitative and qualitative factors, with the latter including the definition of default used.

ECAIs shall in any event have data on annual default rates (theoretical, where available, and effective) and transition matrices with a depth of at least 5 years. They shall calculate the three-year cumulative default rates based on this data. Compliance with this time requirement shall be also be verified with regard to the size of cohorts for the various rating grades for each year.

For credit assessments relating to exposures other than structured finance exposures, the Bank of Italy shall perform the mapping using the methodology recommended by the Basel Committee.

Mapping shall be based on observations of the three-year cumulative default rate (CDR) and shall adopt as a reference variable the ten-year average of the CDR, identifying benchmark values for each risk weight class. It shall also specify "monitoring" and "trigger" level benchmarks to be compared with the two most recent 3-year CDR observations.

For structured finance positions, mapping shall be performed by the Bank of Italy by comparing the default rates registered by a given ECAI with benchmark values, where available, or with default rates recorded by other ECAIs for populations of issuers that the Bank of Italy feels represent an equivalent level of credit risk.

 $<sup>^{36}</sup>$  In such cases, the Bank of Italy may require certification by an external entity as provided for in this subsection.

Default data for at least ten years shall be required for this segment.

The data provided for recognition purposes shall be based on the ratings published at the time of issue. Where the ratings are not accessible to the public, ECAIs shall certify that these ratings correspond to those for the period in which they were produced.

## 5. Ongoing review.

The Bank of Italy shall ascertain ongoing compliance with the recognition requirements. For this purpose, ECAIs shall provide the Bank of Italy with:

- notice of any material change in their rating systems that would produce a change in the ratings of a significant portion of the entities rated in a given segment;
- mapping data updated on an annual basis (see sub-section 4);
- every four years, updated responses to the questionnaire set out in Annex A (including certification by an expert as provided for in sub-section 3).

Where an ECAI has been recognized by more than one Member State, this review shall be carried out in cooperation with the supervisory authorities involved using procedures agreed with them.

### SECTION IX

# CONSOLIDATED CAPITAL REQUIREMENT

The consolidated capital requirement shall be 8% of risk-weighted assets.

Banking groups and the other entities specified in Section I, sub-section 4 shall be required to meet the consolidated capital requirement on an ongoing basis.

## ANNEX A

# INFORMATION THAT EXTERNAL CREDIT ASSESSMENT INSTITUTIONS SHALL PROVIDE IN THE APPLICATION FOR RECOGNITION

## **General information**

- Type of application: a) for use in the standardized approach; b) for riskweighting securitizations;
- market segments for which recognition is requested:
  - a) public finance;
  - b) commercial entities;
  - c) structured finance;
- credit assessments issued (solicited and/or unsolicited) and those for which recognition is requested. Where both solicited and unsolicited ratings are issued, a brief description of the rationale behind the policy shall be provided;
- countries where the applicant is active and Member States in which recognition is being requested.

## **Presentation of the applicant**

- legal form and structure of the group to which the applicant belongs, if any;
- ownership structure, listing at a minimum any shareholders that hold more than 10% of the share capital or that in any case exercise significant influence;
- total number of employees;
- total number of major customers<sup>37</sup> and the percentage of total revenues from services rendered to them;
- financial information: financial statements for the past three years and forecasts for the next three years, where available.

 $<sup>\</sup>overline{^{37}}$  Major customers shall be those who account for 5% or more of total revenues.

## Requirements

#### *Objectivity*

- A high-level description of the credit assessment methodology and the procedures through which it is applied in a consistent manner and reviewed.
  An explanation shall also be provided of the role and operation of any committees that approve the assessments and the significance of non-public information obtained from rated entities;
- for each of the borrower or exposure group for which a core methodology is applied,<sup>38</sup> a high-level description of the quantitative and qualitative inputs;
- a brief explanation by geographical area of the differences in the methodologies;
- a description of the procedures used to verify the consistency and discriminatory power of the methodologies, with details on the results generated by such analysis;
- a comparison of theoretical default probabilities where available and effective default rates;<sup>39</sup>
- the results of internal validation.

## Independence

Identification and detailed description of all factors demonstrating compliance with the independence requirements for which specific certification pursuant to sub-section 2 of Section VIII is required. Material demonstrating that the requirements have been met shall also be attached.

### Ongoing review

- General information on the frequency and scope of regular reviews, people involved, means used to ensure timely updating of data and assessments, automatic warning systems, mechanisms to enable systematic errors to feedback into changes in the methodology;
- a summary of the reviews carried out;

<sup>&</sup>lt;sup>38</sup> Two methodologies shall be considered distinct when the their core elements change. Adaptation of a methodology to the specific characteristics of a certain class of borrowers (for example, to take account of the characteristics of the geographical area in which an undertaking operates) shall not, for the purposes of this questionnaire, be considered a different methodology if the basic features remain unchanged.

<sup>&</sup>lt;sup>39</sup> This comparison shall be performed for at least the past five years for exposures other than in respect of securitizations, for which a ten-period period shall be used.

- an explanation of the methods for performing back-testing and certification that have been in use for at least one year.

# Transparency

 Explanation and demonstration of the way in which the principles of the methodologies employed and changes made to them are disclosed to the banks involved.

## Reputation

- Information demonstrating widespread reliance by the international market on the ratings issued. For example, the following factors may be considered: market share, revenues generated by rating activities, and, more generally, financial resources available, any pricing based on the rating, the use of the ratings by banks for bond issues or assessing credit risk;
- where an ECAI operates exclusively or primarily in its domestic market, certification is required from at least five banks, belonging to different banking groups and having registered offices in at least three regions, that plan to use the ratings in applying the standardized approach to calculate the capital requirement for credit risk.

## Disclosure of credit assessments

- Accessibility to the ratings on the part of banks;
- where both solicited and unsolicited ratings are issued, the methods employed to enable banks to distinguish between the two (definition of solicited and unsolicited ratings, indication of the specific nature of ratings) shall be disclosed;
- where access to ratings or other information needed for their use (e.g. the solicited or unsolicited nature of the credit assessments) is granted in exchange for payment, the criteria used to determine the price and certification that pricing is non-discriminatory in respect of country origin or other non-commercial factors shall be described.

# Mapping of ratings for commercial entities and public finance

- The definition of default used and the time horizon;
- Most recent two three-year cumulative default rates (CDR);
- Average three-year CDR based on a five-year time series;

- Description of the methodology for calculating CDRs: method of aggregating defaults (weighting mechanism), selection of pool (static or dynamic, adjusted), etc.;
- For each rating grade, the number of defaults actually registered each year and the annual default rates based on data based on a five-year time series;
- Comparison between the actual and theoretical (where available) annual default rates;
- Transition matrices with the size of the cohorts and the number of ratings withdrawn for each rating grade;
- Dynamic characteristics of the rating methodology (point-in-time or throughthe-cycle);
- The rating scale adopted and the meaning of the rating categories;
- The geographic coverage of the rating system;

## Mapping of securitization ratings

- Definition of default/impairment on which the default/impairment rates are calculated and the time horizon;
- Analysis of the performance of the rating system and description of its main features (choice of the time horizon, impact of withdrawn and cured ratings on default rates, how seasoning is taken into account);
- Data on the default and/or loss/recovery rates based on a time series of at least ten years;
- Transition matrices with the size of the cohorts and the number of ratings withdrawn for each rating grade;
- The rating scale adopted and the meaning of the rating categories;
- The geographic coverage of the rating system.

## Mapping of CIU ratings

- Presentation of the ratings considered as assessing primarily the credit quality of the underlying assets;
- Description of the factors considered in making the assessment and the treatment methods adopted;
- Transition matrices with the size of the cohorts and the number of ratings withdrawn for each rating grade;
- The rating scale adopted and the meaning of the rating categories;
- The geographic coverage of the rating system.
- Credit assessment time horizon.

### ANNEX B

# **CLASSIFICATION OF GUARANTEES AND COMMITMENTS**

## Full risk

- Guarantees having the character of credit substitutes;
- credit derivatives: commitments in respect of the trading of credit derivatives as a protection seller;
- acceptances;
- endorsements on bills not bearing the name of another bank;
- irrevocable standby letters of credit having the character of credit substitutes;
- spot and forward purchase commitments for securities and other financial instruments other than foreign exchange, except for those allocated to the supervisory trading book and subject to the capital requirements for market risk as well as those with own equity instruments as the underlying;<sup>40</sup>
- spot and forward deposits and loans to be made;
- the unpaid portion of partly paid-up shares and securities, except for those allocated to the supervisory trading book and subject to the capital requirements for market risk;
- assets transferred with option for repurchase upon demand by transferee;<sup>41</sup>
- written put options on securities and financial instruments other than foreign exchange, except for written put options allocated to the supervisory trading book and subject to the capital requirements for market risk, as well as those with own equity instruments as the underlying;<sup>42</sup>
- commitments related to participation in the Interbank Deposit Protection Fund;
- other lending commitments of certain utilization.

 $<sup>^{40}</sup>$  The counterparty to which the risk weight refers shall be the entity that issued the financial instrument being traded.

<sup>&</sup>lt;sup>41</sup> The counterparty to which the risk weight refers shall be the entity that issued the financial instrument being traded, or in the absence of an issuer, the borrower.

 $<sup>^{42}</sup>$  The counterparty to which the risk weight refers shall be the entity that issued the financial instrument being traded, or in the absence of an issuer, the borrower.

## Medium risk

- Irrevocable or confirmed documentary credits except for those in the which the shipment of the goods serves as collateral or other self-liquidating transactions;
- guarantees not having the character of credit substitutes;
- warranties and indemnities (including tender, performance, customs and tax bonds) and other guarantees;
- irrevocable standby letters of credit not having the character of credit substitutes;
- facilities supporting securities issues (NIFs and RUFs);
- undrawn credit facilities (lending commitments of uncertain utilization,<sup>43</sup> commitments to provide guarantees or acceptance facilities) with an original maturity of more than one year.

# Medium/low risk

- Irrevocable or confirmed documentary credits in which the shipment of the goods serves as collateral or other self-liquidating transactions;
- undrawn credit facilities (lending commitments of uncertain utilization,<sup>44</sup> commitments to provide guarantees or acceptance facilities) with an original maturity of up to one year, which may not be revoked unconditionally at any time without notice or that do not provide for automatic revocation due to deterioration in a borrower's creditworthiness;
- other medium/low risk assets.

## Low risk

- Undrawn credit facilities (agreements to lend, purchase securities, provide guarantees or acceptance facilities) which may be revoked unconditionally at any time without notice, or that provide for automatic cancellation due to deterioration in a borrower's creditworthiness. Retail credit lines may be considered as unconditionally revocable where the terms permit the bank to cancel them to the full extent allowable under consumer lending laws;
- other low-risk items.

<sup>&</sup>lt;sup>43</sup> Including securities.

<sup>&</sup>lt;sup>44</sup> Including securities.

#### PART 2

## INTERNAL RATINGS-BASED APPROACH

#### SECTION I

## GENERAL PROVISIONS

## 1. Introduction

This Part governs the internal ratings-based (IRB) approaches for calculating the capital requirement for credit risk.

As with the standardized approach, the regulations apply to exposures in the banking book. However, under IRB approaches, the risk weights applied to assets are calculated on the basis of banks' internal assessments of obligors (or, in some cases, of transactions).

Through the use of internal ratings-based systems, banks calculate their riskweighted exposure. The provisions of Part 1, Section II, sub-section 1 and Section IX shall apply to the calculation of the capital requirement.

The following elements are relevant for internal assessment purposes.

- *I)* Risk components:
  - probability of default (PD), i.e. the probability that a counterparty will default within a time horizon of one year;
  - loss given default (LGD), i.e. the expected value (which may incorporate the impact of economic downturns) of the ratio, expressed in percentage terms, between the loss due to default and the amount of the exposure at the time of default (exposure at default);
  - exposure at default (EAD), i.e. the value of on-balance-sheet and offbalance-sheet exposures. For off-balance-sheet transactions (guarantees issued and commitments), EAD is calculated by means of a credit conversion factor (CCF), which represents the ratio of the currently undrawn amount of a commitment that it is expected to be drawn and outstanding at default and the current undrawn amount;
  - maturity (M), i.e. the average, for a given exposure, of the residual contractual maturities of the payments due, each weighted by its amount.

An essential factor in estimating risk components is the concept of default, based on an approach at a counterparty level. These include bad debts, substandard loans, restructured loans and past due and overdrawn positions. For retail exposures, banks may apply the definition of default at a facility level, if this is consistent with their management practices.

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The IRB approaches consist of a foundation approach and an advanced approach, which differ in the risk parameters that banks are required to estimate. Under the foundation approach, banks use their own PD estimates and supervisory values for the other risk parameters. Under the advanced approach banks shall use their own estimates of PD, LGD, CCF and, where applicable, M.

- 2) Banking book exposures are assigned to different classes:
  - credit exposures to central governments and central banks (including regional and local governments and other public sector entities as well as multilateral development banks and international organizations, under certain conditions);
  - credit exposures to supervised institutions and entities assigned to this class for IRB purposes;
  - credit exposures to corporates;
  - retail credit exposures (divided into exposures secured by residential property, qualifying revolving retail exposures, other retail exposures);
  - equity exposures;
  - securitization positions;
  - other assets.
- *3)* Minimum organizational and quantitative requirements. The former regard: corporate governance arrangements and internal organization, internal validation, the use of rating systems, the process of assigning ratings and information systems.

The primary minimum quantitative requirements regard: the structure of rating systems (for example, the minimum number of rating grades, the assignment of retail credit exposures to pools), the quantification of risk parameters (for example, the minimum content of data records, the length of time series, LGD estimates adjusted for downturns) and the use of models provided by third-party vendors.

4) Risk-weighting functions, through which risk components are transformed into capital requirements. Different functions are envisaged for the various types of exposures. In particular, a single function is applied to claims on central governments and central banks, supervised institutions and corporates. Separate functions are envisaged for the three retail exposure sub-classes. Specific rules are defined for specialized lending for which the banks are not able to generate a PD estimate that satisfies the requirements for IRB approaches. Three different methodologies are available for equity exposures.

The use of the IRB approaches for calculating capital requirements is subject to the authorization of the Bank of Italy following verification of compliance with the aforementioned minimum requirements.

Unless expressly specified, the provisions of this Part shall apply to both the foundation and the advanced approaches.

The provisions contained in this Part are organized as follows.

This Section contains definitions of the basic concepts within the scope of a rating system, such as risk components and the notion of default. In Section II, the various exposure classes are defined. The next two sections illustrate the minimum organizational and quantitative requirements for banks that apply to use IRB systems for calculating capital requirements. Section V explains the weighting rules. Section VI addresses the procedure for obtaining authorization to use the IRB approaches for calculating capital requirements, without prejudice to the provisions of Title I, Chapter 1, Part 5.

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:
  - Article 53, paragraph 1, sub-paragraphs a), b) and d), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;
  - Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;
  - Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:
    - a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
    - b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;
  - Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;
  - Article 65, which specifies the persons subject to supervision on a consolidated basis;

- Article 67, paragraphs 1, sub-paragraphs a), b) and d), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;
- Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;
- Article 67, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph a) that permit the use of:
  - a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
  - b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;
- Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;
- Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;
- the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

- the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by

the Basel Committee for Banking Supervision in June 2006.

### 3. Definitions

Following definitions are used in these regulations.

### 3.1 Rating system

Rating system shall mean the structured and documented set of methodologies, organizational and control processes, and database organization methods that support the collection and processing of information relevant to the formulation of synthetic assessments of the risk of a counterparty and individual credit transactions.

The risk associated with an exposure is expressed through four components: probability of default (PD), which pertains to the obligor; loss given default (LGD), exposure at default (EAD) and effective maturity (M), which pertain to the individual transaction.

Using the rating system, the bank: i) assigns the obligor an internal grade (rating), ranking the counterparties in relation to their level of risk; ii) estimates the risk components.

The rating represents the assessment, for a given time horizon, of the ability of the obligor or potential obligor to meet its contractual obligations, carried out on the basis of all reasonably accessible quantitative and qualitative information and expressed in terms of an ordinal scale.

A probability of default is associated with each rating grade.

The rating grades are ranked on the basis of the credit risk. The probability that an obligor is in default increases as one moves from a lower to a higher risk grade.

In the case of retail customers, the rating may be assigned not only on the basis of the obligor's specific risk, but also on the characteristics of the transaction. In this case, it must regard a pool of assets rather than the individual obligor.

#### 3.2 Defaulted exposures

Defaulted exposures comprise: bad debts, substandard loans, restructured loans and past due and overdrawn positions.<sup>45</sup>

<sup>&</sup>lt;sup>45</sup> See Bank of Italy, *Manuale per la compilazione della matrice dei conti* (Circular no. 49 of 8 February 1989 and subsequent updates) and *Istruzioni per la compilazione delle segnalazioni di vigilanza su base consolidata* (Circular no. 115 of 7 August 1990 and subsequent updates).

Past due and overdrawn positions include those for which:

- a. the obligor is delinquent on a material credit obligation to the bank or banking group by: (i) more than 180 days for retail exposures and claims on public sector entities; (ii) more than 180 days through 31 December 2011 for corporate exposures; (iii) more than 90 days for all other exposures;
- *b.* the threshold for "materiality" shall be 5% of the exposure.

With regard to retail exposures, banks may adopt, for past due or overdrawn positions only, a definition of default at the individual transaction level if this is consistent with their management practices. In such case, the "materiality" threshold referred to in b) above shall be calculated by transaction.

The option of using the definition of default adopted by local supervisory authorities for group branches operating in other Member States or Group of Ten countries shall be unaffected.

The following modifications to the original contractual terms and conditions shall not constitute default: re-aging of the obligations and the granting of extensions, deferrals, renewals and expansions of lines of credit. These changes shall not be made in response to a deterioration in the obligor's financial situation nor shall they give rise to a loss.<sup>46</sup> They shall be governed by a duly documented internal policy.

This policy shall govern the following:

- the bodies responsible for approval;
- minimum age of the exposure;
- delinquency level of the obligor;
- maximum number of modifications per facility;
- reassessment of the obligor's capacity to repay.

In all cases, where the bank manages an exposure affected by such changes in a manner analogous to that for other defaulted exposures, such exposure shall be treated as defaulted.

## 3.3 Other definitions

— *"exposure at default"* (EAD) shall mean the value of on- and off-balance-sheet exposures.

For off-balance-sheet transactions (guarantees issued or commitments), EAD is calculated by means of a credit conversion factor (CCF), which represents the ratio of the currently undrawn amount of a commitment that it is expected to be drawn and outstanding at default and the current undrawn amount.

<sup>&</sup>lt;sup>46</sup> See *Manuale della matrice dei conti*, section III, sub-section 2, item 2478.

- *"foundation approach"* shall mean the method of calculating capital requirements in which banks use their own estimates of PD and supervisory values for the other risk parameters (LGD, CCF and M).
- "*advanced approach*" shall mean the method of calculating capital requirements in which banks use their own estimates of PD, LGD, CCF and, where applicable, M.

For retail exposures, banks shall use their own PD, LGD (or EL) and CCF estimates.

— "*expected loss*" (EL) shall mean the loss recorded on average over a one year period on each exposure (or pool of exposures). It is equal to the grade (or pool) PD multiplied by LGD and EAD.

Specific rules apply to exposures in respect of: (i) specialized lending for which banks are not able to generate PD estimates that satisfy the requirements envisaged for the IRB approach; (ii) equity, differentiated on the basis of the method used to calculate the risk-weighted amounts.

Securitization positions shall not be included in calculating expected losses.

- *"unexpected loss" (UL)* shall mean the loss exceeding the EL at a confidence level of 99.9% over a period of one year.
- *"banking book"* shall mean the totality of positions other than those included in the supervisory trading book (see Chapter 4, Part 1, Section I, sub-section 3.1).
- *"probability of default"* (PD) shall mean the probability that a counterparty will default within a time horizon of one year.
  A distinction shall be made between individual PD and grade PD. Individual PD is associated with each individual obligor; grade PD is associated with each rating grade or pool.
- "*dilution risk*" shall mean the possibility that the amount owed by the assigned obligor in respect of purchased receivables is reduced through credits or allowances arising from returns, disputes regarding product quality, promotional or other discounts.
- "*loss given default*" (LGD) shall mean the expected value (which may incorporate the impact of economic downturns) of the ratio, expressed in percentage terms, between the loss due to default and the amount of the exposure at the time of default.

The LGD shall be calculated with regard to the various types of transactions, not in relation to the individual obligor.

— "*maturity*" (M) shall mean the average, for a given exposure, of the residual contractual maturities of the payments due, each weighted by its amount.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

## 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Part:

- authorization to adopt internal risk measurement systems for calculating the capital requirement for credit risk (foundation or advanced) (Section VI, subsection 1): Banking Supervision Department;
- authorization to re-adopt, in exceptional circumstances, the standardized approach or the foundation IRB approach for calculating the capital requirement for credit risk (Section VI, subsection 1): Banking Supervision Department;
- authorization to re-adopt, in exceptional circumstances, the supervisory values for LGD and CCF for calculating the capital requirement for credit risk (Section VI, subsection 2): Banking Supervision Department.

## SECTION II

# EXPOSURE CLASSES

## 1. Introduction

The assets in the banking book shall be assigned to one of the following classes:

- a) credit exposures to central governments and central banks (sub-section 2);
- b) credit exposures to supervised institutions (sub-section 3);
- c) credit exposures to corporates (sub-section 4);
- d) retail credit exposures (sub-section 5);
- e) equity exposures (sub-section 6);
- f) securitization positions (sub-section 7);
- g) other assets (sub-section 8).

Sub-section 9 addresses purchased receivables.

Where banks adopt internal classifications that differ from those used for supervisory purposes (for example, for commercial or internal risk management purposes), they shall establish a reconciliation procedure for identifying each exposure with the relevant supervisory class.

## 2. Credit exposures to central governments and central banks

This class shall include all exposures to central governments and central banks as defined under the standardized approach.

These include exposure to: i) regional and local governments and public sector entities equivalent to central government under the standardized approach; ii) multilateral development banks and international organizations that satisfy the criteria for the zero risk weight under the standardized approach.

## 3. Credit exposures to supervised institutions

This class shall include exposures to:

a. banks, electronic money institutions (EMI), investment firms and financial companies.

With regard to financial companies, consideration shall be taken of financial intermediaries entered in the special register pursuant to Article 107 of the 1993 Banking Law as well as foreign companies provided that such companies: 1) are subject to prudential capital requirements equivalent to those envisaged for banks by Directive 2006/48/EC; 2) are subject to supervision equivalent to that envisaged for banks;

- b. regional and local governments and public sector entities not treated as central governments under the standardized approach as well as non-profit entities;
- c. multilateral development banks and international organizations that do not qualify for the zero risk weight under the standardized approach.

## 4. Credit exposures to corporates

A corporate credit exposure is defined as an exposure that does not fall within the categories described in sub-sections 2, 3, 5, 7 and 8 of this Section.

4.1 Specialized lending

Within the corporate exposure class, banks shall identify as specialized lending exposures those which possess the following characteristics:

- a) the exposure is to an entity which was specifically created to finance and/or operate physical assets (a vehicle company);
- b) the contractual arrangements give the lender a substantial degree of control over the assets and the income that they generate;
- c) the primary source of repayment of the obligation is the income generated by the assets being financed.

The specialized lending sub-classes shall include the following:

- 1. project finance;
- 2. object finance;
- 3. commodities finance;
- 4. income-producing real estate.

The following criteria shall be used to assign exposures to the above categories:

1) project finance is a method of funding in which the lender looks primarily to the revenues generated by a single project, both as the

source of repayment and as security for the exposure.

Repayment depends mainly on the project's cash flow and the collateral value of the assets.

If repayment depends primarily on a diversified, contractually obligated end-user, the exposure – where the conditions envisaged for credit risk mitigation techniques obtain – shall be considered a secured exposure to that end-user.

2) object finance is a method of funding where repayment of the exposure is dependent on the cash flows generated by the specific assets that have been financed and pledged or assigned to the lender.

If the exposure is to an obligor whose financial condition enables it to repay the debt without undue reliance on the specifically pledged assets, the exposure – where the conditions envisaged for credit risk mitigation techniques obtain – shall be treated as a collateralized corporate exposure.

3) commodities finance refers to short-term lending to finance reserves, inventories or receivables of exchange-traded commodities which is repaid from the proceeds of the sale of the commodity. In addition, the obligor has no other activities and no other material assets that give it the independent capacity to repay the exposure. The exposure's rating reflects its self-liquidating nature rather than the credit quality of the obligor.

Such lending is distinct from exposures to diversified corporate obligors springing from the financing of reserves, inventories, or receivables. In such cases, the value of the commodity serves as a risk mitigant and not as the primary source of repayment.

4) in the financing of income-producing real estate (IPRE), repayment of the exposure depends on the cash flows generated by the asset, generally represented by lease or rental payments or the sale of the asset.

IPRE funding is distinct from corporate exposures that are collateralized by real estate since repayment of the exposure depends primarily on the cash flows generated by the asset.

## 5. Retail credit exposures

This class comprises the following exposures:

- a) exposures to individuals, regardless of technical form or amount. These include personal loans to individual entrepreneurs or small businesses. The personal nature of the purpose of the loan shall be assessed on the basis of objective, documented criteria;
- b) exposures to small- and medium-sized companies and other small businesses, provided that:

- the total cash exposure of the bank or banking group to the smallor medium-sized company or other small business (or group of connected customers),<sup>47</sup> including personal loans, is less than €1 million, excluding exposures secured by mortgages on residential property.

Banks shall use objective, documented criteria to classify positions that do not significantly and/or only temporarily exceed such threshold;

 the bank manages these loans within its risk management systems consistently over time and on the basis of the same criteria applied to other retail exposures.

If the bank has adopted a transaction-level definition of default, the positions shall be managed as part of a segment of a portfolio or pool of assets with similar risk characteristics for the purposes of assessing and quantifying the risks;

- the bank uses objective, documented criteria in classifying exposures to entities in the "retail" class;
- c) exposures that form part of a large pool of exposures, which are managed by the bank on a pooled basis.

Banks shall use duly documented criteria in order to establish whether the number of exposures within the pool is sufficiently large to justify management on a pooled basis.

Assignment to a large pool does not preclude retail exposures from being treated individually at some stages of the risk management process. The fact that an exposure is rated individually does not by itself deny eligibility as a retail exposure.

The retail exposure class category shall contain three sub-classes:

- 1) exposures secured by residential properties and relating to real estate leasing transactions defined in accordance with the rules established under the standardized approach;
- 2) qualifying revolving retail exposures;
- 3) other retail exposures.

An exposure may be classified under sub-class (2) above if:

- i. the counterparty is an individual;
- ii. the exposure is revolving,<sup>48</sup> unsecured and, to the extent it is not drawn, unconditionally cancellable at any time without notice at the

<sup>&</sup>lt;sup>47</sup> For a definition of "group of connected customers", see Title V, Chapter 1, Section I, sub-section 3.

<sup>&</sup>lt;sup>48</sup> Exposures in which the amount outstanding may vary based on borrowings and repayments made within a contractually agreed time period (for example, lines of credit).

discretion of the bank. Undrawn commitments may be considered as unconditionally cancellable if the terms of the agreement permit the bank to cancel them to the full extent allowable under consumer protection legislation;

- iii. the exposure does not exceed  $\in 100,000$ ;
- iv. the bank demonstrates that the exposure is part in a type of portfolio that has exhibited low volatility of loss rates, relative to their average level of loss rates, especially within the low PD rating grades.

# 6. Equity exposures

Equity exposures shall include equity securities, innovative capital instruments and irredeemable instruments, other than those subject to the capital requirements for market risks or those deducted from supervisory capital. They also include forward commitments to buy (including those arising from written put options) with underlying assets consisting of the assets specified above and that are settled on a gross basis.

Equity exposures shall also include any other asset that, on the basis of the principle of substance over form, displays the characteristics of an equity instrument (irredeemable, no obligation on the part of the issuer, residual claim on the net assets and income of the issuer).<sup>49</sup>

This exposure class shall also include long and short positions in equity instruments arising from forward sale contracts or other derivative contracts (for example, purchased or written call options).<sup>50</sup>

Junior and mezzanine exposures connected with securitization positions shall not be included in this exposure class.

## 7. Securitization positions

The securitization positions of banks that use the IRB approach are regulated in Chapter 2, Part 2.

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<sup>&</sup>lt;sup>49</sup> For example, equity instruments include financial transactions arising from the combination of a debt instrument and an equity swap as a result of which the investor is, in substance, exposed to equity risk.

<sup>&</sup>lt;sup>50</sup> This class includes forward commitments under derivative contracts whether they are stand alone instruments or embedded in other financial instruments.

### 8. Other assets

This class shall include unguaranteed residual values relating to leasing operations and all assets other than those described in the preceding sub-sections that have not been assigned to an credit exposure class (for example, physical assets).

Equity holdings in instrumental companies shall be included.

Banks may also include "transit and suspense items" that will ultimately be allocated to asset accounts if the "exemption threshold" envisaged in the *Manuale per la compilazione della matrice dei conti* has not been exceeded.

## 9. Purchased receivables

Purchased receivables do not constitute an exposure class in themselves but shall be divided into retail receivables and corporate receivables.

### 9.1 Corporate receivables

This category shall include corporate receivables purchased from third parties where the operational requirements specified below, which are intended to ensure that collection of the exposures depends upon the payments made by the assigned obligors rather than on the seller's solvency, are observed. Receivables acquired from third parties through factoring operations or discounting transactions with or without recourse may also be included in this category. Advances against invoices "subject to final payment" shall be excluded.

# a) Legal certainty

Banks shall verify that the structure of facilities ensures that under all foreseeable circumstances the banks retain effective ownership and control of the cash receipts from the receivables. Banks shall establish procedures to ensure that ownership of the receivables and cash receipts is protected against the bankruptcy of the seller or the servicer,<sup>51</sup> or legal challenges that could materially delay the lender's ability to liquidate or assign the receivables or retain control over the associated cash receipts.

In order to protect themselves from the risk of revocatory actions, banks – without prejudice to the provisions of b) below – shall adopt special precautions in respect of sellers with a high PD over a one-year time horizon.

Where obligors make payments directly to the seller or servicer, banks shall ensure that the payments are forwarded completely and within the

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<sup>&</sup>lt;sup>51</sup> The servicer is the entity that manages a portfolio of purchased receivables on a day-to-day basis.

contractually agreed terms. Contracts shall specify that the amounts paid be forwarded to the bank promptly.

b) Effectiveness of monitoring systems

The bank shall monitor the quality of purchased receivables and the financial condition of the seller and of the servicer, if any. Specifically, the bank:

- i. shall assess the degree of correlation among the quality of the purchased receivables and the financial condition of both the seller and the servicer and have in place internal strategies and procedures that provide protection against any adverse contingencies, including the assignment of an internal rating for each seller and servicer;
- ii. shall have clear and effective policies and procedures for selecting sellers and servicers. Contract shall give the bank the power to conduct, directly or through an auditing company, periodic reviews of the seller and the servicer in order to verify the accuracy of the reports from the seller or servicer, detect operational weaknesses or fraud, and verify the quality of the seller's credit policies and the servicer's collection policies and procedures. The findings of these reviews shall be documented;
- iii. shall assess the characteristics of purchased receivables pools, such as advances in excess of the nominal value of the receivables, the history of the seller's arrears, bad debts and bad debt allowances, payment terms and potential contra accounts;<sup>52</sup>
- iv. where receivables are managed by pool, it shall have effective policies and procedures for monitoring concentrations of the exposures to individual obligors (or groups of connected obligors) both within and across receivables pools;
- v. shall ensure that it receives from the servicer timely and sufficiently detailed reports of receivables ageings and dilutions to ensure compliance of the receivables with the bank's eligibility criteria and lending policies governing purchased receivables. In addition, it must provide effective instruments with which to monitor and confirm the seller's terms of sale and dilution.

Where assignments of receivables are duly notified to the assigned obligors and the bank collects the receivables directly, a sample of sellers selected using formalized procedures may be monitored.

Where, however, obligors are not notified of assignments and collection is delegated to the sellers or a servicer, such monitoring shall be conducted for each seller or servicer on a systematic basis and in accordance with a preestablished schedule.

 $<sup>^{52}</sup>$  Contra accounts involve a customer buying from and selling to the same firm. In such cases, debts may be settled through payments in kind rather than cash and invoices may be offset.

c) Effectiveness of work-out systems

The bank shall have systems and procedures for detecting deterioration in the seller's financial condition and the quality of the purchased receivables at an early stage as well as for appropriately managing emerging problems. Specifically, the bank shall have in place adequate information systems and clear and effective policies and procedures for monitoring compliance with contractual covenants, managing problem receivables and initiating legal action for recovery.

d) Effectiveness of systems for controlling collateral, credit availability and cash

The bank shall specify in formal internal policies all material elements of the receivables purchase programmes, including advancing rates, eligible collateral, necessary documentation, concentration limits, and how cash receipts are to be handled.<sup>53</sup> These elements shall take account of all material factors, including the financial condition of the sellers and servicers, risk concentrations, trends in the quality of receivables and the sellers' customer base. Internal systems shall ensure that funds are paid out only against delivery of specified collateral and documentation.

e) Compliance with the bank's internal policies and procedures

The bank shall have an effective internal process for assessing compliance of receivables operations with its internal policies and procedures. The internal process shall include regular audits of the main stages of the receivables purchase programme and checks to prevent conflicts of interest between the functions involved in the programme.

Where the requirements under points a) to e) are not met, the following rules shall apply:

- i) exposures in respect of with-recourse transactions or withoutrecourse transactions that do not pass the derecognition test under IAS 39 shall be attributed to the seller and the credit risk shall be treated in accordance with the rules for the portfolio from which the latter originates; purchased receivables may be used as collateral if they meet the requirements set out in the regulations (see Chapter 2, Part 1, Section IV, sub-section 1, paragraph 4);
- ii) exposures in respect of without-recourse transactions that meet the test for derecognition under IAS 39 ("effective without-recourse transactions") shall be attributed to the assigned obligors and the credit risk shall be treated in accordance with the rules for the portfolio from which the latter originate. The capital requirement for dilution risk shall apply.

<sup>&</sup>lt;sup>53</sup> For example, where collection is entrusted to the seller, the bank shall agree with the seller procedures for managing collections that strengthen safeguards for the assignee (for example, channelling collections into tied accounts on behalf of the assignee; on-line access to such accounts).

Regardless of compliance with the operational requirements under points a) to e), factoring or with-recourse discount transactions in which the risk of recourse against the seller fully covers both the credit risk and dilution risk may be treated by the bank in accordance with the procedure set out in point i).

# 9.2 Retail receivables

Purchased retail receivables shall be admitted as a specific category for the treatment of retail exposures pursuant to sub-section 5 where they meet the requirements for that exposure class and the operational requirements under point 9.1.

## 9.3 Treatment as securitization

Banks may apply the prudential treatment envisaged for securitization positions to factoring or discount transactions in which contractual covenants provide for a tranching mechanism (See Chapter 2).

#### SECTION III

## ORGANIZATIONAL REQUIREMENTS

## 1. Corporate governance

The governing bodies of banks play an essential role in achieving an effective and efficient system for managing and monitoring credit risk. The bodies responsible for strategic oversight, management and control functions, each in accordance with its respective duties and responsibilities, shall establish general policies for the system, be responsible for its implementation, oversee its operation, and verify its overall functionality and compliance with regulatory requirements. Specific attention shall be given to processes, functions and other aspects relevant to calculating the capital requirement. For a detail specification of the tasks and responsibilities assigned to each corporate body, banks shall refer to Title I, Chapter 1, Part 4.

## 2. Organization and control systems

Banks shall establish the organizational characteristics of the rating system they intend to adopt, providing for appropriate forms of verification and validation at all levels of control system activities.

The first level of control shall be established at the operational structures involved in the rating assignment process. These controls may be mechanical or governed by specific operational protocols (for example, hierarchical controls).

Such controls shall verify that the preparatory activities for the assignment of ratings, such as the selection of the appropriate model for assessing the customer or transaction and the identification of financial or legal connections between customers, are performed correctly. Similarly, compliance with internal procedures for obtaining the information necessary to assign and update ratings shall also be subject to controls.

The controls shall also include a verification of the final individual ratings generated by the models. In rating systems in which the outcome of statistical models cannot be modified by users (mechanical assessments), such verifications shall regard the completeness of the factors considered and the procedures for processing objectified qualitative information. In rating systems that supplement mechanical assessments with a discretionary component, the consistency of the rationale for proposed overrides with the criteria set out in internal rules shall be verified.

### 2.1 Development and validation of rating systems

Rating systems shall be selected, developed and implemented by a unit that performs, inter alia, the following tasks:

- development of the rating system during the initial set-up stage and in subsequent adjustments so as to ensure its reliability and compliance with regulatory requirements, as well as its consistency with company operations and the economic environment in which the bank operates;
- documentation of any changes in the components and the overall structure of the model, specifying the reasons for such changes.

The rating system shall undergo a validation process consisting of a formal set of activities, instruments and procedures for assessing the accuracy of the estimates of all material risk components and the regular operation, predictive power and overall performance of the IRB system adopted.

In the validation process, the bank shall, on an ongoing, iterative basis, verify the reliability of the results generated by the rating system and its continued consistency with regulatory requirements, operational needs and developments in the reference market.

Achieving these objectives requires the performance of quantitative and qualitative analyses, the breadth and depth of which shall be modulated in accordance with the type and scope of the portfolios examined, the overall complexity of the bank, and the reliability of the environment under analysis. The validation instruments and methods shall be periodically reviewed and adjusted in order to ensure that they remain appropriate in a context of continually evolving market variables and operating conditions.

The validation process shall not consist solely of a statistical comparison of actual risk measures against the related ex ante estimates, but rather shall involve analysis of all the components of the IRB system, including operational processes, controls, documentation, IT infrastructure, as well as an assessment of their overall consistency.

The validation process involves verifying compliance with the quantitative and organizational requirements for rating systems. Specifically, this shall include:

- assessment of the model development process, with particular reference to the underlying logical structure and the methodological criteria supporting the risk parameter estimates;
- performance analyses of the rating system, parameter calibrations, benchmarking and stress tests (see Section IV);
- verification that the rating system is actually used in the various areas of operations.

The results of the validation process shall be adequately documented and periodically submitted to the internal control functions and the governing bodies. The reports shall specifically address any problem areas.
The validation process shall be performed by a function that may draw on the support of operational units in the performance of its activities, providing that the overall cohesion of the process is ensured through the appointment of a person to coordinate and oversee these activities.

The validation function shall be shall be performed by persons with appropriate skills and shall be independent of those involved in assigning ratings and lending. Specifically, the person in charge of the function shall not be a subordinate of the persons responsible for such activities.

In general, the validation function shall also be independent of the function responsible for developing the rating system. Where compliance with this requirement would prove excessively burdensome, the validation function may be involved in the rating system design and development process provided that appropriate organizational and procedural precautions are adopted. In such case, the internal audit function shall carefully verify that this activity is performed in an independent manner and fully achieves the intended objectives.

The validation function shall also be independent of the internal audit function, which shall review the validation process and findings.

# 2.2 Internal audit

The internal audit function shall assess the functionality of the overall structure of controls over the rating system.

The internal audit function shall review the validation process, verifying the adequacy and completeness of the activities performed by the competent function, the consistency and soundness of the validation findings, as well as the continued compliance of the IRB system with regulatory requirements.

For this purpose, it shall, inter alia:

- verify compliance with the regulations and procedures governing the various stages of the rating process and, as a part of this activity, assess the independence of the validation function;
- analyze reconciliation between internal procedures and the rating systems;
- assess the adequacy and reliability of the IT function and its personnel, IT infrastructure, the structural characteristics and data-loading procedures of the databases and record systems that support the rating system;
- perform tests to assess the effective internal use of the rating system.

Within the scope of its ordinary reporting to the governing bodies, the internal audit function shall, at least once a year, prepare a final report describing the activities carried out and the related findings, specifically addressing problem areas and failures discovered and proposing corrective actions.

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# 3. Characteristics of rating systems

IRB approaches differ in terms of the importance of mechanical outputs generated by the model and those based on the judgement of lending experts. In general, it is possible to distinguish between:

- mechanical systems (which may incorporate standardized qualitative elements), from which discretionary, justified overrides are structurally excluded;
- systems in which mechanical assessments may be modified by experts through the override process with information that cannot easily be standardized or in any event is not considered by the model;
- systems primarily based on the discretionary judgement of an expert.

In selecting the most appropriate organizational approach, banks shall take account of their size, operational characteristics and organizational structures, as well as the segments of the portfolio concerned (large corporate, corporate, retail), which generally involve different analysis methodologies, procedures and professional roles.

# 3.1 The rating assignment process

Within the scope of their rating assignment process, banks shall comply with the following requirements on a continuing basis:

- i) documentation of the rating system;
- ii) completeness of information;
- iii) replicability
- iv) integrity of the rating assignment process;
- v) consistency;
- vi) uniqueness.

# 3.2 Documentation of the rating system

Banks shall document the design and operational details of their rating systems, formalizing the characteristics of the model and methodological choices adopted. The documentation shall address portfolio differentiation and rating criteria; the specific definitions of default and loss used, as well as their consistency with regulatory guidelines; the methodology underlying the models, with specific regard to their theoretical and empirical basis, data sources and the circumstances under which the model does not work effectively. A chronological record shall be kept of all major changes in the rating system in order to permit identification of such modifications.

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The organization of the entire rating assignment process shall also be documented, including the assignment of responsibilities and, in particular, the persons with the authority to assign ratings, as well as the guidelines governing the exercise of such power. The structures, instruments and procedures involved in controlling this process shall also be documented.

# 3.3 Completeness of information

Banks shall have internal procedures to ensure the systematic analysis of all available data and the assessment on a continuing basis of the completeness, materiality and relevance of the information used in the process.

Supplementing mechanical assessments with non-standardizable qualitative components may facilitate ensuring the completeness of information. In all cases, banks shall verify that such components are relevant and material for the purposes of obtaining a more accurate assessment of the creditworthiness of the counterparty.

# 3.4 *Replicability*

Banks shall adopt appropriate organizational and procedural precautions to enable the replication of the rating assignment process and the recalculation of ratings for individual positions where necessary.

This minimum requirement shall be met by maintaining records, including in electronic format, of the decisions taken during the rating assignment process, specifying each transitional rating formulated during the various stages of the process (mechanical, partial and final) and the rationale for any overrides. A record shall be kept of the model applied, the methodology and the parameters used in the assessment, the person responsible, the date of the first rating assignment and of subsequent adjustments.

# 3.5 Integrity of the rating assignment process

Where the bank's IRB system incorporates discretionary assessments by sector experts in assigning a final rating, banks shall adopt appropriate organizational and procedural precautions to ensure the integrity of the rating process, so that the final rating assignment shall not be influenced by the involvement of persons with interests that conflict with the objective of an IRB system to perform an accurate and detailed assessment of the creditworthiness of the counterparty.

Such conflict may emerge where the persons responsible for the final rating assignment: a) perform an activity that is assessed on the basis of targets for lending volumes or revenues; or b) have the power to authorize lending decisions.

Where responsibility for the final rating assignment lies with persons involved in the ordinary credit assessment and decision-making process, the

organizational arrangements adopted shall ensure that persons with the power to authorize lending decisions or who are affected by the incentive mechanisms described above do not also have any responsibility for final rating assignments. Appropriate precautions shall also be taken to ensure that the independence of the assessments of the persons who make the final rating assignment is not jeopardized by their belonging to an organizational structure with the power to authorize lending decisions or where remuneration is linked to the achievement of targets for lending volumes or revenues.

Where responsibility for making the final rating assignment is centralized within a specific unit that directly calculates or confirms or modifies ratings generated using a mechanical method or by sector experts, specific attention shall be paid to the following:

- the organizational position of the unit and the extent of its independence from the functions responsible for business growth and lending;
- the position of the unit's manager within the bank hierarchy, the qualitative and quantitative composition of the personnel assigned to the unit and any related incentive mechanisms;
- the rating assignment procedure, in particular the scope of override powers;
- the characteristics of the portfolio in terms of the number and size of the positions to be assessed by the structure.

Where banks also adopt a counterparty-based approach to certain segments of the retail exposures class, they shall implement organizational and procedural precautions to safeguard the integrity of the rating assignment process.<sup>54</sup>

In determining whether the arrangements adopted comply with the organizational requirements, account shall be taken of the size and operational complexity of the bank, of the various types of portfolios, as well as the overall design of the rating system.

## 3.6 Consistency

An IRB system shall ensure that obligors or transactions posing similar risks are assigned to the same rating grade. This consistency shall be ensured across business lines, organizational structures and geographical location.

For this purpose, banks shall adopt appropriate precautions in assigning a rating or allocating an exposure to a pool to ensure that uniform assessment criteria are applied by all branch structures. Accordingly, banks shall prepare instructions for handling qualitative information as well as specific guidelines concerning overrides in order to prevent differences in interpretations among analysts. The adequacy of these guidelines shall also be verified through periodic

<sup>&</sup>lt;sup>54</sup> In these cases, regardless of whether a counterparty or transaction-based approach is adopted, all other organizational requirements established in these regulations shall not be affected.

analysis of the reasons for overrides in order to verify ongoing compliance with the consistency requirement.

## 3.7 Uniqueness

Each counterparty to which more than one geographical or legal entity of the banking group is exposed shall be assigned a single rating. Similarly, when the assessment regards transactions rather than obligors, each exposure shall be assigned to a single pool. Banks shall establish organizational and procedural rules that - for each position featuring multiple exposures to different group structures – uniquely attribute responsibility for the final rating assignment or allocation of an exposure to a pool.

# 3.8 Rating reviews

Rating shall be periodically reviewed in order to ensure that they reflect the effective risk of the obligor or the transaction. Bank shall establish the frequency of the review process, which shall in any case be performed at least once a year. Where a re-examination of the procedures or conditions applying to an exposure should reveal factors that could lead to a change in the obligor's creditworthiness or in the risk of the transaction, the rating shall be updated even if this occurs prior to the next scheduled review provided for in the internal rules.

Banks shall establish operational guidelines governing the actions to be taken with regard to ratings in the event monitoring procedures and systems should reveal any sign of a deterioration in the position.

# 4. The use of the rating system in bank operations

The rating system is not only an instrument for calculating capital requirements, but it must also be used in conducting the bank's regular business.

Accordingly, banks shall be authorized to adopt the IRB approach for calculating capital requirements only if their rating system has an essential role in lending, risk management, internal capital allocation and bank governance functions.

In view of the scope of the actions that need to be taken to ensure that the IRB system is fully implemented, the rollout of the system to all the operational areas addressed above may be phased in gradually, with priority depending on the importance of the operational processes involved and the level of compliance of the system with the minimum requirements. This process shall involve two stages, one preceding and the other concurrent with the application for authorization by the Bank of Italy.

In the first stage, banks shall only have to demonstrate that they have actually used a rating system broadly in line with the minimum requirements established

by these regulations with regard to the granting and renewal of credit, as well as risk measurement activities (*experience requirement*).

Banks shall have complied with the experience requirement in the three years prior to the date of the application for authorization.<sup>55</sup> The experience requirement shall be deemed to be met where, at a minimum, the following circumstances obtain:

- internal rules and procedures require central operating units and branches to use ratings in the granting and renewal of credit. Banks shall have specific guidelines defining criteria for correlating the ratings assigned and the decisions to be taken;
- the operational units involved in granting and renewing credit use the IRB system. Specifically, the internal ratings shall be an essential element of the assessments made in examining loan applications and reviewing positions. The delegation of decision-making powers shall take account of the risk profile of the customer or the transaction as represented by the rating or by the pool;
- the risk management structures perform periodic analyses of the distribution of the portfolio by rating grade and developments in risk profiles;
- ratings and pools are used within the management reporting system and the internal information flows available to the bank structures involved in the lending process.

For banks that adopt an advanced IRB approach or the IRB approach for retail exposures, internal LGD and CCF estimates shall be used, at a minimum, in management reporting and in the periodic analyses conducted by the risk management function.

At the time the application for authorization is submitted, banks shall demonstrate that have been using an IRB approach that complies with the minimum requirements in the areas established by these regulations (use test).

It is possible that, in certain cases and for specific segments, the estimates of the risk parameters for calculating capital requirements will not correspond to those used for management purposes. Banks shall document the reasonableness and necessity of such differences, which shall be subject to internal review. In all cases, the values used for internal purposes and those used for calculating capital requirements must be easily reconciled.

Banks shall establish appropriate internal procedures for maintaining the quality of the parameter estimates used in calculating capital requirements at a high level.

<sup>&</sup>lt;sup>55</sup> The minimum requirement of three years shall be reduced to one year (in the foundation IRB approach and for the retail exposure class) or to two years (for the advanced IRB approach) for applications submitted by 31 December 2009.

# 5. The rating process within banking groups

The parent undertaking of a banking group shall be responsible for taking the strategic decision to adopt an IRB approach. It shall also have ultimate responsibility for implementing the project, as well as overseeing the proper operation of the system and the continuous updating of its methodological, organizational and procedural aspects.

For this purpose, the parent undertaking shall exercise its management and coordination powers with the group companies and structures to ensure the unity of the overall management of the IRB system and compliance with regulatory requirements. The parent undertaking shall prepare internal regulations that clearly establish the allocation of tasks and responsibilities in the different stages of the rating process (such as, for example, the development of models, the assignment of ratings and control functions) within the group, taking account of the specific features of the group's organizational structure.

Specific attention shall be focused on the criteria for recording group customers, especially customers who have dealings with more than one group company. The banking group shall maintain a single customer database or multiple databases at the various group companies, provided that they can be easily synchronized so as to ensure unambiguous identification of a customer by all group companies that have dealings with such customer as well as the identification of the overall exposure of the customer to the banking group.

In addition, the parent undertaking shall be responsible for establishing internal control arrangements for the IRB system where different structures have been established among the various group companies and for specifying the responsibilities and activities to be performed at the different control levels.

In all cases, the parent undertaking shall ensure that the organization of the validation and review functions within the group enables the unified management and control of the IRB system.

Banking groups with significant cross-border operations may adopt different organizational arrangements, provided that such solutions address specified, well-supported business needs related to specific local circumstances and restrictions.

# 6. Information systems

In compliance with the general regulations governing information systems, operational continuity, IT security and the related management and control structures, the bank shall have databases and information systems capable of supporting credit risk measurement, management and control processes.

Annex A regulates the following issues concerning technology infrastructure:

 performance of the technical activities connected with the collection of data, the definition of IRB systems, the calibration of parameters, the assignment

and review of ratings and the calculation of the capital requirement (subsection 1);

- integration between systems and procedures supporting lending and loan management and systems and procedures for measuring risk (sub-section 2);
- availability of data to calculate the rating, to ensure the replicability of results, verification of the predictive power of the model and stress tests (sub-section 3);
- management of data quality in terms of accuracy, completeness and relevance and data and system security (sub-section 4).

## SECTION IV

# MINIMUM QUANTITATIVE REQUIREMENTS

## 1. Structure of rating systems

# 1.1 Exposures to central governments and central banks, supervised institutions and corporates

Rating systems shall take into account obligor and transaction risk characteristics. They shall also have a rating scale that reflects exclusively the quantification of the risk of obligor default. The rating scale shall have a minimum of seven grades for non-defaulted obligors and one for defaulted obligors.

Banks shall have sufficient obligor rating grades to avoid excessive concentrations of obligors. Significant concentrations within a single grade shall be supported by empirical evidence that the obligor grade covers a reasonably narrow PD band and that the default risk posed by all obligors in the grade falls within that band.

Banks that adopt the advanced method shall have a facility scale that reflects the LGD characteristics of the transactions. Where banks use direct estimates of LGD, the latter may be seen as the outputs of grades on a continuous LGD scale.

For specialized lending subject to the method referred to in Section V, subsection 2, banks shall be exempt from the requirements to have a rating scale that reflects exclusively the quantification of the risk of obligor default. In this case, the rating scale may have a minimum of four grades for non-defaulted obligors and one for defaulted obligors.

# 1.2 Retail exposures

Rating systems for retail exposures shall reflect both obligor and transaction risk, and shall capture all relevant obligor and transaction characteristics.

The number of exposures in a given grade or pool shall be sufficient to allow for the meaningful quantification and validation of the loss characteristics at the grade or pool level. The distribution of exposures and obligors across grades or pools shall be such as to avoid excessive concentrations.

Banks shall demonstrate that the process of assigning exposures to grades or pools provides for a meaningful differentiation of risk, a grouping of sufficiently homogenous exposures, and accurate and consistent estimation of loss characteristics at grade or pool level. For purchased receivables the grouping shall reflect the seller's underwriting practices and the heterogeneity of its customers.

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Banks shall consider the following risk factors when assigning exposures to a grade or pool:

- a) obligor risk characteristics;
- b) transaction risk characteristics, including product or collateral types or both. Banks shall explicitly address cases where several exposures benefit from the same collateral;
- c) delinquency, unless the bank demonstrates that it is not a material risk factor for the exposure.

Exposures for which banks adopt a transaction-level default definition shall be assigned to pools. Banks shall have internal criteria to govern cases in which, in the presence of specific operational constraints, this approach is only adopted for some of the lines of credit granted to a single obligor.

# 2. Quantification of risk parameters

Banks shall estimate a PD for each rating grade or pool. Such estimates shall be based on the long-run averages of one-year default rates.

Banks that use the IRB approach for retail exposures and/or the advanced IRB approach for other exposures shall estimate appropriate LGDs and CCFs for each transaction on the basis of long-run default-weighted averages. Banks that do not qualify to use their own estimates of LGDs and CCFs for exposures to central governments, central banks, supervised institutions and corporates shall adopt the regulatory values.

The estimates of PDs, LGDs and CCFs shall:

- a) take account of all relevant data and information;
- b) be based on methods selected after a careful assessment of those available;
- c) be derived using both long-run historical experience and empirical evidence, and not based purely on judgemental considerations;
- d) be plausible and intuitive and based on the material determinants of the respective risk parameters;
- e) be reviewed when new information becomes available, but at least on an annual basis.

The estimates shall also reflect material changes in lending practices or the process for pursuing recoveries over the historical observation period. Banks shall demonstrate the impact of such changes on the estimates.

Banks shall have evidence for a period analogous to that for the time series of the risk parameters on the cure rate for the various categories of defaulted

exposures in order to assess the extent to which such positions are cured and to make any necessary adjustments to the estimates.<sup>56</sup>

Banks shall add to their estimates of PDs, LGDs and CCFs a margin of conservatism commensurate with the expected range of estimation errors.

For purchased receivables the estimates of the risk parameters shall reflect all relevant information available to the purchasing bank regarding the quality of the underlying receivables, including data for similar pools provided by the seller or by external sources. The bank shall evaluate any data relied upon which is provided by the seller.

Banks' internal documentation shall include detailed information on the data and methodologies used in estimating the risk parameters as well as any weaknesses in the estimation methods and the initiatives planned to contain their effects.

# 2.1 Data for quantifying risk parameters

Banks may use both internal and external data (including data pooled with persons not belonging to the same banking group). In all cases, banks shall demonstrate that the estimates are representative of their long-run experience and that the economic and market conditions on which the data are based are consistent with current and foreseeable conditions.

The number of exposures in the sample and the data period used for quantification shall be sufficient to ensure the accuracy and robustness of estimates. The validity of the estimates shall also be confirmed through out-ofsample tests.

In using internal data, their representativeness may be assessed on the basis of:

- a) an analysis of exposures held compared with the sample used in the estimate;
- b) the distribution of exposures by size, economic sector or geographical area;
- c) other relevant characteristics.

Banks that use external elementary data shall demonstrate that:

a) the definitions of default and loss adopted in constructing the dataset are consistent with those envisaged in this Chapter. Where necessary, banks shall make any appropriate adjustments;

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 $<sup>^{56}</sup>$  For the purposes of estimating the risk parameters, in view of the importance of so-called "technical" past-due positions (i.e. positions that do not reflect a state of financial difficulty on the part of the obligor such as to generate losses), banks – at least during the initial stage of application of these regulations – may elect to not classify such past-due positions as defaulted, as long as this election is consistent with reference to the various risk parameters.

- b) the data are representative of the portfolios for which they are used;
- c) the data are used consistently over time.

As regards pooled data, the criteria specified in points a) and b) shall be supplemented as follows:

- a) the definition of default adopted for each segment of the dataset shall be homogeneous – at the national level – for the various banks contributing to the pooled data. Where the data are pooled among banks operating in different jurisdictions, banks shall verify that the meaning of default is the same;
- b) the representativeness of the data with respect to banks' own portfolios shall be demonstrated on the basis of pre-established criteria, which shall include the comparability of the exposure populations for the most significant segments of the pooled dataset. The use of statistical methods to support the tests of representativeness is advisable.

# 2.2 Probability of default

For exposures to central governments and central banks, supervised institutions and corporates, banks shall estimate PDs for each rating grade on the basis of long-run average of one-year default rates.

Banks may use one or more of the following techniques, using the others for the purposes of comparison and adjustment, where necessary: 1) internal default experience; 2) mapping with external data; and 3) statistical models. Banks shall in any case recognize the importance of judgemental assessments in combining the results of different techniques and making adjustments for limitations of techniques or information.

# Internal default experience

Banks may use data on internal default experience. They shall demonstrate that the estimates reflect any differences between the rating system that generated the data and the current system. Where the availability of data is limited or lending standards or rating systems have changed, banks shall add a greater margin of conservatism in their estimates.

# Mapping with external data

Banks may map their own exposures to the rating grades used by external credit assessment institutions (ECAIs) and then attribute the default rate observed for the external grades to their own grades. The mapping shall be based on a comparison of internal rating criteria with the criteria used by the external institution and of the internal and external ratings of any common obligors. Banks shall compare the default definitions used and verify that the quantification of risk from the external institution is oriented to the creditworthiness of the obligor and not to the characteristics of the transaction. Banks shall document the criteria adopted for the mapping.

## Statistical models

Where banks use statistical default prediction models, they may estimate the PDs for each rating grade as the simple average of the PDs estimated for individual obligors in a given grade.

For retail exposures, banks may:

- estimate PDs by obligor grade or pool from long-run averages of one-year default rates;
- derive PD estimates from expected losses and estimates of LGDs; in this case, the same requirements for estimating PDs shall apply.

Banks shall assess the effects of seasonal variations and the age of exposures and, where necessary, shall adjust the estimates; such adjustments shall be applied consistently over time.

At the time the application for authorization is submitted, the length of the historical observation period for at least one data source for the purposes of estimating PDs shall be at least two years for the foundation approach and retail exposure classes, increasing by one year each year until the data cover a period of at least five years. For the advanced approach the minimum observation period shall be five years. In both cases, if the observation period spans a longer period for any data source, banks shall use this longer period.

Where the PD estimates do not incorporate adverse conditions, the Bank of Italy shall give special attention to the manner in which stress testing is conducted for the entire portfolio.

# 2.3 Loss given default

Banks shall estimate LGDs using the methodologies most appropriate to their activity and the portfolios to which the estimates refer. Banks shall demonstrate the robustness of the theoretical assumptions underlying the models.

The estimates shall be derived using methodologies based on objective data such as, for example, the market value of the securities issued by defaulted obligors or internal evidence regarding actual recoveries made on defaulted exposures. Estimates based exclusively on judgemental considerations are not permitted.

The estimation of LGDs shall be based on the definition of default set out in Section I, sub-section 3.2 and the notion of economic loss, which includes all material direct and indirect costs associated with recovery and the effect of discounting of cash flows (recoveries and costs).

Recoveries shall include default interest collected, appropriately highlighted; only the part of unpaid default interest capitalized in the bank's income statement prior to default shall be incorporated in the calculation of the defaulted exposure.

Recovery costs shall include the costs of running the offices of the recovery unit, the costs of outsourced services and an appropriate percentage of other

indirect costs, unless banks can demonstrate that these costs are immaterial. The cost allocation process shall be rigorous, consistent over time and based on the same criteria adopted for internal management purposes.

Banks' estimates shall reflect the effect of discounting using a methodology that satisfies the following criteria:

- a) the discount rate may vary depending on the market in which the bank operates, the transaction type and recovery practices. In all cases, the method for determining the discount rate shall be consistent for all exposures of the same type;
- b) the calculation of present value shall reflect the time value of money and the risk implicit in the volatility of recoveries by means of an appropriate risk premium. Only in the absence of uncertainty concerning recovery (for example, if the recoveries come from cash collateral) may the present value calculations reflect only the time value of money;
- c) banks shall adequately document the data and information underlying their choice of the discount rate.

The reference dataset for the estimation of LGDs shall be representative of the bank's portfolio and shall:

- 1. cover a period that is sufficiently long (the observation period) to provide information on loss rates in the various phases of the business cycle;
- 2. collect and store all information potentially relevant for the estimation, even where only part of such information is actually used;
- 3. contain all exposures closed during the observation period;
- 4. include data on all main loss drivers;
- 5. collect information at the individual defaulted exposure level or at the pool level; where banks do not have sufficiently detailed data, they shall develop an appropriate methodology for allocating such data.

The LGD estimate may also consider exposures to defaulted persons that were not closed during the observation period on the basis of explicit, clear and documented internal rules formulated on a conservative basis. In all cases, estimates of future costs and recoveries are not allowed. Banks shall have evidence of the impact of the inclusion or exclusion of such positions on the estimate of LGDs.

Where the LGDs observed for individual exposures in the reference dataset are negative, banks shall have evidence of such values. The LGD estimates shall in any case be non-negative. Where the estimated values are especially low or equal to zero, banks shall provide a detailed demonstration of the accuracy and robustness of the estimation process used, with particular reference to the main drivers of those value.

In estimating LGDs, banks shall take account of the characteristics of the exposures (such as size, technical form and risk mitigants), using for example multivariate models or the average long-run LGD for the various transaction types.

In the latter case, the average shall not be weighted by the amount of the exposure: any impact of the amount on loss rates shall be treated by segmenting the averages by amount bracket rather than weighting loss rates by amount.

Banks shall use LGD estimates that are appropriate for an economic downturn if those are more conservative than the long-run average. To this end, banks shall adopt a rigorous and documented process structured as follows:

- definition of appropriate economic downturn conditions for each exposure class within each jurisdiction. The adverse economic conditions may be the same as those adopted for stress testing (see subsection 3);
- 2. identification of adverse dependencies, if any, between default rates and recovery rates;
- 3. where no material adverse dependencies have been identified, LGDs may be estimated on the basis of the long-run default-weighted averages of observed loss rates; if any adverse dependencies can be identified, it shall be incorporated in the LGD estimates, for example through analysis of recovery rates during periods of economic downturns or adjusting the risk factors underlying the LGD estimates consistently with downturn conditions. Where requested, banks shall also provide estimates based on long-run averages.

Banks shall demonstrate the robustness of the methodology adopted.

For non-regulatory purposes, banks may use LGD estimates that do not take account of economic downturns.

Banks shall consider the extent of any dependence between the risk of the obligor and that of the collateral or collateral provider. Cases where there is a significant degree of dependence shall be addressed in a conservative manner.

Currency mismatches between the underlying obligation and the collateral shall be treated conservatively in the bank's assessment of LGD.

In the case of exposures backed by collateral, where the current system for managing such collateral differs significantly from the system adopted in the period covered by the time series used to estimate LGDs, it shall, where necessary, adjust such estimates conservatively.

Where banks take account of the effect of risk mitigation techniques, the provisions of Chapter 2, Part 1, Section V shall apply.

To the extent that banks take account of collateral in determining EADs using the standardized approach or internal models for calculating counterparty risk (see Chapter 3, Section II), any amount to be recovered from such collateral shall not be taken into account in the LGD estimates.

For the specific case of exposures already in default, banks shall base their calculation on their best estimate of expected loss for each exposure – given current economic circumstances and exposure status – and the possibility of additional unexpected losses during the recovery period. In particular, the best

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estimate of expected loss shall normally coincide with the specific value adjustments recognized in the financial statements.

# Specific criteria for exposures to central governments and central banks, supervised institutions and corporates

Estimates of LGD shall be based on data over a minimum of five years, increasing by one year each year after implementation until a minimum of seven years is reached, for at least one data source. If the available observation period spans a longer period for any source, this longer period shall be used.

# Specific criteria for retail exposures

LGD estimates may be derived from estimates of expected losses and estimates of PDs; in this case, the same requirements for estimating LGDs shall apply.

Banks may reflect future drawings on credit lines in their LGD estimates rather than in their credit conversion factors.

At the time the application for authorization is submitted, the length of the historical observation period for one data source for the purposes of estimating LGDs shall be at least two years, increasing one year each year until the data cover a period of at least five years. Banks may attribute greater importance to more recent data if they can demonstrate that such data are better predictors of loss rates.

## 2.4 Credit conversion factors

Estimates of CCFs shall reflect the possibility of further drawings by the obligor up to and, where relevant, after the time of the default. CCFs shall be expressed as a percentage of the undrawn margin on the facility and may not be less than zero.

Where there is a positive correlation between PDs and CCFs, the estimates shall incorporate a larger margin of conservatism.

Estimates of CCFs shall take account of the characteristics of the exposures (such as size, technical form and rating), using for example multivariate models or the average long-run CCFs for the various types of exposure. In the latter case, the average shall not be weighted by the amount of the exposure: any impact of the amount shall be treated by segmenting the averages by exposure bracket rather than weighting CCFs by amount.

The reference dataset for the estimation of CCFs shall be representative of the bank's portfolio and shall:

- a. cover a period that is sufficiently long (observation period) to provide information on developments in exposures at default in the various phases of the business cycle;
- b. collect and store all information potentially relevant for the estimation, even where only part of such information is actually used;

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c. report: i) exposures to all obligors that defaulted during the observation period; ii) the drawn and undrawn amount at default, at a time prior to default and, where relevant, after default; iii) factors that permit aggregation of defaulted exposures in meaningful ways.

Banks shall use CCF estimates that are appropriate for an economic downturn if those are more conservative than the long-run average. Banks shall make adjustments to their estimates by facility grade to limit the capital impact of an economic downturn.

Banks shall have adequate systems and procedures in place to monitor on a daily basis facility amounts, current outstandings against committed lines and changes in outstandings by obligor and by rating grade. Banks shall take account of such systems in estimated CCFs.

# Specific criteria for exposures to central governments and central banks, supervised institutions and corporates

Estimates of conversion factors shall be based on data over a minimum of five years, increasing by one year each year until a minimum of seven years is reached, for at least one data source. If the available observation period spans a longer period for any source, this longer period shall be used.

# Specific criteria for retail exposures

At the time the application for authorization is submitted, the length of the historical observation period for the purposes of estimating CCFs shall be at least two years, increasing one year each year until the data cover a period of at least five years. Banks may attribute greater importance to more recent data if they can demonstrate that such data is a better predictor of CCFs.

# 3. Use of stress tests in assessing capital adequacy

In order to assess the adequacy of capital to support the risks faced by banks, credit risk measurement and management activities shall include stress testing of the portfolios within the scope of the validation process. Stress tests may be conducted for different levels of aggregation.

The presence of adequate stress testing methodologies shall be a requirement for authorization of the use of internal rating systems for supervisory capital purposes. In addition, the Bank of Italy shall consider the results of stress tests in its assessment of the adequacy of capital to support risks that the bank could face, including in abnormal market conditions.

The results of stress tests shall be examined within the supervisory review process.

## Types of stress tests

Stress tests comprise a series of methods of varying complexity and sophistication that enable the simulation of the sensitivity of a portfolio to extreme but plausible variations in one or more risk factors.

They involve: a) sensitivity analyses, which are used to assess capital adequacy with respect to a change in one risk factor; b) scenario analyses, which are used to simulate the impact on capital of an adverse shock leading to the simultaneous variation in a set of risk factors.

Banks that adopt an IRB approach for measuring credit risk shall conduct stress tests that include both sensitivity and scenario analyses. In conducting the latter, banks shall consider both historical and hypothetical scenarios.

Stress tests shall incorporate shocks of varying intensity. Tests shall consider at least the effect of a mild recession (for example, two consecutive quarters of zero GDP growth).

# Methodological issues

Banks shall assess migration of exposures among ratings grades under their stress testing.

Stress tests shall:

- be plausible;
- be consistent with the quantitative models used by the bank in order to ensure the correct interpretation of the results of the tests;
- take account of any specific features of the bank's portfolio and the related sources of risk.

# Time horizon

Banks shall consider a time period sufficiently long to permit the full manifestation of the impact of the shock on their portfolio. The time period shall be consistent with the portfolio and in any case no less than one year.

# Frequency

In determining the frequency of credit risk stress tests, banks may reconcile the need to obtain an updated vision of their risk exposure with the need to contain the burden associated with conducting simulations. A lower frequency may be justified on the basis of the complexity of the techniques used in conducting the stress tests. In all cases, banks shall carry out stress tests at least once a year.

# Organizational issues

The entire stress testing process shall be adequately documented. The documentation shall describe the allocation of responsibility for conducting the tests, the assumptions underlying the sensitivity and scenario analyses, the statistical methods and databases adopted and the procedures for reporting to the supervisory body and the management body.

# 4. Validation of rating systems and risk parameter estimates

The validation of rating systems and risk parameter estimates forms part of banks' broader internal process for validating rating systems. The general

principles governing this area are laid down in Section III, sub-section 2.1, while specific provisions governing the validation of internal estimates are set out below.

The main issues concern:

- a) the representativeness of the estimation sample with respect to the reference population at the time of the estimate and in subsequent periods;
- b) the performance of quantitative models for the assignment of ratings and the allocation of exposures to pools, in terms of accuracy, predictive power, ability to rank obligors by risk level, with regard to exposure classes, individual portfolios and appropriate breakdowns of the latter on the basis of a range of classification criteria (for example, size or location);
- c) the accuracy of risk parameter estimates when compared with ex-post empirical evidence (back-testing);
- d) the relative performance of systems and risk parameter estimates with respect to benchmarks;
- e) the dynamic properties of the rating system in terms of stability and migration rates;
- f) the adequacy of stress testing procedures.

This analysis shall be conducted at least once a year.

With regard to backtesting, realized default rates shall regularly be compared with estimated PDs for each rating grade (or pool) and where they do not fall within the expected range for that grade (or pool), banks shall analyse the reasons for the deviation. Banks using the advanced IRB approach or the IRB approach for retail exposures shall conduct a similar analysis of estimates of LGDs and CCFs, and ELs where used. Such comparisons shall be based on historical data that cover as long a period as possible.

Banks shall also have internal standards for situations where deviations from expectations in realized PDs, LGDs, CCFs and ELs, where used, become significant enough to call the validity of the estimates into question. These standards may take account of business cycles and similar systematic variability in default experience. Where realized values continue to be higher than expected values, banks shall revise estimates upward to reflect their default and loss experience.

With regard to benchmarking, banks shall establish procedures to specify acceptable deviations between internal estimates and benchmark data and shall identify, at least in general terms, the actions to be taken in the event such deviations significantly exceed acceptable levels. Banks shall also identify possible sources of unexpected volatility that could affect benchmarking results over time.

Banks that adopt the foundation IRB approach shall compare the values referred to in Section V with the realized LGDs and CCFs, where available.

For asset portfolios showing few defaults (low-default portfolios), the following principles shall also apply:

- a) exposures shall not be excluded from the scope of IRB approaches simply because of the absence of sufficient data to validate the risk parameter estimates on a statistical basis;
- b) banks shall use an adequate margin of conservatism in the estimation and validation of risk parameters;
- c) banks shall devote particular attention to the qualitative analysis techniques adopted in the validation process.

# 5. Use of internal models for equity exposures

Banks that intend to use internal models for calculating risk-weighted assets in respect of equity exposures (Section V, sub-section 4) shall hold capital equal to the potential loss as calculated by VaR models generated by an assumed instantaneous shock equivalent to the 99<sup>th</sup> percentile, one-tailed confidence interval of the difference between quarterly returns and an appropriate risk-free rate computed over a long-run sample period.

Banks shall comply with the following criteria:

a) The estimated losses should be robust to adverse market movements relevant to the long-term risk profile of the bank's holdings. The data used to represent return distributions should reflect the longest sample period for which data are available and meaningful in representing the risk profile of the bank's equity exposures. Banks shall demonstrate that the shock employed provides a conservative estimate of potential losses over a relevant long-term market or business cycle. The number of exposures in the sample and the observation period used shall be sufficient to provide statistically reliable loss estimates. Banks shall combine empirical analysis of available data with adjustments in order to obtain estimates that achieve appropriate realism and conservatism that are not based solely on judgemental assessments. Banks may use independently reviewed internal data or data from external sources (including pooled data).

In constructing VaR models estimating potential quarterly losses, banks may use quarterly data or convert shorter horizon period data to a quarterly equivalent using an appropriate and documented method in a conservative and consistent manner. Where only limited data is available banks shall add appropriate margins of conservatism;

b) the models used shall be able to capture adequately all material risks embodied in the bank's equity exposures, including both the general risk and specific risk. The internal models shall adequately explain historical price variations, capture both the magnitude and changes in the composition of potential concentrations, and be robust to adverse market environments. The population of risk exposures represented in the data used for estimation shall be closely matched to or at least comparable

with those of the bank's equity exposures. Banks shall demonstrate through empirical analysis the appropriateness of risk factors;

- c) the internal model shall be appropriate for the risk profile and complexity of a bank's equity portfolio. Where a bank has material holdings with values that are highly non-linear in nature the internal models shall be designed to capture appropriately the risks associated with such instruments. Banks may supplement internal risk measures with any correlations in the class of equity exposures. The use of explicit correlations shall be documented and supported using empirical analysis. The appropriateness of implicit correlation assumptions shall be assessed by the Bank of Italy in its review of model documentation and estimation techniques;
- d) mapping of individual positions to proxies, market indices and risk factors shall be plausible, intuitive and conceptually sound;
- e) a rigorous and comprehensive stress-testing programme shall be in place.

Banks shall establish policies, procedures, and controls to ensure the integrity of the model and the modelling process in accordance with the provisions governing market risks (see Chapter 4).

Banks shall regularly compare actual returns (computed using realized and unrealized gains and losses) with estimates. Such comparisons shall make use of historical data that cover as long a period as possible. The bank shall document the methods and data used in such comparisons. This analysis and documentation shall be updated at least annually.

Banks shall make use of other quantitative validation tools and comparisons with external data sources. The analysis shall be based on data that are appropriate to their equity exposures, are updated regularly, and cover a relevant observation period. Banks' internal assessments of the performance of their internal models shall be based on as long a period as possible.

Banks shall have internal standards for situations where comparison of actual returns with the models estimates calls the validity of the estimates into question. These standards shall take account of business cycles and similar systematic variability in returns. All adjustments made to internal models in response to model reviews shall be documented.

# 6. Use of models supplied by third-party vendors

Systems for assigning ratings or allocating exposures to a pool shall be designed and developed internally by banks, with the possible assistance of an external party. Banks shall retain title to such systems.

In specific operational areas banks may acquire models from third-party vendors. Such models may also supplement models developed internally, as long as the following criteria are complied with:

- a) models acquired from third-party vendors shall be appropriate to the bank's portfolio and the use that will be made of them within the rating process;
- b) banks shall have personnel appropriately qualified in the use and maintenance of such models;
- c) banks shall fully understand the functioning of the models and shall comply with all minimum requirements envisaged for internal systems.

Where an external model is used to supplement a more extensive internal system and the bank can demonstrate that the removal of the external component from the internal system does not decisively reduce the performance of the latter, the bank shall in any case:

- fully understand the key features and logical processes underlying the external models;
- demonstrate an adequate understanding of the type of data used in the external model and the way in which the latter is linked to information produced internally (also with a view to ensuring that the same data is not counted more than once);
- d) banks shall ensure the consistency of the rating methodologies used in the internal system with those used in the external model, for example as regards the internal procedure used to assign exposures to a given rating grade (or to a given pool) and that adopted by the third-party vendor;
- e) banks shall use an internal validation process to assess the external models.
  Where the external model is used to supplement a more extensive internal system and the bank can demonstrate that the removal of the external component from the internal system does not decisively reduce the performance of the latter, the validation of the external model may form part of the validation of the overall internal system;
- f) banks shall be able to ensure the functioning and validation of external models even in the event the relationship with the third-party vendor is terminated.

## SECTION V

## WEIGHTING RULES

The risk parameters required for the calculation of capital requirements using IRB approaches shall either be estimated by the banks themselves or else supplied by the Bank of Italy, depending on which method (foundation or advanced) is being used.

In both cases, the bank shall use the relevant regulatory functions (see Annex B) to determine risk-weighted exposure amounts.

The rules set out below shall apply to both on-balance-sheet and off-balancesheet exposures in the banking book.

# 1. Exposures to central governments and central banks, supervised institutions and corporates

## 1.1 Probability of default (PD)

For exposures to corporates and supervised institutions, the probability of default (PD) to be considered in the relevant regulatory functions (see Annex B), shall not be less than 0.03%. Such limit shall not apply to central governments and central banks.

As regards purchased receivables in respect of corporates, see sub-section 7.

The PD of accrued interest and other income on facilities and other revenues accrued but not yet fallen due shall be that of the rating grade to which the obligors are assigned. Where the bank is unable to assign the accruals to the individual obligors, it may assign them on the basis of the exposure class to which the obligors belong, applying the average PD for that exposure class. Accrued interest and other income for which the bank is unable to determine the exposure class shall be assigned to the exposure class with the highest grade PD below that for defaulted assets and shall be assigned that PD.

The criterion for accrued income shall also apply to interest and other income that has accrued, fallen due but not yet been debited or that cannot be debited, even where it was recognized on a date subsequent to the reference date for the calculation of the capital requirement.

For transit and suspense items that will ultimately be allocated to asset accounts, banks shall apply the PD of the rating grade that includes the counterparties to which such accounts refer to the algebraic sum of such items. Where banks are unable to comply with this rule, they shall allocate the transit and suspense items to their respective exposure classes and assign the highest grade PD immediately below that for defaulted positions. Where a bank is also unable to

determine the exposure class for the transit and suspense items to be allocated to asset accounts, such items shall be assigned to the exposure class with the highest grade PD below that for defaulted assets and shall be assigned that PD.

Banks that do not exceed the "exemption thresholds" for transit and suspense items envisaged in the *Manuale per la compilazione della matrice dei conti* may, as an alternative to the above rule, conventionally recognize the entire value of the transit and suspense items under "Other assets" (see sub-section 6).

Receivables recognized under "Other receivables" may also be recognized in the relevant classes, with the exception of suspense items.

The PD of defaulted positions shall be 100%.

Where an exposure is entirely or partly supported by unfunded credit protection, the regulations set out in Chapter 2, Part 1, Section IV shall apply.

Banks that adopt the advanced IRB approach may recognize the credit risk mitigation impact of unfunded credit protection instruments or credit derivatives by adjusting PD and/or LGD subject to compliance with the related minimum requirements.

The credit risk-weighted exposure amount computed after recognizing the mitigating effects of the above instruments shall in no case be lower than the amount of a comparable direct exposure to the protection provider.

# 1.2 Loss given default (LGD)

## Foundation approach

The banks that adopt the foundation approach for exposures to central governments and central banks, supervised institutions and corporates shall apply the following LGD values in the relevant regulatory function (see Annex B):

- a. exposures other than hybrid capital instruments, subordinated instruments and covered bonds: 45%;
- b. hybrid capital instruments and subordinated instruments other than those deducted from supervisory capital: 75%;
- c. covered bonds, as defined for the standardized approach: 12.5%. Until 31 December 2010, such instruments may be assigned an LGD of 11.25%, provided that the conditions laid down in Annex VII, Part 2, paragraph 8 of Directive 2006/48/EC are met;
- d. for purchased receivables, see sub-section 7.

The values indicated above may be reduced where unfunded or funded credit protection has been provided.

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## Advanced approach

Banks may recognize the credit risk mitigation impact of unfunded credit protection instruments by adjusting PD and/or LGD subject to compliance with the related minimum requirements.

The credit risk-weighted exposure amount computed after recognizing the mitigating effects of the above instruments shall in no case be lower than the amount of a comparable direct exposure to the protection provider

For purchased receivables, see sub-section 7.

## 1.3 Exposure at default (EAD)

# Foundation approach

## **On-balance-sheet exposures**

On-balance-sheet exposures include all assets carried on the balance sheet regardless of their technical form, except for equity exposures and securities financing transactions (SFTs) (see Chapter 3). For purchased receivables, see subsection 7.

On-balance-sheet exposures are considered at their carrying amount gross of: a) specific value adjustments; b) the positive difference between the nominal redemption value and the purchase cost, where the defaulted financial assets were purchased at a discount.

The exposure value shall then be adjusted by deducting (adding) the part of that was not (was) recognized in supervisory capital. In particular, the capital gains/losses from fair value measurement and the positive or negative reserves in respect of loans classified as available-for-sale (AFS) contribute to the determination of the exposure up to the amount in which they were eligible as supervisory capital.<sup>57</sup>

Loans classified in the supervisory trading book as well as loans and debt securities affected by the fair value option or subject to fair value hedging shall be measured in accordance with the general rule. However, for loans classified in the supervisory trading book the specific value adjustments shall correspond to the positive difference between the book value of the closing balances prior to balance-sheet measurement and their carrying amount.

<sup>&</sup>lt;sup>57</sup> For example, for debt securities classified as available for sale, two alternative situations shall be envisaged:

<sup>1)</sup> in the event of a net capital loss, the fact that the loss is fully deducted from supervisory capital means that the securities contributing to the determination of the loss shall be included as at their carrying amount, without supervisory haircuts;

<sup>2)</sup> in the event of a net capital gain, the fact that the gain is included only in part (50%) in Tier 2 capital means that the securities contributing to the gain shall be considered at their carrying amount, with a supervisory adjustment to be calculated and allocated as follows: the portion of the net gain that was not included in supervisory capital, gross of the related tax liability, shall be deducted up to the amount equal to the carrying amount of the securities generating the gains with the lowest PD.

For leases, the value of exposures shall be the present value of the minimum lease payments. These are the payments over the lease term that the lessee is or can be required to make and any purchase option that is reasonably certain to be exercised. They shall also include any guaranteed residual value fulfilling the requirements set out in Chapter 2, Part 1, Section III, Subsection 2, paragraphs 5.2, 5.3, 5.5 and 7, and in Section IV, Subsection 2, paragraph 7.1.

For exposures in respect of the unguaranteed residual value, see sub-section 6.

# On-balance-sheet exposures – Netting

For loans and deposits in respect of the same counterparty that comply with the requirements for on-balance-sheet netting, EAD shall be the carrying amount gross of specific value adjustments net of the carrying amount of the deposits held as collateral, which shall be adjusted if necessary for exchange rate volatility and maturity mismatches (see Chapter 2, Part 1, Annex B).

SFTs

For repurchase transactions in securities or commodities and for securities or commodities lending or borrowing transactions that are subject to a bilateral netting arrangement, as defined by the regulations governing credit risk mitigation instruments, EAD shall be determined using the calculation method prescribed by the latter regulations.

For reverse repurchase transactions in securities or commodities that are not subject to a bilateral netting arrangement, EAD shall be equal to the carrying amount of the security or commodity. The amount shall be increased using either standard supervisory haircuts or internally estimated haircuts under the comprehensive method for credit risk mitigation.

For repurchase transactions in securities or commodities that are not conducted within the framework of a bilateral netting arrangement, EAD shall be equal to the carrying amount gross of any value adjustments.

In the case of commodities or securities sold, pledged as collateral or lent in connection with securities or commodities lending or borrowing transactions (that are not subject to a bilateral netting arrangement) and in the case of margin lending transactions, EAD shall be the carrying amount of the security or commodity. The amount shall be increased using either standard supervisory haircuts or internally estimated haircuts under the comprehensive method for credit risk mitigation. For margin lending transactions connected with the purchase of securities, EAD shall be the carrying amount gross of any value adjustments.

Alternatively, EAD for the above transactions (with the exception of repurchase and reverse repurchase transactions in securities or commodities and securities and commodities lending or borrowing transactions subject to a bilateral netting arrangement) may be determined using one of the other methods prescribed for measuring counterparty risk (see Chapter 3, Section II).

An EAD of zero may be assigned to exposures to a central counterparty (see Chapter 3, Section I, sub-section 3) connected with the transactions above, provided that its counterparty risk exposures with its own counterparties are fully collateralized on a daily basis.

*Off-balance-sheet assets – Over-the-counter (OTC) derivative contracts and long settlement transactions* 

EAD for OTC financial and credit derivatives and long settlement transactions shall be determined by means of one of the methods prescribed for measuring counterparty risk. The exposure value shall be increased by any specific value adjustments that should be necessary.

An EAD of zero may be assigned to exposures to a central counterparty connected with such transactions, provided that its counterparty risk exposures with its own counterparties are fully collateralized on a daily basis.

*Off-balance-sheet assets – Guarantees issued and commitments to disburse funds* 

EAD for guarantees issued and commitments to disburse funds shall be the nominal value multiplied by the CCFs.

Banks that adopt the foundation IRB approach shall apply the CCF prescribed by the standardized approach, as set out below:

- 100% for full-risk guarantees and commitments;
- 50% for medium-risk guarantees and commitments;
- 20% for medium/low-risk guarantees and commitments;
- 0% for low-risk guarantees and commitments;

Undrawn retail credit facilities that the bank may cancel unconditionally at any time without notice, and those that provide for automatic cancellation due to deterioration in an obligor's creditworthiness shall receive a CCF of 0%. This treatment shall be permitted as long as the bank adequately monitors the financial situation of the obligor and its internal control system enables it to immediately detect any deterioration in the obligor's creditworthiness.

For short-term letters of credit arising from the movement of goods, in transactions in which the shipment has already taken place, a CCF of 20% shall be applied for both the issuing and confirming banks.

For other credit lines, note issuance facilities (NIF) and revolving underwriting facilities (RUF), a CCF of 75% shall be applied, regardless of the maturity of the commitments.

For a commitment referring to another off-balance-sheet operation (e.g. a commitment to provide a guarantee), the CCF shall be the lower of the CCFs associated with each operation.

## 

## Advanced approach

The CCFs shall be estimated by the banks themselves, without prejudice to the rules for the phased rollout of the IRB approach and the permanent use of the standardized approach (see Section VI).

## 1.4 Maturity

# Foundation approach

Maturity (M), expressed in years, shall be equal to:

- 0.5 for repurchase transactions and securities and commodities lending or borrowing transactions;
- 2.5 for other transactions.

For the treatment of maturity mismatches, see Chapter 2, Part I.

# Advanced approach

Maturity (M), expressed in years, shall be calculated on the basis of the following criteria. In all cases, M shall be no less than 1 year (with certain exceptions) and no greater than 5 years.

For exposures subject to a cash flow schedule, M shall be calculated in accordance with the following formula:

$$M = \max\left\{1; \min\left(\sum_{t} t * CF_{t} / \sum_{t} CF_{t}; 5\right)\right\}$$
(1)

where  $CF_t$  denotes the cash flows (principal, interest payments and fees) contractually payable by the obligor in period t expressed in years.

For purchased receivables, see sub-section 7.

For derivatives that are not fully or nearly fully collateralized<sup>58</sup> and are subject to a bilateral netting agreement, M shall be the average remaining maturity of the transaction, calculated by weighting the remaining maturity of each derivative within the agreement with its notional value.<sup>59</sup> In all cases, M shall be no less than 1 year.

<sup>&</sup>lt;sup>58</sup> This refers to transactions that are not fully secured by collateral only in exceptional circumstances. In such a situation, banks shall restore full collateralization on the working day following that on which the difference between the fair value of the derivative and the value of the collateral was emerged. Consequently, this provision does not regard positions for which the value of the collateral is systematically less than the fair value of the derivative.

<sup>&</sup>lt;sup>59</sup> For interest rate swaps with variable notional principal, the residual maturity and the notional value shall be calculated with reference to each of the interest rate swaps contained in the underlying contract.

For operations in fully or nearly-fully collateralized derivatives and fully or nearly-fully collateralized margin lending transactions which are subject to the same bilateral netting agreement, M shall be the average remaining maturity of the operations, calculated by weighting the remaining maturity of each derivative within the agreement with its notional value. In all cases, M shall be no less than 10 days.

For exposures other than those with a cash flow schedule and those considered above, M shall be the maximum remaining time that the obligor may take to fully discharge its contractual obligations. Normally, the time allowed to the obligor is the same as the remaining maturity of the financial instrument. In all cases, M shall be no less than 1 year. This criterion shall also apply to exposures for which the bank is unable to calculate the maturity using formula (1) above.

For transactions in which banks use the internal model method to calculate counterparty risk and whose maturity (or that of one instrument in the case of netting arrangements) is greater than 1 year, M shall be determined using the methods specified in Chapter 3, Annex C, formula (4).

Without prejudice to the provisions of the following sub-section, where an internal model is used for to calculate counterparty risk and where the netting arrangements consist entirely of contracts with an original maturity of less than one year, M shall be calculated using formula (1).

With the exception of transactions for which M is calculated on the basis of formula (4), M may be less than 1 year but may not be less than 1 day where the transactions involve the following:

- 1. fully or nearly-fully collateralized derivatives;
- 2. fully or nearly-fully collateralized margin lending transactions;
- 3. repurchase transactions and securities or commodities lending or borrowing transactions,

provided the documentation requires daily re-margining and revaluation and includes provisions that allow for the prompt liquidation or setoff of collateral in the event of default or failure to re-margin.

For the treatment of maturity mismatches, see Chapter 2, Part I.

# 2. Specialized lending

Banks that meet the requirements for PD, LGD and EAD estimates may, as appropriate, adopt the foundation approach or the advanced approach.

Banks that do not meet the requirements for PD estimates shall assign their specialized lending exposures to one of five categories, to which the risk weights set out in the following table shall be applied (supervisory slotting criteria):

	Category 1	Category 2	Category 3	Category 4	Category 5
Assessment	Strong	Good	Satisfactory	Weak	Default
Remaining maturity less than 2.5 years	50%	70%	115%	250%	0%
Remaining maturity equal to or more than 2.5 years	70%	90%	115%	250%	0%

Table 1

For the purpose of mapping the exposures to the above categories, banks shall take into account factors such as financial strength, political and legal environment, transaction/asset characteristics and guarantees securing the exposure.

Annex C provides a detailed description of the distinguishing characteristics of these factors.

Where the exposure has a remaining maturity of 2.5 years or more, the Bank of Italy may allow banks, within the procedure for the authorization of internal systems set out in Section 1, Chapter 1, Part 5, to assign risk weights of 50% to exposures in category 1 and 70% to exposures in category 2, provided that they have proven experience and a significant volume of business in this segment.

Where banks use the supervisory slotting criteria for determining the risk weights for the specialised lending exposures, the corresponding expected losses shall be calculated in accordance with the table below.

	Category	Category	Category	Category	Category
	1	2	3	4	5
Remaining maturity less than 2.5 years	0%	0.4%	2.8%	8%	50%
Remaining maturity equal to or more than 2.5 years	0.4%	0.8%	2.8%	8%	50%

Table 2

Where preferential risk weights are assigned to exposures in categories 1 and 2, the expected loss for category 1 shall be 0 and the expected loss for category 2 shall be 0.4%.

## 3. Retail exposures

Banks shall provide their own estimates of PD, LGD (or EL) and CCF. The capital requirement shall be calculated using the relevant formulas (see Annex B).

# 3.1 Probability of default (PD)

PD may not be less than 0.03%.

For purchased receivables, see sub-section 7.

Prepayments and accrued income, transit and suspense items, interest and other income yet to be debited or received and other payables shall be subject to the same rules as those for the classes of exposure to central governments and central banks, supervised institutions and corporates (see sub-section 1).

Where it is not possible to differentiate the relationships in respect of which interest and other income is to be debited or credited on accounts with a debtor balance as well as that to be received, the entire amount shall be assigned to the "other retail" sub-portfolio.

The PD of defaulted obligors or transactions shall be 100%.

Banks may recognize the credit risk mitigation impact of unfunded credit protection instruments by adjusting PD and/or LGD at the individual exposure or pool level, subject to compliance with the related minimum requirements.

Banks shall not assign guaranteed exposures a PD or LGD that reflects the impact of the credit risk mitigation instrument in a manner that the resulting risk weight is lower than that a comparable direct exposure to the protection provider.

## 3.2 Loss given default (LGD)

For transactions with uncertain future drawing such as credit cards, banks shall take into account their history and/or expectation of additional drawings prior to default in their overall calibration of loss estimates. Where a bank does not allow for these factors in determining CCFs, it shall reflect the possibility of additional drawing in its LGD estimates.

Banks may recognize the credit risk mitigation impact of unfunded credit protection instruments by adjusting PD and/or LGD at the individual exposure or pool level, subject to compliance with the related minimum requirements.

Banks shall not assign guaranteed exposures a PD or LGD that reflects the impact of the credit risk mitigation instrument in a manner that the resulting risk weight is lower than that a comparable direct exposure to the protection provider

Until 31 December 2010 LGD values for exposures secured by residential properties and not benefiting from guarantees from central governments shall not be lower than 10 %.

3.3 Exposure at default (EAD)

Without prejudice to the provisions of this sub-section, the provisions contained in sub-section 1.3 shall apply.

For transactions with uncertain future drawing, banks shall reflect the possibility of additional drawing in its CCF estimates where their history and/or expectation of additional drawings prior to default were not taken into account in determining LGD.

For unsettled spot and forward transactions in foreign exchange and debt securities, banks shall determine the credit equivalents on the basis of the rules envisaged for the standardized approach rather than their internal estimates.

In the case of securitizations of own credit lines, the provisions governing securitization shall apply (Chapter 2, Part II).

# 4. Equity exposures

Banks may adopt three approaches:

- 1. simple risk weight approach;
- 2. PD/LGD approach;
- 3. internal models approach.

Banks may employ different approaches to different equity portfolios where they use different approaches internally.

The approach shall comply with the general principle of appropriateness and proportionality. The choice must be consistent with the size and complexity of the positions, the experience of the bank and the internal process it uses to manage its positions.

Banks may recognize the impact of the credit risk mitigation produced by unfunded credit protection or credit derivatives in accordance with the rules and measurement methods established in the relevant regulations.

For the treatment of equity exposures to instrumental companies or similar entities, see sub-section 6.

4.1 Simple risk weight approach;

The following risk weights shall be applied to equity exposures:

- a) 190% for private equity exposures in sufficiently diversified portfolios;
- b) 290% for exchange-traded equity exposures;
- c) 370% for other equity exposures.

Equity assets (long positions) may be offset by short positions in the same equity instrument other than those held in the supervisory trading book, even where they are the underlying in derivatives contracts. Such offsetting is permitted on condition that the short positions were explicitly designated as hedges of specific equity exposures and that they provide a hedge for at least one year beyond the reference date for the calculation of the capital requirement. Where a maturity mismatch should arise, the rules for corporate exposures shall apply.

The remaining short positions in equity instruments other than those held in the supervisory trading book shall be treated as long positions in equity instruments in the amount of their absolute value.

Where the this approach is used, expected loss shall be determined by multiplying the value of the exposure by the following percentages:

- a) 0.8% for private equity exposures in sufficiently diversified portfolios;
- b) 0.8% for exchange-traded equity exposures;
- c) 2.4% for all other equity exposures.

EAD shall be equal to the carrying amount. In addition, gains/losses from fair value measurement shall be included in the calculation of the exposure to the extent to which they have been included in supervisory capital (see sub-section 1.3).

# 4.2 PD/LGD approach

Without prejudice to the follow provisions, the approach for the calculation of risk-weighted exposures and the related minimum requirements are analogous to those set out in sub-section 1. For equity exposures, however, no distinction is made between the foundation approach and the advanced approach.

Specifically, at the individual exposure level, the sum of the expected loss amount multiplied by 12.5 and the risk-weighted exposure amount shall not exceed the unweighted exposure value multiplied by 12.5.

## Probability of default (PD)

For equity exposures traded on a regulated exchange where the investment is part of a long-term relationship and for non-exchange traded equity exposures where the return on the investment is based on regular and periodic cash flows not derived from capital gains, PD shall not be less than 0.09%.

For exchange-traded equity exposures including non-hedging short positions in the same instruments, PD shall not be less than 0.40%.

For all other equity exposures including other non-hedging short positions in the same instruments, PD shall not be less than 1.25%.

(3)

In the case of hedging with unfunded credit protection instruments, banks may consider the protection provider's PD. The minimum value for the protection provider's portfolio shall be applied to the latter.

Loss given default (LGD)

The banks shall use the following LGD values:

- a) 65% for private equity exposures in sufficiently diversified portfolios;
- b) 90% for other equity exposures.

In the case of hedging with unfunded credit protection instruments, the LGD applicable to the exposure to the protection provider shall be that of the main obligor.

## Exposure at default (EAD)

EAD shall be equal to the carrying amount. In addition, gains/losses from fair value measurement shall be included in the calculation of the exposure to the extent to which they have been included in supervisory capital (see sub-section 1.3).

Maturity (M)

Maturity (M), expressed in years, shall be equal to 5.

# Expected loss

Expected loss amounts shall be calculated according to the following formula:

$$PD \times LGD \times EAD$$

# 4.3 Internal models approach.

The risk weighted exposure amount shall be the potential loss on exposures as derived using internal value-at-risk (VaR) models subject to the 99th percentile interval of the difference between quarterly returns and an appropriate risk-free rate computed over a long-term sample period, multiplied by 12.5.

Expected losses shall be zero.

#### 

The risk-weighted exposure amounts at the individual exposure level shall not be less than the sum of the following amounts obtained with the PD/LGD approach: a) weighted exposure determined by applying the relevant minimum PD and the LGD values envisaged in that approach; b) expected losses (PD × LGD) multiplied by EAD and by 12.5.

# 5. Exposures to collective investment undertakings (CIUs)

Banks may apply: 1) the look-through approach; 2) the simple risk weight approach; 3) the average risk weight approach.

# 5.1 Look-through approach

This approach may be used where the following conditions apply:

- 1. the units in the CIU satisfy the eligibility requirements set out in the standardized approach (see Part I, Section III, sub-section 10.2);
- 2. the bank is aware of all the effective exposures underlying the units in the CIU.

Banks shall assign its holding in the CIU on a pro rata basis to the investments in the fund and treat each portion in the manner prescribed by the applicable rule under the IRB approach.

Banks that do not meet the conditions necessary for the adoption of the lookthrough approach may choose the simple risk weight approach set out in subsection 4.1 or the average risk weight approach as described in sub-section 5.3.

# 5.2 Simple risk weight approach

Without prejudice to the following provisions, the provisions contained in sub-section 4.1 shall apply. Where banks are unable to assign the portion of their CIU investment associated with equity exposures to the categories envisaged for this approach, that portion of the CIU investment shall be assigned to "other equity exposures".

The portion of the investment in the CIU associated with non-equity exposures shall be assigned to one of the equity types set out in sub-section 4.1 taking account of the characteristics of such exposures. Where the bank is not aware of certain exposures of the CIU, the portion of the investment in the CIU investment associated with such exposures shall be assigned to "other equity exposures".

## 5.3 Average risk weight approach

As an alternative to the simple risk weight approach, banks may adopt the average risk weighted exposure approach, either independently or through a third party (asset management companies, depository and sub-depository banks) provided that the correctness of the calculation and the reporting of the average risk weight is assured.

Banks shall multiply the amount of their exposures to the CIU by the corresponding average risk weights, which shall be determined on the basis of the exposures underlying the units in the CIU themselves.

Banks shall calculate the average risk weight on the basis of the following criteria:

- a. for investments associated with equity exposures, the risk weights prescribed in the simple risk weight approach shall apply. Where banks are unable assign the equity exposures to the categories envisaged for that approach, such exposures shall be assigned to "other equity exposures".
- b. for investments other than the equity exposures referred to in point a) above, the risk weights specified in the standardized approach shall apply, with the following adjustments:
  - i. for exposures that are not part of the high-risk class, the risk weight shall be that of the risk class immediately above that to which the exposure would normally be assigned;
  - ii. for exposures in the high-risk class, the risk weight shall be 200%.

# 6. Other items

Other items, measured at their carrying amount, shall receive a risk weight of 100%, except where the exposure is an unguaranteed residual value. In this case, the value shall be calculated for each year as follows:

$$1/t \times 100 \% \times \text{exposure value}$$
 (4)

where *t* is the number of years of the lease contract term.

The carrying amount of tangible assets shall be reduced by the portion (50%) of any capital gains from fair value measurement or revaluation, gross of the related tax liability, that was not included in supervisory capital. Tangible assets shall be considered net of accumulated depreciation.

Cash in hand and equivalent cash items shall be assigned a 0% risk weight and cash items in the process of collection shall be assigned a 20% risk weight.

##
# 7. Purchased receivables

Capital requirements for both default and dilution risk shall be calculated for purchased receivables.

With regard to default risk, the exposures in respect of purchased receivables shall be allocated to the relevant exposure classes. They shall be treated using the regulatory function for corporate exposures (see Annex B, sub-section 1) or the regulatory function for retail exposures (see Annex B, sub-section 2). Where the bank is unable to differentiate the individual components, the regulatory function that will generate the highest capital requirement shall be used.

## 7.1. Default risk: purchased corporate receivables

#### Bottom-up approach

Banks shall assign all their exposures to each obligor to rating grades that capture the risk of the obligor and estimate risk parameters in accordance with the rules and requirements for corporate exposures.

# Top-down approach

Banks may adopt the top-down approach where, in addition to the requirements set out in Section II, sub-section 9.1, the following requirements are met:

- a) the bank has purchased the receivables from unrelated, third party sellers, and its exposure to the obligor of the receivable does not include any exposures that are directly or indirectly originated by the bank itself;
- b) the purchased receivables are generated on an arm's-length basis between the seller and the obligor. Inter-company accounts receivables and receivables subject to contra-accounts between firms that buy and sell to each other are ineligible;
- c) the purchasing bank has a claim on all or part of the proceeds from the purchased receivables;
- d) the portfolio of purchased receivables is sufficiently diversified. Banks shall use duly documented criteria in order to establish whether the number of exposures within the pool is sufficiently large to justify management on a pooled basis.

The following rules shall apply:

- exposures shall be grouped in homogenous grades or pools that reflect both obligor and transaction risks. The grouping shall reflect the seller's lending practices;
- banks may use the long-run averages of one-year realized default rates to estimated EL by obligor grade.

Where the minimum requirements for the estimation of PD set out in Section IV, sub-section 2.2 are not met, banks may calculate PD by estimating EL. Under the foundation IRB approach, the LGD for portfolios composed entirely of senior receivables shall be 45%; in all other cases LGD shall be 100%. Under advanced IRB approach, banks shall calculate PD and LGD in a manner consistent with the rules set out in Section IV, sub-section 2. Where banks are unable to estimate one of the two parameters they may obtain PD/LGD from the value of EL and LGD/PD.

Banks that adopt the foundation approach for corporate exposures shall not adopt the advanced approach for purchased receivables.

Banks shall determined the risk weighted exposure amount on the basis of the regulatory function for exposures to corporates, central governments and central banks, and supervised institutions (see Annex B, sub-section 1). The total annual sales to be used in formula (6) of Annex B is the average of the annual sales of the corporates weighted by their respective exposures.

In addition, where a bank uses its own PD estimates, the remaining maturity (M) for drawn amounts shall be equal to the average maturity of individual exposures in the portfolio weighted by the value of the exposures themselves. In all cases, M shall be at least 90 days.

The same rules shall apply to undrawn amounts under a committed purchase facility, provided the facility contains effective covenants, early amortisation triggers or other features intended to protect the purchasing bank against a significant deterioration in the quality of the future receivables that the bank is required to purchase over the facility's term. In the absence of such effective protections, M for undrawn amounts shall be calculated as the sum of the longest-dated potential receivable under the purchase agreement and the remaining maturity of the purchase facility. In all cases, M shall be at least 90 days.

EAD shall be equal to the exposure value calculated in accordance with the provisions of sub-section 1.3 reduced by the capital requirements for dilution risk prior to credit risk mitigation.

For a revolving purchase facility, EAD shall be the difference between the following two amounts: a) the sum of the current amount of receivables, calculated in accordance with the provisions of sub-section 1.3 plus 75% of the undrawn purchase commitment; b) the capital requirement for dilution risk.

Undrawn commitments relating to revolving purchase facilities that the bank may cancel unconditionally at any time without notice shall receive a CCF of 0%. This treatment shall be permitted as long as the bank adequately monitors the financial situation of the obligor and its internal control system enables it to immediately detect any deterioration in the obligor's creditworthiness.

Under the advanced IRB approach, banks shall calculate EAD in a manner consistent with the requirements set out in Section IV, sub-section 2.

#### 

#### 7.2 Default risk: purchased retail receivables

Exposures shall be grouped in homogenous grades or pools that reflect both obligor and transaction risks. The grouping shall reflect the seller's lending practices.

The risk parameters shall be estimated in accordance with the general provisions for retail exposures.

EAD shall be equal to the exposure value calculated in accordance with the provisions of sub-section 1.3 reduced by the capital requirements for dilution risk prior to credit risk mitigation.

Undrawn commitments relating to revolving purchase facilities that the bank may cancel unconditionally at any time without notice shall receive a CCF of 0%. This treatment shall be permitted as long as the bank adequately monitors the financial situation of the obligor (or the transaction) and its internal control system enables it to immediately detect any deterioration in the obligor's creditworthiness

For pools of retail receivables that the bank is unable to allocate to one of the three sub-classes defined in Section II, sub-section 5, the entire pool shall be allocated to the sub-class with the highest capital requirement.

## 7.3 Dilution risk

To calculate dilution risk, banks shall use the regulatory function for exposures to corporates, central governments and central banks and supervised institutions (see Annex B) for purchased retail receivables as well.

Under the foundation approach, where PD estimates comply with the requirements set out in Section IV, LGD shall be 75%. In the other cases, LGD shall be 100%.

Under the advanced approach, where PD and LGD have not been determined separately in accordance with the requirements set out in Section IV, PD may be derived from EL on the basis of an estimate of LGD.

Under both the foundation and advanced approach, M shall be equal to 1 year.

The estimate of PD, LGD and EL shall be made on the assumption that neither the seller nor third parties have any right of recourse or other guarantees.

Any protection against dilution risk using unfunded credit protection instruments provided by the seller or a third party shall be treated in accordance with the rules set out in Chapter 2, Part I. In particular, the guaranteed exposure (or part thereof) may be assigned the PD of the guarantors.

Under the advanced IRB approach, banks may recognize the effects of unfunded credit protection by adjusting the PD and/or LGD estimates. In this case, the capital requirement shall not be lower than the amount of a comparable direct exposure to the protection provider.

Where the bank is unable to differentiate the operational risk component from the dilution risk component, it may treat both as dilution risk.

Where the bank can demonstrate that dilution risk is immaterial, it shall not be necessary to calculate the corresponding capital requirement.

# 8. Expected loss and total net value adjustments

Expected losses in respect of exposures to central governments and central banks, supervised institutions, corporates and retail exposures, as well as exposures to collective investment undertakings (where the look-through approach has been adopted) and purchased receivables, shall be compared with the corresponding net specific and portfolio value adjustments.

The comparison of expected loss and net value adjustments shall not regard:

a) equity exposures;

b) exposures to collective investment undertakings where, within the framework of each of the three approaches envisaged for such exposures, the bank adopts the simple risk weight approach set out in sub-section 4.1;

c) exposures subject to the rules governing securitisations.

Expected losses in respect of the exposures under points a) and b) shall be deducted subtracted directly from supervisory capital.<sup>60</sup> Expected losses in respect of the exposures under point c) shall be considered in accordance with the rules governing the calculation of the capital requirement for such exposures.

For defaulted financial assets purchased at a discount, the positive difference between the nominal redemption value and the purchase price shall be treated in the same manner as value adjustments.

Where total net value adjustments are greater than the expected loss, the absolute value of the difference shall be included among the positive elements of Tier 2 capital in an amount up to 0.6% of credit risk weighted assets. Where total net value adjustments are less than expected losses, the absolute value of the difference shall be deducted in the amount of 50% from Tier 1 capital and 50% from Tier 2 capital. For exposures already in default, the comparison shall be between the bank's best estimate of the expected loss and the corresponding net value adjustments, where the latter are not equal to the former.

Banks that have received temporary or permanent authorization to use the standardized approach for certain exposures shall establish objective and documented internal criteria for assigning portfolio value adjustments to assets treated under the IRB approach and those treated under the standardized approach.

<sup>&</sup>lt;sup>60</sup> 50% from Tier 1 capital and 50% from Tier 2 capital.

#### SECTION VI

# PHASED ROLLOUT AND PERMANENT PARTIAL USE

## 1. Foreword

The Bank of Italy authorizes the use of internal systems developed by banks for calculating capital requirements subject to compliance with the organizational and quantitative requirements set out in this Part and in accordance with the procedures set out in Title I, Chapter 1, Part 5.

Authorization to use internal rating systems is exclusively directed at verifying the compliance with such minimum requirements. The authorization process shall not represent, either in subject or purpose, an assessment of the merit of lending policies or individual loans, which remain the responsibility of banks' governing bodies, in accordance with the principle of the independence of business decisions.

Where certain aspects of the system are not fully consistent with the operational complexity and risk profile of the applicant, as long as the general validity and reliability of the system is not affected, the authorization may be accompanied by a request for organizational changes and/or the adoption of capital measures (such as adjustments to the risk parameters and the maintenance or raising of the thresholds calculated in accordance with the procedures set out in Chapter 6, Section II, sub-section 6).

Banks intending to adopt an IRB approach shall make a parallel calculation of credit risk and compare the result obtained with the result produced by the standardized method (see Annex D). Until 2009, the calculation shall be made using the method for calculating the capital requirement for credit risk in force until 31 December 2006.

Without prejudice to the provisions of Title I, Chapter 1, Part 5, banks authorized to use the foundation or advanced IRB approaches shall not use the standardized approach or, in the second case, the foundation approach for calculating capital requirements, except in adequately justified extraordinary cases subject to authorization by the Bank of Italy.

## 2. Phased rollout of IRB approaches

Internal rating methods shall be applied to all of the applicant bank's exposure classes, except for permanently exempt exposures (see sub-section 4 of this Section).

However, upon submitting its application, a bank may request permission to exclude temporarily some exposure classes from the IRB approach (phased

rollout). For retail exposures, the phased rollout may be applied to the three subclasses referred to Section II, sub-section 5.

For banks that intend to adopt the IRB approach for retail exposures or the advanced IRB approach for other exposures, the phased rollout may also regard the use of certain risk parameters. However, the requirement to estimate not only PD but also LGD in compliance with the requirements set out in Section IV at the time the application is submitted shall not be affected.

Banks shall demonstrate that at the time the application is submitted their internal rating systems cover<sup>61</sup> at least 75% of the exposures in the individual exposure classes (or sub-classes). To this end, the "other retail exposures" referred to in point 3) of Section II, sub-section 5, may be divided between exposures to private individuals and exposures to corporates and small businesses. For banking groups with significant international activity, the Bank of Italy shall take account of other rules or constraints in the countries in which the groups operate in verifying compliance with the above criterion.

In all cases, the exposures subject to supervisory validation shall make up a significant portion of the overall portfolio.

Banks shall prepare a rollout plan approved by their supervisory body and reviewed by their control body specifying the timing and the sequence of the phased rollout.

The rollout plan shall be submitted to the Bank of Italy together with application for authorization (see Annex D).

In assessing rollout plans, the Bank of Italy shall take account, inter alia, of the specific arrangements in place for the detailed implementation of the plan (structures and resources for monitoring the state of progress of implementation, specification of the procedures to be adopted in the event of delays, etc.).

Banks that intend to apply the IRB approach for retail exposures and the foundation IRB approach for other exposures shall complete the phased rollout within five years of the date on which they obtain authorization to use the IRB approach. Banks that intend to use the advanced IRB approach shall complete the phased rollout within seven years. Derogations from these limits may be granted for highly complex banking groups.

The phased rollout of the IRB approach shall not be used selectively with a view to reducing the minimum capital requirements for exposure classes not yet included in the IRB approach.

Banks authorized to use the IRB approach may not return to the standardized approach for the purposes of calculating capital adequacy requirements except in

<sup>&</sup>lt;sup>61</sup> "Cover" in this context refers to the percentage - in terms of risk-weighted amounts calculated using the standardized approach - of positions assigned a rating in accordance with the requirements set out in these regulations or classified as defaulted. For the purposes of calculating the percentage, no account shall be taken (either in the numerator or in the denominator) of exposures for which the permanent use of the standardized approach is permitted (see paragraph 4).

adequately justified extraordinary cases subject to authorization by the Bank of Italy.

Banks authorized to use internal estimates of LGD and CCF may not return using the regulatory LGD and CCF values except in adequately justified extraordinary cases subject to authorization by the Bank of Italy.

## 3. Implementation of rollout plan

The Bank of Italy shall verify effective compliance with banks' rollout plans and shall prescribe the adoption of appropriate measures to correct any significant deviations from the plan.

Banks shall inform the Bank of Italy when they extend validated IRB systems across other exposure classes or sub-classes as defined for the purposes of the calculation of the 75% threshold. For groups with an international presence, the extension to a foreign component of the group of systems for which authorization has already been granted in another country shall require the submission of a new application for authorization in order to ensure in the procedure the involvement of the competent supervisor on the foreign subsidiary.<sup>62</sup> The extension of new systems not examined during the initial authorization procedure to other exposure classes or sub-classes shall be subject to a new authorization by the Bank of Italy.

Banks shall also provide the Bank of Italy with detailed information regarding the impact on the rollout plan of significant corporate events (such as mergers, reorganizations, acquisitions of business units, changes to information systems) or external factors (such as changes in the regulatory framework).

Where a bank fails to comply with its rollout plan, it shall demonstrate that the effects of such failure are not material or promptly submit a new plan to the Bank of Italy.

## 4. Permanent partial use of the standardized approach

Banks may permanently exclude the following types of exposure from the application of the IRB approach:

- a) exposures of non-significant business units and exposure classes that are immaterial in terms of their size and risk profile;
- b) exposures to central governments and central banks, provided that the bank has ascertained that, in relation to its strategies, the number of material counterparties is limited and it would be unduly burdensome to implement a rating system for them;

 $<sup>^{62}</sup>$  For other issues concerning groups with an international presence, see Title 1, Chapter 1, Part 5.

- c) exposures to supervised institutions, provided that the bank has ascertained that, in relation to its strategies, the number of material counterparties is limited and it would be unduly burdensome to implement a rating system for them. To this end, certain portions of this exposure class may also be excluded, provided that they include exposures that have a homogenous risk profile;
- d) exposures to central governments of the bank's home Member State and exposures to their regional and local governments and administrative bodies, provided that:
  - there is no difference in risk between the exposures to that central government and those other exposures because of specific public arrangements. To this end, banks may apply the standardized approach provided that the regional and local governments have specific tax-raising powers and institutional arrangements are such as to reduce their default risk to the same level as that of the central government of the Member State;<sup>63</sup>
  - exposures to central governments are assigned a 0% risk weight under the standardized approach;
- e) exposures to entities of the same banking group;
- f) equity exposures to entities whose credit obligations qualify for a 0 % risk weight under the standardized approach. The Bank of Italy shall permit the application of the standardized approach to equity exposures for which other Member States have authorized such treatment;
- g) exposures arising from compliance with the minimum reserve requirement set by the ECB, provided that the bank has complied with the conditions laid down by the regulations;<sup>64</sup>
- h) government and government-reinsured guarantees recognized pursuant to the regulations governing credit risk mitigation;
- i) exposures in the "other assets" class.

As regards exposures under point a) above, the exemption shall only apply for small business units to which the group's rating systems cannot be applied or for which the development of specific rating systems would be impossible or unduly burdensome. To this end:

- 1. a business unit is an entity that can be distinguished from the rest of the bank on the basis of its technical-operational, geographical or organizational characteristics;
- 2. the bank shall in any case monitor the risk profile of the exposures using the instruments available to it, even if they have not been recognized for prudential purposes.

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 $<sup>^{63}</sup>$  As regards these entities in the European Union, banks shall refer to the list published by the European Commission and the CEBS.

<sup>&</sup>lt;sup>64</sup> See Part I, Section III, sub-section 2.

The materiality of the exposures shall assessed with reference to both their size and risk profile. In all cases, the amount of the exposures referred to in point a) that may be exempt shall not exceed 10% of total risk-weighted assets, calculated under the standardized approach. For the purposes of calculating this amount, account shall not be taken (either in the numerator or in the denominator) of exposures excluded from the IRB approach for reasons other than those specified in point a) above. Exposures in the "other assets" class shall in any case be considered.

Equity exposures shall be considered material where their average aggregate amount in the year prior to that in which the authorization is granted is greater than 10% of supervisory capital (5% where the number of exposures is fewer than ten individual holdings).

Banks shall verify compliance with that limit at least once a year. Banks shall in any case verify compliance whenever there are significant changes in their structure, for example as a result of mergers or acquisitions.

For the exposures specified in points b) and c) above, the bank shall demonstrate that the conditions required for IRB exemption have been met, and shall provide information on the reasons for which the development of a rating system for the various exposure categories would be unduly burdensome. Lack of data on defaulted assets is not in itself sufficient reason for seeking exemption from the IRB approach.

In particular, the bank shall provide evidence:

- i. of the role played by exposures to central governments, central banks and supervised institutions in the bank's operating strategies;
- ii. of the risk profile of the exposures to central governments, central banks and supervised institutions that the bank intends to exclude from the application of the IRB approach. Such information may be based on the bank's internal classifications (used for monitoring purposes) or on classifications drawn from external sources (agency ratings). The absence of internal or external classifications shall represent in itself an indication of the high risk of the exposures.

Shares held as of 31 December 2006 by banks intending to adopt the foundation approach in 2007 and as of 31 December 2007 by banks intending to adopt IRB approaches as from 1 January 2008 shall be excluded from the calculation of capital requirements until 31 December 2017. For this purpose, the exemption shall also apply to additional purchases of such shares provided that such purchases do not increase the percentage share of the holding. The exemption shall not apply to any shares in excess of the original percentage holding or to any holdings that although they originally qualified for the exemption were sold and subsequently repurchased.

Banks shall apply the standardized approach to exposures belonging to the categories listed above. This option shall also cover exposures supported by credit protection provided by a counterparty to which the standardized approach is applied on a permanent basis.

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The permanent partial use of the standardized approach shall not be used selectively with a view to reducing minimum capital requirements.

The Bank of Italy may require banks to take all necessary measures to implement and use, within the established time limits, the IRB approach for exposures or operational areas that do not comply with the conditions established in this sub-section.

For banking groups with a significant international presence, the Bank of Italy may establish specific methods for the permanent partial use of the standardized approach that take account of rules or other constraints existing in the other countries in which the groups operate.

Where a bank no longer meets the conditions for the permanent partial use of the standardized approach, the bank and the Bank of Italy shall agree on the approaches to be adopted for calculating capital requirements.

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ANNEX A

## **INFORMATION SYSTEMS**

## 1. Performance of technical activities

Bank shall collect and store data in electronic form on obligor and facility characteristics in sufficient detail to provide it to measure credit risk, calculate capital requirements and prepare supervisory reports.

The priorities and significant actions undertaken to implement and maintain the reliability of computerized systems and procedures for managing data supporting the IRB models shall be approved by the supervisory body.

Technical personnel and the IT function shall be involved at the appropriate levels in designing, implementing and managing rating systems. Suitable methods for developing and maintaining information systems, documenting and formalizing processes<sup>65</sup> and periodically reporting on progress and compliance with plans shall be established.

Banks shall document the technical architecture of the IRB systems, the data sources used, data extraction procedures, procedures for storing and controlling data, and the data files used in developing the model and calculating ratings.

The engagement of third parties to perform significant tasks within this process shall not exempt the bank from the duties established by these regulations. Outsourcing contracts shall provide for appropriate minimum service levels and shall permit the supervisory authorities to access the systems of the outsourcer. Where banks use models developed by third-party vendors (for example, applications packages), they shall ensure that their internal personnel have an adequate understanding of the various processing stages and links with the bank's internal data.

## 2. Integration with information systems

The systems and procedures supporting credit management activities<sup>66</sup> shall collect and update the data required to assign ratings to customers.

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<sup>&</sup>lt;sup>65</sup> Where the development of rating systems and their integration with bank systems is conducted using a prototype approach, with the progressive release of modules that have been reviewed and perfected over time, a lesser degree of formalization than that employed in traditional development processes may be found. Banks shall in any case keep a record of the needs expressed by users during development, of the functionalities introduced with the different prototypes, of final approval and of the release of satisfactory modules to the production environment.

<sup>&</sup>lt;sup>66</sup> These include procedures such as: customer information records, group mapping, electronic lending procedures, prices and terms and conditions, loans and guarantees, risk management and control, allocation of economic capital and back-office operations.

The procedures for granting and renewing, at least once a year, facilities<sup>67</sup> shall be integrated with the rating calculation module so as to permit adequate management of the process of assigning, approving and reviewing the scores of individual obligors or pools.

The IT systems and procedures of the IRB shall be fully integrated with management and operational information systems.

The components of banks' IT systems shall, in accordance with the timetable specified in the plan to roll out the IRB system to the banking group, be integrated with one another and with the summary systems of the parent undertaking in order to provide a unified view of the group's risk profile. Full consistency or appropriate links between systems shall ensure the uniformity of data at the group level with regard to customer information<sup>68</sup> and quantitative data. The consistency of statistical concepts, data processing and data quality controls shall be ensured.

## 3. Rating calculation systems

Banks shall collect and store sufficiently long time series for input data, the intermediate and the final outputs of the model (PD, LGD, EAD, ratings with the dates they were assigned, methodologies employed and the person responsible for the assignment, defaulted exposures, assignment of retail exposures to pools, etc.).

The development environment for internal systems shall be supported by suitable tools for managing the software life-cycle,<sup>69</sup> safeguards for data security and quality testing and the representativeness of the information processed, especially in the event of major modifications in the information systems used for managing credit or the use of new data sources. The release of a model from the development environment to the production environment shall be formally documented.

The databases and procedures used in estimating the models and in calculating ratings shall enable replication of past outcomes, the ex post classification of obligors and transactions, and the comparison of estimated and realized data. It is not necessary for all data, including that for remote periods, to be available online at all times. However, information shall be stored in a suitable manner and shall be readily accessible.

Banks shall ensure the availability of databases and procedures and shall facilitate access to data for analysis, model validation and reporting to the governing bodies and external entities.

<sup>&</sup>lt;sup>67</sup> Specifically, procedures shall make immediate use of new information that may alter the current rating, proposing the possible revised rating.

<sup>&</sup>lt;sup>68</sup> This shall include the identification of customers of more than one group component and the establishment of standard criteria for identifying legal or economic links between the customers of the various group banks.

<sup>&</sup>lt;sup>69</sup> Specifically, banks shall ensure appropriate management of versioning, change management and the testing of applications.

Data for conducting stress tests shall be accurate, complete, appropriate and representative. Such data shall be managed in separate environments from those used in the estimation of models and in production. Stress testing shall be conducted using technological resources that are proportionate to the complexity of the methodologies chosen and the size of the databases.

## 4. Data quality and IT security

The procedures for collecting, storing and processing data shall ensure that a high level of quality is maintained. All information that is material (completeness) and of use (relevance) in the calculation of ratings, without systematic distortions of outputs caused by input data or by collection and integration processes (accuracy), shall be identified.

Banks shall establish a data policy that shall encompass the planned controls and the measures for handling missing or unsatisfactory data. On a periodic basis, an assessment shall be conducted to determine whether this policy is being implemented. Increasingly stringent data quality targets shall be set over time.

Banks shall identify the functions involved in collecting data and generating information. They shall be assigned roles and responsibilities to ensure the orderly management of data, statistical concepts and the data dictionary (the "data model").

Data collected or corrected manually (e.g., inputting the findings of quality surveys, adjusting amounts, correcting a position to permit association with the related assessment model, inserting overrides) shall be documented. A record shall be kept of the data prior to modification, the user who adjusted, erased or added information, and, where significant, the reasons for the actions, coded by homogeneous groups. Manual actions shall be validated continuously, including by means of appropriate controls during collection procedures and, where possible, shall be progressively replaced by automated procedures.

A record shall be kept of the controls performed and their outcomes, of data discarded or introduced during the different stages, of missing, implausible and outlier data and data displaying major discontinuities between two periods, of positions excluded from or not correctly associated with rating models, of the results of reconciliations with accounting procedures and of verifications with external databases.

A security policy shall be implemented to prevent unauthorized persons from accessing data and to ensure data integrity and availability. The operational continuity plan shall ensure that, in the event of an incident, the systems and databases used to measure credit risk can be recovered within a time frame compatible with operational needs.

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#### ANNEX B

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### **RISK-WEIGHT FUNCTIONS**

# 1. Rules for exposures to corporates, central governments and central banks, and supervised institutions

The determination of risk-weighted assets in respect of a given exposure is dependent on estimates of PD, supervisory values or internal estimates of LGD and EAD (depending on the IRB approach adopted) and, is some cases, effective maturity (M). PD and LGD are measured as decimals, while EAD is measured as an absolute value. Risk-weighted assets (RWA) shall be calculated using the following formula:

$$RWA = K * 12.5 * EAD$$
 (1

where K denotes the capital requirement and is calculated as follows:

## a) For exposures not in default

 $K = 1.06 * LGD * \{ N [(1 - R)^{-0.5} * G (PD) + (R / (1 - R))^{-0.5} * G (0.999)] - PD \} * [1 + (M - 2.5) * b] / (1 - 1.5 * b)$ (2)

where:

- Ln denotes the natural logarithm.
- N (x) denotes the cumulative distribution function for a standard normal random variable (i.e. the probability that a normal random variable with mean zero and variance of one is less than or equal to x).
- G (z) denotes the inverse cumulative distribution functions for a standard normal random variable (i.e. the value of x such that N(x) = z).
- R denotes the correlation and is calculated as follows:

$$R = 0.12 * [1 + EXP (-50 * PD)]$$
(3)

- b denotes the maturity adjustment and is calculated as follows:

$$b = [0.11852 - 0.05478 * Ln (PD)]^{2}$$
(4)

If PD = 0, then RWA = 0

Banks may treat exposures to SMEs (defined as exposures to companies where the total annual sales for the consolidated group of which the firm is part is less than  $\in$ 50 million) separately from those to large firms. For such exposures, the following adjustment to the correlation formula shall apply:

$$0.04 * [1 - (S - 5)/45] \tag{5}$$

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where S denotes the total annual sales in millions of euros with values of S falling in the range from  $\notin$ 5 million to  $\notin$ 50 million. Reported sales of less than  $\notin$ 5 million shall be treated as if they were equivalent to  $\notin$ 5 million for the purposes of the correlation adjustment.

Banks shall use the total assets of the consolidated group for total annual sales when total sales are not a meaningful indicator of firm size and total assets are a more meaningful indicator than total sales.

The correlation formula thus becomes:

$$R = 0.12 * [1 + EXP (-50 * PD)] - 0.04 * [1 - (S-5)/45]$$
(6)

Where a bank provides credit protection for a number of exposures (basket) under terms that the nth default among the exposures shall trigger payment and that this credit event shall terminate the contract, and where the instrument has an external credit assessment from an ECAI, the risk weights prescribed for securitization shall be assigned.<sup>70</sup> If the instrument is not rated by an ECAI or if the bank does not use the assessment issued by the ECAI, in order to obtain the risk-weighted exposure amount the risk weights of the exposures included in the basket shall be aggregated, excluding n-1 exposures, up to a maximum of 1250% and multiplied by the nominal amount of the protection provided by the credit derivative. The n-1 exposures to be excluded from the aggregation shall be determined on the basis that they shall include those exposures each of which produces a lower risk-weighted exposure amount than the risk-weighted exposure amount of any of the exposures included in the basket.

#### b) For defaulted exposures

For defaulted exposures for which banks apply supervisory LGD values, the capital requirement (K) shall be equal to zero.

For defaulted exposures for which banks apply internal LGD estimates, the capital requirement (K) shall be equal to the greater of zero and the difference between its LGD and the bank's best estimate of expected loss.

## 2. Rules for retail exposures

There are three separate risk-weight functions for retail exposures, respectively for i) exposures secured by residential properties, ii) qualifying revolving retail exposures, and iii) other retail exposures.

In the risk-weight functions, PD and LGD are measured as decimals and EAD is measured as an absolute value.

<sup>&</sup>lt;sup>70</sup> See Chapter 2, Part 2.

# (i) Exposures secured by residential properties

For the exposures referred to in Section II, sub-section 5, point 1, that are not in default, risk-weighted assets shall be determined on the basis of the following formula:

**Risk-weighted** assets

$$RWA=K * 12.5 * EAD$$
 (7)

Capital requirement

$$K = 1.06 * LGD * \{N[(1 - R)^{-0.5} * G(PD) + (R / (1 - R))^{-0.5} * G(0.999)] - PD \}$$
(8)

Correlation

R = 0.15 (9)

For defaulted exposures, the capital requirement (K) shall be equal to the greater of zero and the difference between its LGD and the bank's best estimate of expected loss.

## (ii) Qualifying revolving retail exposures

For qualifying revolving retail exposures that are not in default, riskweighted assets shall be determined on the basis of the following formula:

Risk-weighted assets

$$RWA=K * 12.5 * EAD$$
 (10)

Capital requirements

$$K = 1.06 * LGD * \{ N[(1 - R)^{-0.5} * G(PD) + (R / (1 - R))^{-0.5} * G(0.999)] - PD \}$$
(11)

Correlation

$$R = 0.04$$
 (12)

For defaulted exposures the capital requirement (K) shall be equal to the greater of zero and the difference between its LGD and the bank's best estimate of expected loss.

# (iii) Other retail exposures

For all other retail exposures that are not in default, risk-weighted assets shall be determined on the basis of the following formula, which also allows correlation to vary with PD:

**Risk-weighted** assets

$$RWA=K * 12.5 * EAD$$
 (13)

Capital requirement

$$K = 1.06 * LGD * \{N[(1 - R)^{-0.5} * G(PD) + (R / (1 - R))^{-0.5} * G(0.999)] - PD\}$$
(14)

Correlation

$$R = 0.03 + 0.13 * EXP(-35 \times PD)$$
(15)

For defaulted exposures, the capital requirement (K) shall be equal to the greater of zero and the difference between its LGD and the bank's best estimate of expected loss.

# ANNEX C

### SUPERVISORY SLOTTING CRITERIA FOR SPECIALISED LENDING

Table 1

**Project Finance Exposures: Supervisory Rating Grades** 

	Strong	Good	Satisfactory	Weak
Financial strength				
Market conditions	Few competing suppliers or substantial and durable advantage in location, cost, or technology. Demand is strong and growing	Few competing suppliers or better than average location, cost, or technology but this situation may not last. Demand is strong and stable	Project has no advantage in location, cost, or technology. Demand is adequate and stable	Project has worse than average location, cost, or technology. Demand is weak and declining
Financial ratios (e.g. <i>debt service coverage ratio</i> (DSCR), <i>loan life coverage ratio</i> (LLCR), <i>project life coverage ratio</i> (PLCR), <i>and debt-to-equity ratio</i> )	Strong financial ratios considering the level of project risk; very robust economic assumptions	Strong to acceptable financial ratios considering the level of project risk; robust project economic assumptions	Standard financial ratios considering the level of project risk	Aggressive financial ratios considering the level of project risk
Stress analysis	The project can meet its financial obligations under sustained, severely stressed economic or sectoral conditions	The project can meet its financial obligations under normal stressed economic or sectoral conditions. The project is only likely to default under severe economic conditions	The project is vulnerable to stresses that are not uncommon through an economic cycle, and may default in a normal downturn	The project is likely to default unless conditions improve soon

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	Strong	Good	Satisfactory	Weak
Financial structure				
Duration of the credit compared to the duration of the project	Useful life of the project significantly exceeds tenor of the loan	Useful life of the project exceeds tenor of the loan	Useful life of the project exceeds tenor of the loan	Useful life of the project may not exceed tenor of the loan
Amortisation schedule	Amortising debt	Amortising debt	Amortising debt repayments with limited bullet payment	Bullet repayment or amortising debt repayments with high bullet repayment
Political and legal environment				
Political risk, including transfer risk, considering project type and mitigants	Very low exposure; strong mitigation instruments, if needed	Low exposure; satisfactory mitigation instruments, if needed	Moderate exposure; fair mitigation instruments	High exposure; no or weak mitigation instruments
Force majeure risk (war, civil unrest, etc),	Low exposure	Acceptable exposure	Standard protection	Significant risks, not fully mitigated
Government support and project's importance for the country over the long term	Project of strategic importance for the country (preferably export-oriented). Strong support from Government	Project considered important for the country. Good level of support from Government	Project may not be strategic but brings unquestionable benefits for the country. Support from Government may not be explicit	Project not key to the country. No or weak support from Government
Stability of legal and regulatory environment (risk of change in law)	Favourable and stable regulatory environment over the long term	Favourable and stable regulatory environment over the medium term	Regulatory changes can be predicted with a fair level of certainty	Current or future regulatory issues may affect the project
Acquisition of all necessary supports and approvals for such relief from local content laws	Strong	Satisfactory	Fair	Weak

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	Strong	Good	Satisfactory	Weak
Enforceability of contracts, collateral and security	Contracts, collateral and security are enforceable	Contracts, collateral and security are enforceable	Contracts, collateral and security are considered enforceable even if certain non-key issues may exist	There are unresolved key issues in respect if actual enforcement of contracts, collateral and security
Transaction characteristics				
Design and technology risk	Fully proven technology and design	Fully proven technology and design	Proven technology and design — start-up issues are mitigated by a strong completion package	Unproven technology and design; technology issues exist and/or complex design
Construction risk				
Permitting and siting	All permits have been obtained	Some permits are still outstanding but their receipt is considered very likely	Some permits are still outstanding but the permitting process is well defined and they are considered routine	Key permits still need to be obtained and are not considered routine. Significant conditions may be attached
Type of construction contract	Fixed-price date-certain turnkey construction EPC (engineering and procurement contract)	Fixed-price date-certain turnkey construction EPC	Fixed-price date-certain turnkey construction contract with one or several contractors	No or partial fixed-price turnkey contract and/or interfacing issues with multiple contractors
Completion guarantees	Substantial liquidated damages supported by financial substance and/or strong completion guarantee from sponsors with excellent financial standing	Significant liquidated damages supported by financial substance and/or completion guarantee from sponsors with good financial standing	Adequate liquidated damages supported by financial substance and/or completion guarantee from sponsors with good financial standing	Inadequate liquidated damages or not supported by financial substance or weak completion guarantees
Track record and financial strength of contractor in constructing similar projects.	Strong	Good	Satisfactory	Weak

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		Strong	Good	Satisfactory	Weak
Operating	risk				
Scope and nature of operations and maintenance (O & M) contracts		Strong long-term O&M contract, preferably with contractual performance incentives, and/or O&M reserve accounts	Long-term O&M contract, and/or O&M reserve accounts	Limited O&M contract or O&M reserve account	No O&M contract: risk of high operational cost overruns beyond mitigants
Operator's expertise, track record, and financial strength		Very strong, or committed technical assistance of the sponsors	Strong	Acceptable	Limited/weak, or local operator dependent on local authorities
Off-take	risk				
(a)	If there is a take-or-pay or fixed-price off- take contract:	Excellent creditworthiness of off-taker; strong termination clauses; tenor of contract comfortably exceeds the maturity of the debt	Good creditworthiness of off- taker; strong termination clauses; tenor of contract exceeds the maturity of the debt	Acceptable financial standing of off-taker; normal termination clauses; tenor of contract generally matches the maturity of the debt	Weak off-taker; weak termination clauses; tenor of contract does not exceed the maturity of the debt
(b)	If there is no take-or-pay or fixed-price off-take contract:	Project produces essential services or a commodity sold widely on a world market; output can readily be absorbed at projected prices even at lower than historic market growth rates	Project produces essential services or a commodity sold widely on a regional market that will absorb it at projected prices at historical growth rates	Commodity is sold on a limited market that may absorb it only at lower than projected prices	Project output is demanded by only one or a few buyers or is not generally sold on an organised market

	Strong	Good	Satisfactory	Weak
Supply risk				
Price, volume and transportation risk of feed- stocks; supplier's track record and financial strength	Long-term supply contract with supplier of excellent financial standing	Long-term supply contract with supplier of good financial standing	Long-term supply contract with supplier of good financial standing — a degree of price risk may remain	Short-term supply contract or long-term supply contract with financially weak supplier — a degree of price risk definitely remains
Reserve risks (e.g. natural resource development)	Independently audited, proven and developed reserves well in excess of requirements over lifetime of the project	Independently audited, proven and developed reserves in excess of requirements over lifetime of the project	Proven reserves can supply the project adequately through the maturity of the debt	Project relies to some extent on potential and undeveloped reserves
Strength of Sponsor				
Sponsor's track record, financial strength, and country/sector experience	Strong sponsor with excellent track record and high financial standing	Good sponsor with satisfactory track record and good financial standing	Adequate sponsor with adequate track record and good financial standing	Weak sponsor with no or questionable track record and/or financial weaknesses
Sponsor support, as evidenced by equity, ownership clause and incentive to inject additional cash if necessary	Strong. Project is highly strategic for the sponsor (core business — long-term strategy)	Good. Project is strategic for the sponsor (core business — long- term strategy)	Acceptable. Project is considered important for the sponsor (core business)	Limited. Project is not key to sponsor's long-term strategy or core business
Security Package				
Assignment of contracts and accounts	Fully comprehensive	Comprehensive	Acceptable	Weak

	Strong	Good	Satisfactory	Weak
Pledge of assets, taking into account quality, value and liquidity of assets	First perfected security interest in all project assets, contracts, permits and accounts necessary to run the project	Perfected security interest in all project assets, contracts, permits and accounts necessary to run the project	Acceptable security interest in all project assets, contracts, permits and accounts necessary to run the project	Little security or collateral for lenders; weak negative pledge clause
Lender's control over cash flow (e.g. cash sweeps, independent escrow accounts)	Strong	Satisfactory	Fair	Weak
Strength of the covenant package (mandatory prepayments, payment deferrals, payment cascade, dividend restrictions)	Covenant package is strong for this type of project	Covenant package is satisfactory for this type of project	Covenant package is fair for this type of project	Covenant package is Insufficient for this type of project
	Project may issue no additional debt	Project may issue extremely limited additional debt	Project may issue limited additional debt	Project may issue unlimited additional debt
Reserve funds (debt service, O&M, renewal and replacement, unforeseen events, etc)	Longer than average coverage period, all reserve funds fully funded in cash or letters of credit from highly rated bank	Average coverage period, all reserve funds fully funded	Average coverage period, all reserve funds fully funded	Shorter than average coverage period, reserve funds funded from operating cash flows

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## Table 2

# Income-Producing Real Estate Exposures (IPRE): Supervisory Rating Grades

	Strong	Good	Satisfactory	Weak
Financial strength				
Market conditions	The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is equal or lower than forecasted demand	The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is roughly equal to forecasted demand	Market conditions are roughly in equilibrium. Competitive properties are coming on the market and others are in the planning stages. The project's design and capabilities may not be state of the art compared to new projects	Market conditions are weak. It is uncertain when conditions will improve and return to equilibrium. The project is losing tenants at lease expiration. New lease terms are less favourable compared to those expiring
Financial ratios and advance rate	The property's debt service coverage ratio (DSCR) is considered strong (DSCR is not relevant for the construction phase) and its loan to value ratio (LTV) is considered low given its property type. Where a secondary market exists, the transaction is underwritten to market standards	The DSCR (not relevant for development real estate) and LTV are satisfactory. Where a secondary market exists, the transaction is underwritten to market standards	The property's DSCR has deteriorated and its value has fallen, increasing its LTV	The property's DSCR has deteriorated significantly and its LTV is well above underwriting standards for new loans
Stress analysis	The property's resources, contingencies and liability structure allow it to meet its financial obligations during a period of severe financial stress (e.g. interest rates, economic growth)	The property can meet its financial obligations under a sustained period of financial stress (e.g. interest rates, economic growth). The property is likely to default only under severe economic conditions	During an economic downturn, the property would suffer a decline in revenue that would limit its ability to fund capital expenditures and significantly increase the risk of default	The property's financial condition is strained and is likely to default unless conditions improve in the near term

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		Strong	Good	Satisfactory	Weak
Cash-	flow predictability				
(a)	For complete and stabilised property.	The property's leases are long-term with creditworthy tenants and their maturity dates are scattered. The property has a track record of tenant retention upon lease expiration. Its vacancy rate is low. Expenses (maintenance, insurance, security, and property taxes) are predictable	Most of the property's leases are long-term, with tenants that range in creditworthiness. The property experiences a normal level of tenant turnover upon lease expiration. Its vacancy rate is low. Expenses are predictable	Most of the property's leases are medium rather than long-term with tenants that range in creditworthiness. The property experiences a moderate level of tenant turnover upon lease expiration. Its vacancy rate is moderate. Expenses are relatively predictable but vary in relation to revenue	The property's leases are of various terms with tenants that range in creditworthiness. The property experiences a very high level of tenant turnover upon lease expiration. Its vacancy rate is high. Significant expenses are incurred preparing space for new tenants
(b)	For complete but not stabilised property	Leasing activity meets or exceeds projections. The project should achieve stabilisation in the near future	Leasing activity meets or exceeds projections. The project should achieve stabilisation in the near future	Most leasing activity is within projections; however, stabilisation will not occur for some time	Market rents do not meet expectations. Despite achieving target occupancy rate, cash flow coverage is tight due to disappointing revenue
(c)	For construction phase	The property is entirely pre-leased through the tenor of the loan or pre- sold to an investment grade tenant or buyer, or the bank has a binding commitment for take-out financing from an investment grade lender	The property is entirely pre-leased or pre-sold to a creditworthy tenant or buyer, or the bank has a binding commitment for permanent financing from a creditworthy lender	Leasing activity is within projections but the building may not be pre-leased and there may not exist a take-out financing. The bank may be the permanent lender	The property is deteriorating due to cost overruns, market deterioration, tenant cancellations or other factors. There may be a dispute with the party providing the permanent financing

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	Strong	Good	Satisfactory	Weak
Asset characteristics				
Location	Property is located in highly desirable location that is convenient to services that tenants desire	Property is located in desirable location that is convenient to services that tenants desire	The property location lacks a competitive advantage	The property's location, configuration, design and maintenance have contributed to the property's difficulties
Design and condition	Property is favoured due to its design, configuration, and maintenance, and is highly competitive with new properties	Property is appropriate in terms of its design, configuration and maintenance. The property's design and capabilities are competitive with new properties	Property is adequate in terms of its configuration, design and maintenance	Weaknesses exist in the property's configuration, design or maintenance
Property is under construction	Construction budget is conservative and technical hazards are limited. Contractors are highly qualified	Construction budget is conservative and technical hazards are limited. Contractors are highly qualified	Construction budget is adequate and contractors are ordinarily qualified	Project is over budget or unrealistic given its technical hazards. Contractors may be under qualified
Strength of Sponsor/Developer				
Financial capacity and willingness to support the property.	The sponsor/developer made a substantial cash contribution to the construction or purchase of the property. The sponsor/developer has substantial resources and limited direct and contingent liabilities. The sponsor/developer's properties are diversified geographically and by property type	The sponsor/developer made a material cash contribution to the construction or purchase of the property. The sponsor/developer's financial condition allows it to support the property in the event of a cash flow shortfall. The sponsor/developer's properties are located in several geographic regions	The sponsor/developer's contribution may be immaterial or non-cash. The sponsor/developer is average to below average in financial resources	The sponsor/developer lacks capacity or willingness to support the property

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	Strong	Good	Satisfactory	Weak
Reputation and track record with similar properties.	Experienced management and high sponsors' quality. Strong reputation and lengthy and successful record with similar properties	Appropriate management and sponsors' quality. The sponsor or management has a successful record with similar properties	Moderate management and sponsors' quality. Management or sponsor track record does not raise serious concerns	Ineffective management and substandard sponsors' quality. Management and sponsor difficulties have contributed to difficulties in managing properties in the past
Relationships with relevant real estate actors	Strong relationships with leading actors such as leasing agents	Proven relationships with leading actors such as leasing agents	Adequate relationships with leasing agents and other parties providing important real estate services	Poor relationships with leasing agents and/or other parties providing important real estate services
Security Package				
Nature of lien	Perfected first lien	Perfected first lien	Perfected first lien	Ability of lender to foreclose is constrained
Assignment of rents (for projects leased to long-term tenants)	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to remit rents directly to the lender, such as a current rent roll and copies of the project's leases	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases	The lender has obtained an assignment. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases	The lender has not obtained an assignment of the leases or has not maintained the information necessary to readily provide notice to the building's tenants
Quality of the insurance coverage	Appropriate	Appropriate	Appropriate	Substandard

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## Table 3

# **Object Finance Exposures: Supervisory Rating Grades**

	Strong	Good	Satisfactory	Weak
Financial strength				
Market conditions	Demand is strong and growing, strong entry barriers, low sensitivity to changes in technology and economic outlook	Demand is strong and stable. Some entry barriers, some sensitivity to changes in technology and economic outlook	Demand is adequate and stable, limited entry barriers, significant sensitivity to changes in technology and economic outlook	Demand is weak and declining, vulnerable to changes in technology and economic outlook, highly uncertain environment
Financial ratios (debt service coverage ratio and loan-to-value ratio)	Strong financial ratios considering the type of asset. Very robust economic assumptions	Strong / acceptable financial ratios considering the type of asset. Robust project economic assumptions	Standard financial ratios for the asset type	Aggressive financial ratios considering the type of asset
Stress analysis	Stable long-term revenues, capable of withstanding severely stressed conditions through an economic cycle	Satisfactory short-term revenues. Loan can withstand some financial adversity. Default is only likely under severe economic conditions	Uncertain short-term revenues. Cash flows are vulnerable to stresses that are not uncommon through an economic cycle. The loan may default in a normal downturn	Revenues subject to strong uncertainties; even in normal economic conditions the asset may default, unless conditions improve
Market liquidity	Market is structured on a worldwide basis; assets are highly liquid	Market is worldwide or regional; assets are relatively liquid	Market is regional with limited prospects in the short term, implying lower liquidity	Local market and/or poor visibility. Low or no liquidity, particularly on niche markets
Political and legal environment				
Political risk, including transfer risk	Very low; strong mitigation instruments, if needed	Low; satisfactory mitigation instruments, if needed	Moderate; fair mitigation instruments	High; no or weak mitigation instruments

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	Strong	Good	Satisfactory	Weak
Legal and regulatory risks	Jurisdiction is favourable to repossession and enforcement of contracts	Jurisdiction is favourable to repossession and enforcement of contracts	Jurisdiction is generally favourable to repossession and enforcement of contracts, even if repossession might be long and/or difficult	Poor or unstable legal and regulatory environment. Jurisdiction may make repossession and enforcement of contracts lengthy or impossible
Transaction characteristics				
Financing term compared to the economic life of the asset	Full payout profile/minimum balloon. No grace period	Balloon more significant, but still at satisfactory levels	Important balloon with potentially grace periods	Repayment in fine or high balloon
Operating risk				
Permits / licensing	All permits have been obtained; asset meets current and foreseeable safety regulations	All permits obtained or in the process of being obtained; asset meets current and foreseeable safety regulations	Most permits obtained or in process of being obtained, outstanding ones considered routine, asset meets current safety regulations	Problems in obtaining all required permits, part of the planned configuration and/or planned operations might need to be revised
Scope and nature of O & M contracts	Strong long-term O&M contract, preferably with contractual performance incentives, and/or O&M reserve accounts (if needed)	Long-term O&M contract, and/or O&M reserve accounts (if needed)	Limited O&M contract or O&M reserve account (if needed)	No O&M contract: risk of high operational cost overruns beyond mitigants
Operator's financial strength, track record in managing the asset type and capability to re-market asset when it comes off-lease	Excellent track record and strong re- marketing capability	Satisfactory track record and re- marketing capability	Weak or short track record and uncertain re-marketing capability	No or unknown track record and inability to re-market the asset

	Strong	Good	Satisfactory	Weak
Asset characteristics				
Configuration, size, design and maintenance (i.e. age, size for a plane) compared to other assets on the same market	Strong advantage in design and maintenance. Configuration is standard such that the object meets a liquid market	Above average design and maintenance. Standard configuration, maybe with very limited exceptions — such that the object meets a liquid market	Average design and maintenance. Configuration is somewhat specific, and thus might cause a narrower market for the object	Below average design and maintenance. Asset is near the end of its economic life. Configuration is very specific; the market for the object is very narrow
Resale value	Current resale value is well above debt value	Resale value is moderately above debt value	Resale value is slightly above debt value	Resale value is below debt value
Sensitivity of the asset value and liquidity to economic cycles	Asset value and liquidity are relatively insensitive to economic cycles	Asset value and liquidity are sensitive to economic cycles	Asset value and liquidity are quite sensitive to economic cycles	Asset value and liquidity are highly sensitive to economic cycles
Strength of sponsor				
Operator's financial strength, track record in managing the asset type and capability to re-market asset when it comes off-lease	Excellent track record and strong re- marketing capability	Satisfactory track record and re- marketing capability	Weak or short track record and uncertain re-marketing capability	No or unknown track record and inability to re-market the asset
Sponsors' track record and financial strength	Sponsors with excellent track record and high financial standing	Sponsors with good track record and good financial standing	Sponsors with adequate track record and good financial standing	Sponsors with no or questionable track record and/or financial weaknesses

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	Strong	Good	Satisfactory	Weak
Security Package				
Asset control	Legal documentation provides the lender effective control (e.g. a first perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it	Legal documentation provides the lender effective control (e.g. a perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it	Legal documentation provides the lender effective control (e.g. a perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it	The contract provides little security to the lender and leaves room to some risk of losing control on the asset
Rights and means at the lender's disposal to monitor the location and condition of the asset	The lender is able to monitor the location and condition of the asset, at any time and place (regular reports, possibility to lead inspections)	The lender is able to monitor the location and condition of the asset, almost at any time and place	The lender is able to monitor the location and condition of the asset, almost at any time and place	The lender is able to monitor the location and condition of the asset are limited
Insurance against damages	Strong insurance coverage including collateral damages with top quality insurance companies	Satisfactory insurance coverage (not including collateral damages) with good quality insurance companies	Fair insurance coverage (not including collateral damages) with acceptable quality insurance companies	Weak insurance coverage (not including collateral damages) or with weak quality insurance companies

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### Table 4

# **Commodities Finance Exposures: Supervisory Rating Grades**

	Strong	Good	Satisfactory	Weak
Financial strength				
Degree of over-collateralisation of trade	Strong	Good	Satisfactory	Weak
Political and legal environment				
Country risk	No country risk	Limited exposure to country risk (in particular, offshore location of reserves in an emerging country)	Exposure to country risk (in particular, offshore location of reserves in an emerging country)	Strong exposure to country risk (in particular, inland reserves in an emerging country)
Mitigation of country risks	Very strong mitigation:	Strong mitigation:	Acceptable mitigation:	Only partial mitigation:
	Strong offshore mechanisms Strategic commodity 1 <sup>st</sup> class buyer	Offshore mechanisms Strategic commodity Strong buyer	Offshore mechanisms Less strategic commodity Acceptable buyer	No offshore mechanisms Non-strategic commodity Weak buyer
Asset characteristics				
Liquidity and susceptibility to damage	Commodity is quoted and can be hedged through futures or OTC instruments. Commodity is not susceptible to damage	Commodity is quoted and can be hedged through OTC instruments. Commodity is not susceptible to damage	Commodity is not quoted but is liquid. There is uncertainty about the possibility of hedging. Commodity is not susceptible to damage	Commodity is not quoted. Liquidity is limited given the size and depth of the market. No appropriate hedging instruments. Commodity is susceptible to damage

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	Strong	Good	Satisfactory	Weak
Strength of sponsor				
Financial strength of trader	Very strong, relative to trading philosophy and risks	Strong	Adequate	Weak
Track record, including ability to manage the logistic process	Extensive experience with the type of transaction in question. Strong record of operating success and cost efficiency	Sufficient experience with the type of transaction in question. Above average record of operating success and cost efficiency	Limited experience with the type of transaction in question. Average record of operating success and cost efficiency	Limited or uncertain track record in general. Volatile costs and profits
Trading controls and hedging policies	Strong standards for counterparty selection, hedging, and monitoring	Adequate standards for counterparty selection, hedging, and monitoring	Past deals have experienced no or minor problems	Trader has experienced significant losses on past deals
Quality of financial disclosure	Excellent	Good	Satisfactory	Financial disclosure contains some uncertainties or is insufficient
Security package				
Asset control	First perfected security interest provides the lender legal control of the assets at any time if needed	First perfected security interest provides the lender legal control of the assets at any time if needed	At some point in the process, there is a rupture in the control of the assets by the lender. The rupture is mitigated by knowledge of the trade process or a third party undertaking as the case may be	Contract leaves room for some risk of losing control over the assets. Recovery could be jeopardised
Insurance against damages	Strong insurance coverage including collateral damages with top quality insurance companies	Satisfactory insurance coverage (not including collateral damages) with good quality insurance companies	Fair insurance coverage (not including collateral damages) with acceptable quality insurance companies	Weak insurance coverage (not including collateral damages) or with weak quality insurance companies

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## ANNEX D

## **REQUIRED DOCUMENTATION FOR IRB APPROACHES**

- 1) Project governance
- 1.1. Resolutions of the supervisory body and, where applicable, minutes of other project governance bodies;
- 1.2. Description of the project and the roles and responsibilities involved;
- 1.3. List of internal regulations issued regarding the implementation of the project.
- 2) Implementation of the project
- 2.1. Roll-out plan: timetable and procedures for rolling out the IRB method across the banking group, with the exclusion of permanently exempt areas;
- 2.2. Information on the share of exposures covered by rating systems at the time of application; information on the distribution by rating grade/PD of exposures and the number of counterparties;
- 2.3. Cost/benefit analysis (financial, operational, regulatory).

## 3) Organisational aspects

- 3.1. Resolutions approving and/or revising rating system processes and criteria;
- 3.2. Description of the organisational aspects of rating assignment: structures, tasks and responsibilities, incentive systems, control instruments;
- 3.3. Description of the uses of rating systems within the scope of the management processes envisaged by the regulations;
- 3.4. Internal validation and review processes and tools.

## 4) Quantitative aspects

- 4.1. Summary report detailing the various systems currently in use or to be used in the future (model mapping) as well as the portfolios/legal entities covered;
- 4.2. Specific information on individual IRB systems. A "model report" for such information is provided in Annex E. Alternatively, instead of

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completing such report (or parts thereof), banks may submit any relevant internal documentation;

- 4.3. Results of the parallel calculation.
- 5) Information systems
- 5.1. Architecture of the dedicated information subsystem;
- 5.2. Framework of the primary electronic support processes for lending activities;
- 5.3. Use of external resources (e.g. outsourcing, applications packages);
- 5.4. Data quality: internal standards and controls;
- 5.5. Linkage of data at the banking group level, group-wide customer database, treatment of common obligors;
- 5.6. Management of IT security: integrity, confidentiality and availability of data and systems; business continuity.
- 6) Internal review
- 6.1 Final report on the internal validation process containing a detailed statement of the bank's positioning with regard to each organisational and quantitative requirement.
- 6.2 Report by the internal audit function on the examination of the IRB systems, their use in bank operations, and the internal validation process.
- 6.3 Other verifications performed by the internal audit function relevant in considering the application.

## ANNEX E

## **MODEL REPORT**

# **Banking group**

*Model* Document version Document date

The purpose of this report is to describe the internal rating model used by the banking group with regard to a specific portfolio.

Banks that use rating assignment processes involving judgemental assessments shall not complete paragraph 8. Banks that use statistical models shall not complete section 7. Banks that use mixed processes shall complete the relevant portions of sections 7 and 8.

The structure of the report should be adopted where possible. If the characteristics of the model require that the structure of the report be modified in order to provide a clearer description, the changes shall be described in the introduction. In general, banks shall report any information that is not addressed in the sections contained herein but that is considered necessary for understanding the nature and the performance of the model.

Where appropriate, banks may supplement this report with copies of internal manuals documenting the characteristics, functioning and manner of use of the model and, in general, any other documentation that enhances understanding of these aspects.
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# - DESCRIPTION OF THE MODEL

This section contains a description of the main features of the internal rating model. Specifically, this section shall indicate:

- the function(s) responsible for developing the model;
- whether the model was developed by the bank or purchased (in whole or in party) from a third-party vendor;
- whether consultants were involved in developing the model, specifying the persons engaged and the nature and scope of the advice given;
- the reasons the model was selected;
- a summary description of the process for generating internal ratings and calculating the PDs associated with each rating grade,<sup>71</sup> describing, inter alia:
  - any modular structure adopted (e.g. economic-financial module, position developments module, qualitative module);
  - the methodology for estimating and implementing the model;
  - the output of the various estimation phases (scores, PD or internal ratings).

# - DESCRIPTION OF THE PORTFOLIO

Banks shall describe the portfolio to which the model applies, with reference to the most recent data available. Bank shall use the following table, modifying or adding columns where necessary to report any additional segmentation criteria adopted (Table 1). Data shall be reported for the different entities of the group.

Table 1 – Composition of the portfolio					
Portfolio	Sales thresholds	Credit limit	Percentage of total group obligors	Percentage of total group lending	
Portfolio 1 - entity A 	⇔€mil.	⇔€ mil.	X%	Y%	
••••					

(reference data: dd-mm-yy)

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<sup>&</sup>lt;sup>71</sup> The information provided here shall not address the technical and statistical specifications of the model, which are treated in greater detail in subsequent sections.

# - DEFINITION OF DEFAULT

In this section, banks shall report:

- the definitions of default adopted during the estimation of the statistical model and the calculation of the PD associated with the rating grades (Table 2);
- the description of the internal classifications for non performing exposures included in the definition of default;
- the degree of correspondence between the internal classifications and those provided for by these regulations.

Where unharmonized definitions of default are adopted, banks shall specify:

- the procedures and timetable envisaged for harmonisation in the model estimation phase;
- the temporary procedures with which the calibration process takes account of the use of an unharmonized default definition.

Please clarify the treatment of exposures:

- to individual entities in default belonging to groups in good financial standing;
- to individual entities in good financial standing belonging to groups in default.

Table 2 – Definition of default				
Estimation phase	Development sample		Validation sample	
-	Module		Module	
	Module		Module	
Calculation				
PD associated				
with the rating grade				

# CHARACTERISTICS OF THE ESTIMATION SAMPLE

In this section, banks shall specify the methods adopted in constructing samples and the sample characteristics (composition and observation period) separately for each phase (development and validation). They shall specify whether account has been taken of the presence in the sample of undertakings belonging to groups and what criteria were applied.

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# Sample composition

Banks shall describe (separately for each module of the model where appropriate) the composition of the development and the validation samples, specifying, inter alia:

- whether they are internal or external observations; in the case of internal observations, the representativeness of the population sample shall also be reported *(degree of balance)*;
- any stratification adopted (e.g., size, economic sector, legal form, location, etc.) and the reasons for their selection;
- sample extraction methods;
- the different phases leading to the formation of the estimation sample starting with the initial set of observations.

Table3 – Composition of samples						
Module	Development sample			Validation sample		
	Performing	Problem	Total	Performing	Problem	Total
Module						
% of sample						
% of population						
Module						
% of sample						
% of population						
Module						
% of sample						
% of population						

Table 4 – Composition of samples by economic sector						
Module	Developmen	t sample		Validation sample		
	Performing	Problem	Total	Performing	Problem	Total
Agriculture						
% of sample						
% of population						
Industry						
% of sample						
% of population						
•••						
% of sample						
% of population						

Describe the stratifications used. For example:

Table 5 – Composition of samples by geographical location						
Module	Development	sample		Validation sample		
	Performing	Problem	Total	Performing	Problem	Total
North						
% of sample						
% of population						
Centre						
% of sample						
% of population						
•••						
% of sample						
% of population						

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Table 6 – Composition of sample by legal form						
Module	Development	Development sample			Validation sample	
	Performing	Problem	Total	Performing	Problem	Total
SpA (company limited by shares)						
% of sample						
% of population						
Srl (private limited liability company)						
% of sample						
% of population						
•••						
% of sample						
% of population						

.....

# **Observation period**

In the following table, banks shall report (separately for each module where appropriate) the observation periods for the estimation and validation samples.

Table 7 – Sample observation period				
	Development sa	mple	Validation sampl	le
	Date of observation of default	Date of observation of indicators	Date of observation of default	Date of observation of indicators
Module				
Module				
Module				

# 

Please specify why the periods reported were selected.

# INPUT DATA

Bank shall use the following table to report the data used to construct the indicators adopted (broken down by module where appropriate) and the related data sources, specifying whether these refer to external or internal databases. Please specify whether supplementary data is used at the consolidated level.

Banks shall describe the procedures and criteria by which qualitative information is obtained (e.g., questionnaires, describing the main features).

Example of a list of input data and sources:

Table 8 – Data sources used				
Module	Data	Sources	Use of consolidated data	
Module	Financial: financial statements			
	Behavioural: used at system level			
	Behavioural: used at company level			
	Score			
	Sectoral			

For external databases, information shall be provided on access procedures and controls, specifying, inter alia:

- the definition of default adopted;
- the frequency of updating;
- the degree of integration with other databases (key fields);
- the criteria for validating the quality and consistency of data;
- their representativeness with respect to the portfolio for which they are used (and any statistical methods used to verify representativeness).

For internal databases, detailed descriptions shall be provided of:

- the architecture;
- controls of data consistency, reliability and integrity;
- the units responsible for managing and maintaining the databases;

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- their representativeness with respect to the portfolio for which they are used (and any statistical methods used to verify representativeness).

#### - INDICATOR SELECTION PROCESS

This section shall describe (separately for each module where appropriate) the process used to select the long list of indicators and to reduce this to the short list of variables considered in calculating the rating using the model estimation or the assignment of weights by experts.

The description shall specify the criteria used in selecting the indicator long list (e.g. the technical literature, expert opinions, availability of information, relevance thresholds, etc.) and those for revising the lists.

# Pre-processing of data

Banks shall report (separately for each module where appropriate) any preprocessing of input data. This may include, for example:

- exploratory analysis of raw data;
- procedures for processing qualitative variables;
- procedures for processing random errors (while inputting data), outliers, missing values, values constructed as ratios (in particular, the handling of exceptions such as DIV/0);
- definition of domains;
- transformation and normalisation of indicators.

#### Univariate analysis

Univariate analysis of the indicators should enable banks to order the variables considered based on their relative explicative power and, therefore, to guide the specification of the short list.

Banks shall describe (separately for each module where appropriate) the analyses performed for each indicator considered individually to assess their predictive power. For example, univariate frequency distribution, graphical analysis, accuracy ratio, average default frequency for percentiles, etc..

#### **Multivariate analysis**

Banks shall describe (separately for each module) the multivariate statistical techniques used to determine the degree of correlation between the variables in order, for example, to assess information "redundancy".

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# RATING ASSIGNMENT USING JUDGEMENTAL ASSESSMENTS

This section shall describe in detail the methodology and procedures used to identify links between the characteristics of the obligor and the latter's level of risk. Banks shall also specify, for each module comprising the model where appropriate:

- the restrictions placed on the model (e.g., maximum number of variables);
- the weight of each variable in calculating the rating (see Table 9).

A list of the variables for each module of the model shall be attached to the report.

Where the bank uses a "mixed" model (i.e. one that uses a final module to integrate the risk measures generated by intermediate modules on the basis of statistical techniques and the judgemental assessments of experts), it shall specify, inter alia:

- the procedure, criteria and methodology used to combine the outputs of the intermediate modules and to define the integrated model;
- any transformations of the variables generated by the intermediate modules;
- the weight of each intermediate output in calculating the final output (see Table 10).

Table 9 – Indicator weighting system		
Module		
Indicator Weight		

Table 10 – Weighting system for modules (or variables generated by the intermediate modules)	
	Weight
Module	
Module	
Module	

Please provide a summary description of the main changes made to the model over time.

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# ESTIMATION OF THE STATISTICAL MODEL

This section shall describe: the estimation method used to produce the individual risk measures, including the use of integrated models; the tests of the predictive power of the model; and the main changes made.

# Estimation of the model

Banks shall provide a detailed description of the estimation method (e.g., discriminant analysis, logistic functions, etc.) used to identify links between the characteristics of the obligor and the associated risk measure.

Banks shall specify (for each module comprising the model where appropriate):

- the procedure and criteria for selecting the short list of variables from the long list of indicators. In this regard, banks shall report the use of automated or semi-automated selection algorithms, specifying the software used;
- the assumptions made (e.g., asymmetric cost of error);
- the restrictions placed on the model (e.g., maximum number of variables);
- the weight of each variable in calculating the output (see Table 11).

Banks shall explain the reasons for and implications of any manual adjustments made to the model weights.

A list of the variables for each module of the model shall be attached to the report.

Table 11 –Indicator weighting system		
Module		
Indicator Weight		

#### "Integrated" models

Where the bank adopts a model that uses a final module to integrate the different risk measures generated by the intermediate modules, it shall specify, inter alia:

- the procedure, criteria and methodology used to combine the outputs of the intermediate modules and to define the integrated model;
- any transformations of the variables generated by the intermediate modules;
- the weight of each intermediate output in calculating the final output.

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Banks shall explain the reasons for and implications of any manual adjustments made to the model weights.

 Table 12 – Weighting system for modules (or variables generated by the intermediate modules)

 Weight

 Module ...

 Module ...

 Module ...

## Testing the predicative power of the model

Banks shall report:

1

- the statistics of the estimation method (significance of coefficients, goodness of the combination, etc.), a description of the tests performed to verify the assumptions underlying the model and the percentage of correct classifications;
- the results of the analysis conducted on the causes of classification errors (e.g., the distinction between model prediction errors and the effects of circumstances that were not considered in creating the model) and on the stability of the risk measurements obtained over time;
- the statistical procedures used to measure the predictive power of the model (e.g., the accuracy ratio) for the estimation sample and the validation sample.

Table 13 – Correct classification rate in the development sample						
	Existir	ng customer	New customer			
	Performing	Problem	Performing	Problem		
Module						
Module						
Module						
Final module						

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Table 14 – Correct classification rate in the validation sample						
	Existir	ng customer	New customer			
	Performing	Problem	Performing	Problem		
Module						
Module						
Module						
Final module						

# Changes made to model

A summary description shall be provided of the main changes made to the model over time.

# CONSTRUCTION OF RATING GRADES AND THE ASSIGNMENT OF OBLIGORS TO GRADES

This section shall describe the criteria and procedures used – once the "individual" risk measurement (score or PD) is obtained – to specify the rating grades (identification of cut-off points).

Where the model output is a score, the bank shall describe any methodology used to transform the score into an individual PD. The following table reports the rating grades and the relative cut-offs.

Table 15 – Rating grades					
Rating grade	Internal	Grade thresholds			
	(performing, watchlist)	Minimum	Maximum		

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The following table describes the assignment of the portfolio based on the specified rating grades.

Table 16 – Portfolio at dd-mm-yy								
Rating	Frequency distribution			Analysis of PDs				
grade	Total exposure by rating	No. of observations by rating grade	% exposure	% observations	Average PD	Exposure weighted- average PD	Minimum PD	Maximum PD
	Brude	Brude						
Unrated positions								
Total portfolio			100%	100%				

# - CALCULATION OF THE PD ASSOCIATED WITH THE RATING GRADES (CALIBRATION)

This section shall describe the methodologies used in the calibration process with which the PD associated with each rating grade is estimated.

Please specify, inter alia:

- the algorithm used to calculate the PD;
- the length of the PD time series;
- any adjustments made to take account of factors such as differences between the sample characteristics and the composition of the bank's portfolio, specifying the techniques and reasons;
- the statistical tests of the predictive power of the model (e.g., binomial tests, normality tests, etc.);
- the criteria that govern the process of verifying the PD estimates at least once a year.

# - MODIFICATION OF RATINGS BASED ON JUDGEMENTAL ASSESSMENTS (OVERRIDE)

This section shall describe the procedures for overriding rating assignments. Banks shall specify:

- the criteria for permitting overrides and any associated restrictions;

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- the level of responsibility of the person(s) who may perform and/or approve overrides, and whether such persons have the power to authorize lending operations;
- the procedures for recording overrides and the control and backtesting procedures envisaged.

Banks shall also specify any changes that may be made to intermediate outputs and the criteria that govern such modifications.

# - DYNAMIC PROPERTIES OF RATINGS AND PD

Banks shall describe the characteristics of the rating in terms of the degree to which it corresponds to the current condition of the obligor and any assessment of the impact of adverse conditions or given phases of the business cycle on the obligor's creditworthiness.

#### - DATA STORAGE

This section shall describe the criteria, procedures and assignment of responsibilities related to the collection and storage of data, which must permit, inter alia, the ex post reclassification of obligors and transactions.

By way of example, the information that shall be collected and stored includes: the ratings assigned, the date of assignment, the persons responsible for assigning the rating and any overrides, key methodologies and parameters, model version, PD, etc..

The section shall also include the frequency with which the data on individual obligors is updated.

# - USES OF RATINGS AND PD

This section shall describe the manner in which the ratings and the PD estimates are actually used in operational processes, specifying the uses of these risk measures:

- in the various stages of the credit process: definition of lending policies concerning commercial aspects as well as risk management, credit granting and monitoring activities;
- for purposes other than the classification of credit risk. By way of example, these include:
  - calculation of supervisory capital;
  - provisioning policies for expected losses;
  - allocation of economic capital (where a portfolio model exists);
  - risk-adjusted performance metrics;
  - pricing;
  - incentive systems.

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# Reporting

Banks shall describe the use of the risk measures generated by the model in their reporting. For this purpose, banks shall attach the relevant reports, specifying the unit responsible for producing the report, the frequency with which it is prepared, and the functions and/or persons to which it is addressed.

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# TITLE II

Chapter 2

# CREDIT RISK MITIGATION TECHNIQUES AND SECURITIZATION TRANSACTIONS

TITLE II - Chapter 4

PART 1

#### **CREDIT RISK MITIGATION TECHNIQUES (CRM)**

#### SECTION I

#### GENERAL PROVISIONS

#### 1. Introduction

The Chapter governs credit risk mitigation (CRM) techniques. These consist of contracts accessory to the loan or of other instruments and techniques that give rise to a reduction in credit risk that is recognized in determining capital requirements.

The scope for using CRM techniques has been expanded with respect to the previous prudential regulations. This extension has been accompanied by more specific legal, financial and organizational eligibility requirements for supervisory recognition and more precise methods for calculating the resulting reduction in risk (and hence, the capital requirement).

The regulations contained in this Chapter shall apply to banking book exposures and regard all asset classes, without prejudice to the specific provisions concerning certain exposures categories (for example, retail exposures).

All banks may adopt CRM techniques regardless of the method selected for calculating credit risk capital requirements (standardized, foundation IRB or advanced IRB), albeit with certain differences concerning the type of instruments recognized and the methods for calculating the impact on capital requirements.

Banks authorized to use advanced IRB approaches shall benefit from greater operational flexibility, being able to use a broader range of guarantees and facing fewer restrictions compared with other banks, since the calculation of the reduction in risk is substantially left to the banks themselves. Naturally, banks that use advanced IRB approaches shall demonstrate the accuracy of their estimates and the reliability of their internal assessment processes.

Unless otherwise specified, the CRM techniques recognized for all capital requirement calculation methods shall be divided into two general categories: funded credit protection and unfunded credit protection.

Funded credit protection shall consist of:

a) financial collateral – in the form of cash, certain financial instruments and gold – given through pledge agreements, the transfer of title as a guarantee, repurchase transactions, and securities lending and borrowing transactions;

- b) master netting agreements covering repurchase transactions, securities lending and borrowing transactions and margin lending transactions;
- c) on-balance-sheet netting;
- d) real estate mortgages and lease transactions involving real estate with the characteristics specified in these regulations;
- e) other collateral usable only by banks adopting IRB approaches ("eligible IRB collateral"). These include the assignment of receivables and other physical collateral relating to assets other than those used as financial collateral and encumbered by mortgages given through, for example, pledges or leases.

Unfunded credit protection shall consist of:

- a) guarantees;
- b) credit derivatives.<sup>1</sup>

Both general and specific eligibility requirements shall apply to the various CRM techniques. Such requirements shall be met at the time the guarantee is established and compliance shall continue over its duration.

The general requirements, which seek to ensure the legal certainty and effectiveness of guarantees, concern the binding nature of the legal commitment between the parties and its enforceability, documentability, the enforceability of the instrument in all relevant jurisdictions against third parties with regard to establishment and liquidation and the timeliness of liquidation in the event of breach. Specific requirements are prescribed for the features of each form of CRM and are designed to ensure a high degree of effectiveness of the credit protection.

The calculation methods vary depending on the instrument used and the method followed by the bank in calculating the capital requirements.

In the case of unfunded credit protection (guarantees or credit derivatives), a lending bank that adopts the standardized approach or the foundation IRB approach may apply the principle of substitution, i.e. the substitution of the borrower's risk weight or probability of default (PD) with the protection provider's risk weight or PD. Protection providers shall have a high credit standing and are therefore specifically identified.<sup>2</sup>

Banks that adopt the advanced IRB approaches - and, under certain conditions, banks that adopt the foundation IRB approach<sup>3</sup> - may elect either to

<sup>&</sup>lt;sup>1</sup> Among credit derivatives, credit linked notes shall be subject to the same specific eligibility requirements as for unfunded credit protection (credit derivatives) and shall be subject to the same prudential treatment as for funded credit protection (amounts paid upon issuance to the bank granting the loan shall be treated as cash collateral).

<sup>&</sup>lt;sup>2</sup> Eligible guarantors may include sovereigns and central banks, public-sector entities and local authorities, multilateral development banks, supervised institutions, non-financial undertakings that have an external rating associated with credit quality step 2 or higher. For banks that adopt the foundation IRB approach, non-financial undertakings that have received an internal rating from the bank associated with credit quality step 2 or above shall also be considered eligible.

<sup>&</sup>lt;sup>3</sup> Banks that use the foundation IRB approach may use CRM techniques to reduce LGD where a subordinated exposure (which is associated with an LGD of 75%) is guaranteed by a non-subordinated exposure (which is associated with an LGD of up to 45%).

use the specified CRM techniques to reduce PD, applying the principle of substitution, or loss given default (LGD), applying their own estimates.

Only banks that adopt the advanced IRB approaches may use any category of protection provider without restrictions. They may also use conditional guarantees (or credit derivatives), provided that they are able to demonstrate that these instruments reduce LGD.

Financial collateral may be treated using either the simple or comprehensive method. Under the simple method, the collateralized portion of the exposure shall receive the specific risk weight of the financial collateral in substitution of that of the underlying borrower. Under the comprehensive method, the amount of the exposure shall be reduced by the value of the collateral in calculating the capital requirement. Specific rules shall apply to account for market price volatility. Banks that adopt the standardized approach may choose between the simple or the comprehensive method. The comprehensive method shall be required for banks that adopt one of the two IRB approaches.

Real estate collateral shall be treated differently depending on the method adopted to calculate the capital requirements.

- a) Under the standardized approach, exposures fully secured by a mortgage on real estate shall be assigned to a specific, less risky asset class. See Chapter 1, Part 1 for the treatment of such loans.
- b) Under the foundation IRB approach, mortgages shall reduce credit risk only under certain conditions. Exposures secured by mortgages on residential property that are included in the retail portfolio shall be treated as a subcategory of the retail portfolio and shall be subject to a specific weighting function. The use of the retail portfolio, and therefore also of the mortgage loan sub-category, requires that the bank adopt internal LGD and EAD estimates. If no such estimates are available, these exposures shall remain subject to the treatment specified under the standardized approach.

As regards the portfolio relating to sovereigns, banks or other undertakings, real estate collateral shall reduce the LGD subject to specific requirements analogous to those envisaged for the standardized approach and for the retail portfolio. Where the risk of the borrower materially depends on the real estate, i.e. where repayment of the debt depends upon the cash flow generated by the property pledged as collateral, the mortgage loans shall be included in the specialized lending portfolio where the appropriate conditions are met (Chapter 1, Part 2, Section V, sub-section 2). Otherwise, real estate collateral shall not be recognized for supervisory capital purposes.

c) Under the advanced IRB approach, no conditions shall apply to the use of real estate collateral, whose effect is taken into account in determining the LGD calculated internally by the bank based on the cash flow from debt recovery.

# 2. Legislative sources

The field is governed by:

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- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, sub-paragraphs a), b) and d), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraphs a), b) and d), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking or to the components of the banking group with regard to capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

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— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

 the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

## 3. Definitions

For the purposes of these regulations:

- "*protection buyer*" shall mean the party that purchases protection against credit risk (or sells the credit risk);
- "*underlying asset*" shall mean the on-balance-sheet asset for which protection has been acquired;
- "asset mismatch" shall mean a situation in which the underlying asset differs from the reference obligation or from the obligation used to determine whether a credit event has occurred;
- *"first-to-default derivatives*" shall mean contracts referring to a number (basket) of borrowers under the terms of which the protection provider's payment obligation is triggered by the first default in the basket and that this credit event terminates the protection afforded by the derivative contract;
- "*nth-to-default derivatives*" shall mean contracts referring to a number (basket) of borrowers under the terms of which the protection provider's payment obligation is triggered by the nth default in the basket; borrowers may be assigned different settlement amounts;
- "*credit derivatives*" shall mean contracts in which the protection provider is required to perform a contractually-agreed obligation triggered by a specified credit event; such obligation consists of paying an amount equal to: i) the decline in the value of the reference obligation with respect to the initial value ("cash settlement variable"); ii) the entire notional value of the reference obligation in exchange for physical delivery of the reference obligation or another equivalent financial instrument ("deliverable obligation") specified in the contract; iii) a specified fixed amount ("binary payout");
- *"maturity mismatch"* shall mean a situation where the residual maturity of the credit protection is less than that of the protected exposure;
- "credit event" shall mean an event agreed by the parties that triggers the protection provider's obligation to fulfill the undertaking established in the contract;
- "*margin lending*" shall mean credit extended by an intermediary in connection with the purchase, sale, carrying or trading of securities by the counterparty for which an exchange of margins is required. Margin lending shall not include traditional financing collateralized by securities;

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- *"protection provider"* shall mean the party that sells the credit risk protection (or purchases the credit risk);
- *"reference obligation"* shall mean the obligation used to determine the cash settlement value or the deliverable obligation;
- "capital market-driven transaction" shall mean transactions giving rise to an exposure secured by collateral which include a provision conferring upon the bank the right to receive margin frequently. These include margin lending and over-the-counter (OTC) derivatives with the exchange of margins between counterparties;
- *"securities financing transactions"* shall mean securities or commodities repurchase/reverse repurchase transactions, securities or commodities lending/borrowing transactions and margin lending transactions;
- *"main stock index"* shall mean a stock index of a Member State or of an OECD country;
- "*funded credit protection*" shall mean the credit risk mitigation techniques that give the protection buyer the right to satisfy its claim with specified assets or cash amounts. These include financial collateral, real estate collateral and movable property collateral (other physical collateral), credit linked notes, trade receivables, on- and off-balance sheet netting; other types of protection are listed in Section III, sub-section 4. Funded credit protection shall also include guarantees given through securities repurchase and lending/borrowing transactions and the related master netting agreements, as well as leasing transactions;
- *"unfunded credit protection"* shall mean the credit risk mitigation techniques based on the undertaking of a third party to pay a specified amount in the event of the default of the borrower or on the occurrence of other specified credit events. These include guarantees and credit derivatives, with the exception of credit linked notes;
- *"reference entity"* shall mean the party/parties or country (in the case of sovereign risk) to which the reference obligation refers;
- "*cash assimilated instrument*" shall mean certificates of deposit or other similar instruments issued by the bank that acquires protection;
- *"reference rate"* shall mean the market interest rate increased or decreased by a specified spread;
- "total rate of return swaps" ("TRORs") shall mean contracts under which the protection buyer (also called the "total return payer") agrees to transfer all the cash flows generated by the reference obligation to the protection provider (also called the "total return receiver"), who agrees to transfer the cash flows associated with changes in a reference rate to the protection buyer. On the payment dates (or the termination date of the contract), the total return payer pays the total return receiver any increase in the value of the reference obligation (i.e. the positive difference between the market value and the initial value of the reference obligation). In the case of a decline in the value of the reference obligation, the total return receiver pays the equivalent

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amount to the total return payer;<sup>4</sup>

— *"fair value*" shall mean the amount at which an asset may be exchanged, or a liability settled, in a free transaction between knowledgeable, independent parties. It is determined in accordance with the provisions of Article 2427-bis of the Civil Code.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

# 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Part:

— authorization to adopt internal VAR models for calculating the value of exposures subject to master netting agreements (Annex C, sub-section 2): Banking Supervision Department.

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<sup>&</sup>lt;sup>4</sup> Basically, a TROR is a structured financial product combining a credit derivative and an interest rate derivative (interest rate swap).

#### SECTION II

#### GENERAL REQUIREMENTS

# 1. Introduction

For the purposes of calculating the credit risk capital requirement, recognition of the impact of the use of credit risk mitigation tools shall be subject to satisfaction of the general requirements described in this section as well as additional specific requirements applicable to the different types of transactions.

The general and specific requirements shall be met at the time the credit protection is established and compliance shall continue over its duration.

### 2. Legal certainty

Credit protection acquired by the bank shall be legally valid, effective, binding on the protection provider and enforceable in all relevant jurisdictions, including in the event of the insolvency or bankruptcy of the underlying borrower and/or protection provider.

In particular, the bank that purchases credit protection shall:

- a) ensure in advance that the instrument used confers a full and freely enforceable right to activate the protection. Moral or social obligations shall not be recognized;
- b) fulfil any requirements to ensure that the credit protection is valid, effective, binding and enforceable under the applicable law. This shall include obtaining and conserving appropriate documentation explicitly establishing the existence of the credit protection;
- c) ensure that the protection provider may not plead any defence under applicable law that may void the validity, effectiveness, bindingness and enforceability of the protection.

The above verifications shall be carried out by banks based on the various applicable domestic laws (also assessed in light of the rules of international private law), conventions concerning civil law, Community regulations and any other relevant source of law.

In general, the possibility of bringing a revocatory action shall not mean that the "legal certainty" requirements for credit risk mitigation instruments have not been met. Therefore, the related effects for supervisory capital purposes may be recognized as from the establishment of the credit protection, without waiting for the consolidation period to lapse.

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### 3. Timely liquidation

Banks shall be able to realize the credit risk protection in a timely manner. To this end they shall adopt techniques and procedures that enable them to take rapid measures to realize the assets securing the claim. This may be achieved through the liquidation of the asset and receipt of the proceeds, or through the direct acquisition of the asset pledged as collateral (for example, assignment of the real estate).

#### 4. Organizational requirements

Banks shall have in place a system for managing credit risk mitigation techniques that governs the entire process of obtaining, valuing, controlling and realizing the CRM instruments used.

Within this context, banks shall establish documented policies and documented procedures concerning the types of CRM instruments used for supervisory capital purposes, their amounts and their interaction with the management of the overall risk profile.

Even where credit protection instruments have been recognized for supervisory capital purposes, banks shall continue to perform a complete assessment of the credit risk of the protected exposure. For this purpose only, banks may refer to the net amount of the exposure in assessing securities or commodities repurchase transactions and securities or commodities lending or borrowing transactions.

The use of credit risk mitigation techniques may give rise to other risks, notably those connected with the failure, reduction or termination of protection ("residual risks") as well as valuation risk and potential concentration risk with regard to certain counterparties. Banks shall establish appropriate processes and mechanisms for controlling, managing, and, where necessary, measuring these risks.

Accordingly, banks shall adopt operational techniques and processes for ensuring ongoing compliance with the general and specific requirements for the recognition of CRM techniques for supervisory capital purposes.

In particular, banks shall conduct reviews of the current legal value of the documentation acquired, the impact of any changes in the law and any consequent actions to be taken.

Where the task of verifying legal certainty is not assigned to a centralized structure, banks shall adopt specific organizational measures to ensure the uniformity of local structures' assessments and operational procedures. Specifically, banks shall approve appropriate guidelines governing their actions. Taking account of their operational complexity and the organization of control structures, banks shall also assess the advisability of using standardized contracts.

In all cases, in order to prevent conflicts of interest between the commercial and legal control functions, the structures responsible for legal control shall be independent of the operational units that conclude the contracts.

The Bank of Italy shall verify the adequacy of the organizational and control arrangements adopted during the supervisory review process.

# 5. Disclosure

The recognition of CRM techniques for supervisory capital purposes shall be subject to the disclosure eligibility requirements established by the relevant regulations (Title IV, Chapter 1).

#### SECTION III

#### STANDARDIZED APPROACH

# UNIT 1

#### FUNDED CREDIT PROTECTION

# 1. Financial collateral

Credit risk mitigation techniques include collateral and other equivalent rights having as object assets featuring an adequate degree of liquidity and a sufficiently stable market value over time, such as gold, cash deposits or other financial instruments specifically identified in Annex A.

For example, these include collateral given through pledges, contracts for the transfer of property serving as collateral, credit linked notes, and repurchase/reverse repurchase and securities lending/securities borrowing transactions, provided that they are assigned to the banking book.

Accordingly, they shall also include transactions fitting the definition of financial collateral contracts governed by Legislative Decree 170/2004 where they involve the assets expressly indicated in these regulations (therefore excluding the assignment of receivables).

## 1.1 Specific requirements

For supervisory capital purposes, financial collateral shall have the characteristics described below.

1) *Correlation.* – There shall be no positive material correlation between the value of the financial collateral and the credit quality of the borrower.

In all cases, securities issued by the borrower, or any related group entity, shall not be eligible to be financial collateral. For this purpose, banks shall have regard to the notion of group of connected borrowers referred to in the regulations governing concerning concentration risk (see Title V, Chapter 1, Section I, sub-section 3).

By way of derogation from the provisions of the previous paragraph, covered bonds issued by banks belonging to the same group as the borrower may be accepted as financial collateral in repurchase transactions provided that they comply with the requirements for applying the reduced weight under the standardized approach and there is no positive material correlation between the value of the bond and the credit quality of the borrower.

2) *Fair value*. – Banks shall be able to calculate the fair value of the collateral and revalue it with a minimum frequency of once every six months or whenever they have reason to believe that a significant decrease in its fair value has occurred.

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3) *Segregation.* – Where the financial collateral is held by a third party, banks shall ensure segregation of the assets of the third party from the collateral ("external segregation") and the segregation of assets belonging to other parties held by the same custodian ("internal segregation").

In general, the segregation requirement may be deemed satisfied where the pledged instruments are specifically identified and attributable to the owner (such as, for example, in the case of registered securities) or where, although fungible, the assets are held under a contractually governed custodial arrangement or using methods that ensure internal and external segregation.<sup>5</sup>

#### 1.2 Calculation methods

In calculating the capital requirement for credit exposures secured by eligible financial collateral, banks may use the simple method (a) or the comprehensive method (b).

Under method a), the risk weight associated with the instrument provided as credit protection shall be applied to the collateralized portion of the exposure.

Under method b), the amount of the exposure shall be reduced by the value of the collateral in calculating the requirement. The value of the exposure and that of the collateral shall be adjusted to take account of market price volatility by applying appropriate haircuts to both amounts (collateral value and exposure value). Unless cash is involved, the exposure value adjusted for volatility shall be higher than that of the original exposure, while the adjusted value of the collateral shall be lower than its original value.

If the exposure and the collateral are denominated in different currencies, the value of the collateral shall be further reduced by an appropriate adjustment that reflects possible fluctuations in the exchange rate.

Once the calculation method is elected, it shall be adopted for all exposures.

Maturity mismatching is not permitted under method a). Under method b), the rules set out in sub-section 8 shall apply.

The methods described in this sub-section shall also apply to amounts paid to the lending bank in respect of the issue of credit linked notes (see sub-section 6.1) and to eligible collateral given as part of securities or commodities repurchase transactions and securities or commodities lending or borrowing transactions, provided that they are assigned to the banking book.

See Annex B on the application of the calculation methods.

<sup>&</sup>lt;sup>5</sup> For example, these include custodial deposit arrangements with accounting entries in individual accounts (as occurs with dematerialized financial instruments or financial instruments held by banks and other financial institutions in the performance of investment and ancillary services, in accordance with Article 22 of the Consolidated Law on Financial Intermediation) or physical segregation (for example, in the case of precious metals held in a manner that ensures the unambiguous attribution of ownership). The segregation requirement does not apply in the case of "fungible" deposit arrangements.

# 2. Master netting agreements

#### 2.1 Specific requirements

The effects of the reduction of credit risk as a result of bilateral netting contracts between the bank and a single counterparty relating to securities financing transactions shall be recognized, provided that in addition the general requirements set out in Section II the contracts:

- a) are legally effective and enforceable in all relevant jurisdictions, including in the event of the bankruptcy or insolvency of the counterparty;
- b) give the non-defaulting party the right to terminate and close-out in a timely manner all transactions under the agreement in the event of default, including in the event of the bankruptcy or insolvency of the counterparty;
- c) provide for the netting, or other equivalent effect, of reciprocal debtor and creditor positions on transactions closed out under a master agreement so that a single net amount is owed by one party to the other.<sup>6</sup>

The specific requirements for financial collateral established in sub-section 1.1 shall also be met.

The netting of banking book and trading book positions shall be permitted only where the transactions covered by the agreement satisfy the following conditions:

- a) all the transactions are revalued daily at current market prices;
- b) the instruments used as collateral for the transaction are among those eligible as financial collateral (see Annex A).<sup>7</sup>

These regulations shall apply to master netting agreements involving like transactions (single-product netting).<sup>8</sup> Master netting agreements involving different products (cross-product netting) shall be subject to the regulations established in Chapter 3.

#### 2.2 Calculation methods

For the purposes of calculating the credit risk capital requirement relating to securities financing transactions exposures covered by a master netting

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 $<sup>^{6}</sup>$  With regard to the requirements under points (b) and (c), netting may be deemed – in general and without prejudice to any specific assessments periodically required – enforceable and binding, even in cases of bankruptcy proceedings, where the transactions covered by the netting contract are: i) among those specified in Article 203 of the Consolidated Law on Financial Intermediation; ii) financial collateral contracts as referred to in Legislative Decree 170/2004 and are subject to a close-out netting clause that complies with the provisions of that decree; or iii) in a close-out netting contract which includes at least one financial collateral contract as defined in point ii).

<sup>&</sup>lt;sup>7</sup> Accordingly, all the other financial instruments and commodities that may be assigned to the trading book as provided for under the rules governing counterparty risk may not be used as collateral for positions assigned to the supervisory trading book (see Chapter 4).

<sup>&</sup>lt;sup>8</sup> For this purpose, like transactions include i) securities or commodities repurchase/reverse repurchase transactions and securities or commodities lending or borrowing transactions; ii) margin lending.

agreement recognized in accordance with sub-section 2.1, banks may use the comprehensive method, the VaR internal models approach or the EPE internal models approach.

Refer to Annex C on the application of the first two approaches. The third approach is set out in Chapter 2.

# 3. On-balance-sheet netting

## 3.1 Specific requirements

For the purposes of calculating capital requirements, banks may recognize the effects of on-balance-sheet netting agreements covering asset and liability positions with the same counterparty. Eligibility shall be limited to reciprocal cash balances in respect of the bank's loans and deposits.

The master netting agreements described in sub-section 2 shall not be governed by the provisions of this sub-section.

In addition to the legal certainty<sup>9</sup> and enforceability requirements applicable to all credit risk mitigation instruments (see Section II), the recognition of the effects of on-balance-sheet netting shall be subject to the following specific requirements:

- a) the netting agreement shall be in written form, even where there is a basis for legal netting. In order to prevent disputes from arising and, as a result, to reduce the connected legal risk, the agreement shall specifically identify the loans and deposits subject to netting;
- b) the bank shall be able to identify at any time the assets and liabilities in respect of the same counterparty that are subject to the netting agreement;
- c) the bank shall monitor and control risks associated with the termination of the credit protection. Specifically, the bank shall adopt every precaution to preserve the effective availability of the liabilities to be offset against the assets. Accordingly, restrictions on the disposal of the liabilities shall be established;
- d) the bank shall monitor and control relevant exposures on a net basis.

#### 3.2 Calculation method

Liabilities in respect of the lending bank shall be treated as cash collateral (see sub-section 1).

Where the liabilities subject to the netting agreement mature sooner than the asset, the provisions regarding maturity mismatch shall apply (see subsection 8).

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 $<sup>^9</sup>$  For this purpose, banks shall assess the relevance of any possible impediments to the legal recognition of netting, including in the event of the bankruptcy of one of the parties (for example, Article 1246 of the Civil Code or Article 56(2) of the Bankruptcy Law).

# 4. Other funded credit protection

The instruments described below may be recognized for credit risk mitigation purposes, applying the unfunded credit protection calculation method. The instruments shall be subject to the general requirements set out in Section II and the requirements established below.

# 4.1 Deposits with third party institutions

Cash deposits with supervised institutions or similar instruments held by them in a non-custodial arrangement designed to satisfy the segregation requirement referred to in sub-section 1.1 and pledged to the bank calculating the capital requirement may be treated as collateral provided by the institution that holds them provided that:

- a) the borrower's claim against the third party institution is openly pledged or assigned to the bank and the pledge is legally effective and enforceable in all relevant jurisdictions;
- b) the third party institution is notified of the pledge or assignment;
- c) as a result of the notification, the third party institution is able to make payment solely to the bank or to other parties with the bank's consent;
- d) the pledge is unconditional and irrevocable.
- 4.2 Life insurance

Insurance policies pledged to the bank may be treated as protection provided by the company issuing the policy provided that:

- a) the company providing the life insurance can be recognized as an eligible guarantor (see sub-section 5.3);
- b) the life insurance policy is openly pledged or assigned to the bank;
- c) the company providing the insurance is notified of the pledge or assignment and as a result may not pay amounts payable under the contract without the bank's consent;
- d) the declared surrender value of the policy is non-reducible;
- e) the bank has the right to cancel the policy and receive the surrender value in a timely fashion in the event of borrower default;
- f) the bank is informed of any non-payments under the policy by the policyholder;
- g) the credit protection is provided for the maturity of the loan. Where the insurance relationship ends before the loan relationship expires, the bank shall ensure that the amount deriving from the insurance contract serves as security until the end of the duration of the credit agreement;

h) the pledge or assignment shall be legally effective and enforceable in all jurisdictions which are relevant at the time of the conclusion of the credit agreement.

The value of the credit protection shall be the surrender value of the policy.

#### 4.3 Financial instruments issued by third parties

Financial instruments issued by supervised institutions that the issuer has undertaken to repurchase at the request of the bearer may be treated as a guarantee of the issuer.

The value of the credit protection recognized shall be the following:

- a) where the instrument will be repurchased at face value, the value of the protection shall be that amount;
- b) where the instrument will be repurchased at market price, the value of the protection shall be the value of the instrument calculated in accordance with the rules applicable to unrated debt securities.

#### UNIT 2

#### UNFUNDED CREDIT PROTECTION

#### 5. Guarantees and counter-guarantees

#### 5.1 Eligible instruments

A guarantee shall mean a legal commitment explicitly assumed by a third party (protection seller) to fulfil an obligation to a bank in the event of default by the underlying obligor.

Guarantees include, inter alia, the *fideiussione* (including the "*fideiussione omnibus*" or blanket guarantee), the *polizza fideiussoria*, autonomous guarantee contracts and endorsements.

Guarantees may include commitments undertaken in the delegation, expromission and assumption of debt if they meet the requirements for unfunded credit protection.<sup>10 11</sup> See Section IV, sub-section 4.1 concerning the possibility that the transactions discussed in this sub-section should give rise to forms of credit transfer that may be recognized by banks adopting IRB approaches.

<sup>&</sup>lt;sup>10</sup> Specifically, in the case of delegation, the following conditions shall be met: the delegator is a government department or is in any case not subject to bankruptcy proceedings, the delegate irrevocably assumes the direct, unconditional obligation to pay the lending bank directly and this obligation is abstract and independent of the underlying relationships with the original debtor.

<sup>&</sup>lt;sup>11</sup> Loans backed by salaries ("*cessione del quinto*") may be treated as loans secured by a guarantee where the overall structure of the transaction meets all the requirements for this form of credit protection.

Collection orders, delegations of payment and advances on invoices subject to final payment do not constitute guarantees since the borrower does not assume any obligation towards the creditor bank.

In general, comfort letters shall not constitute guarantees unless they are substantively equivalent to a *fideiussione* or autonomous guarantee contract.

Where credit protection instruments are governed by foreign law, banks shall carefully verify, including on the basis of qualified legal opinions, that the instruments produce effects analogous to those described above.

#### 5.2 Specific requirements

Without prejudice to the general requirements set out in Section II, recognition of the credit risk mitigation effects of guarantees for supervisory capital purposes shall be subject to the following additional conditions:

- a) the credit protection shall be direct;
- b) the extent of the credit protection shall be clearly defined and incontrovertible;
- c) the credit protection contract shall not contain any clause that could allow the protection provider to unilaterally cancel the protection. If the contract allows the protection provider to withdraw, the agreements between the parties shall safeguard the coverage concerning obligations arising prior to the exercise of the withdrawal;
- d) the credit protection contract shall not contain any clause, the fulfilment of which is outside the direct control of the lending bank,<sup>12</sup> that could have one of the following effects:
  - i) to increase the effective cost of the protection as a result of deteriorating credit quality of the protected exposure;
  - ii) to prevent the protection seller from being obliged to pay out in a timely manner in the event the original borrower fails to make any payments due;
  - iii) to allow the protection seller to reduce the maturity of the credit protection;
- e) in the event of default of the counterparty, the bank shall have the right to recoup, in a timely manner, any monies due under claim covered under the guarantee.<sup>13</sup> In particular, payment shall not be subject to the lending bank first having to pursue the borrower (the guarantee contract shall not grant the guarantor the benefit of discussion of the borrower);

<sup>&</sup>lt;sup>12</sup> Contractual provisions establishing obligations to be performed by the lending bank (for example, notifying the guarantor of the borrower's first missed payment) are therefore not a condition for these purposes. However, banks shall avoid excessively broad, difficult-to-verify clauses (for example, an obligation to take all precautions to avoid borrower default) that could easily be challenged by the guarantor upon enforcement of the guarantee.

<sup>&</sup>lt;sup>13</sup> In the case of supplementary unfunded credit protection securing residential mortgage loans, the contract may establish that the guarantor shall make payment within 24 months.

- f) the guarantee shall cover all payments the borrower is required to make in respect of the claim. Where certain types of payments are excluded from the guarantee, the recognized value of the guarantee shall be adjusted to reflect the limited coverage;
- g) the guarantee shall be an explicitly documented obligation assumed by the guarantor.

In the event of an asset mismatch, guarantee contracts shall contain a crossdefault clause under which default in respect of a specific credit exposure of a given borrower shall extend to all exposures to the same person.

### 5.3 Eligible guarantors

Guarantees issued by parties falling within the categories listed below (which correspond to the exposure classes under the standardized approach) shall be allowed:

- a) central governments and central banks $^{14}$ ;
- b) public sector entities and regional and local authorities;
- c) multilateral development banks;
- d) supervised institutions.
- e) corporates that have a credit assessment by an ECAI associated with credit quality step 2 or above.

# 5.4 Calculation method

In calculating the capital requirement, banks may substitute the risk weight of the guarantor for that of the borrower (the principle of substitution).

The value of the credit protection provided by a guarantee shall be the amount that the protection provider has undertaken to pay in the event of the default of the borrower.

Where the guarantee is denominated in a currency different from that in which the exposure is denominated ("currency mismatch") the value of the credit protection shall be reduced as provided for in Annex D.

In calculating the capital requirements, a guaranteed exposure with respect to borrowers assigned to the retail exposure portfolio may be valued as if it were assigned to the portfolio in which the guarantor is classified.<sup>15</sup>

The regulations set out in sub-section 8 shall apply in the event of maturity mismatch.

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<sup>&</sup>lt;sup>14</sup> This category includes international organizations with a risk weight of zero.

<sup>&</sup>lt;sup>15</sup> This means that if 50% of a retail exposure is guaranteed by a central government, the exposure may be treated as if 50% were attributed to the "central government" portfolio and the remaining 50% to the retail exposures portfolio. Each portion of the exposure shall receive the relevant risk weight.

Where the protected amount is less than the exposure value and the secured and unsecured portions are of equal seniority (i.e. the bank and the protection provider share the losses on a pro-rata basis), the capital requirements shall be reduced proportionately.

Where the protected amount is less than the exposure value and the secured and unsecured portions are of unequal seniority (i.e. the bank and the protection seller are liable for losses with different levels of seniority), with the risk being segmented ("tranched transactions"), the regulations governing securitisation operations shall apply.

# 5.5 Counter-guarantees and indirect guarantees<sup>16</sup>

Where an exposure is covered by a guarantee that is counter-guaranteed by one of the entities in categories a) through c)<sup>17</sup> of sub-section 5.3, the exposure may be treated as covered by a guarantee provided by the counter-guarantor, provided that the following conditions are met:

- a) the counter-guarantee covers all the credit risk elements of the protected exposure;
- b) both the original guarantee and the counter-guarantee meet the requirements for guarantees, except that the counter-guarantee need not be direct;
- c) the bank is be able to demonstrate that the cover is robust and that nothing in the historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct guarantee by the counterguarantor.

A counter-guarantee provided by one of the protection providers listed above shall be recognized even where it does not guarantee the direct guarantee of the exposure but rather a counter-guarantee of the direct guarantee provided by a protection seller that is not an eligible counter-guarantor.

# 6. Credit derivatives

#### 6.1 Instruments and eligible protection providers

For the purposes of these regulations, the following types of credit derivatives and instruments that may be composed of such credit derivatives or are economically equivalent may be recognized:

a) credit default swaps;

<sup>&</sup>lt;sup>16</sup> Counter-guarantees (typically the guarantee (fideiussione) granted to the guarantor in accordance with Article 1940 of the Civil Code) are indirect second-level guarantees, which allow the lending bank to demand performance of the obligation from the counter-guarantor where neither the original borrower nor the guarantor is able to perform. Co-guarantees are direct first-level guarantees which operate concurrently with other guarantees in the event the original borrower defaults. In this case, the rules governing guarantees shall apply in place of those in this sub-section.

<sup>&</sup>lt;sup>17</sup> Multilateral development banks may be recognized as counter-guarantee providers if they receive a risk weight of zero pursuant to Chapter 1, Part 1.

b) total return swaps;

#### c) credit linked notes.

In order to be recognized for supervisory capital purposes, the protection shall be provided by a protection provider belonging to one of the categories listed in sub-section 5.3 on guarantees.

Where a bank uses a credit derivative in the supervisory trading book to hedge exposures in the banking book ("internal hedges"), the protection shall be recognized only if the credit risk transferred to the supervisory trading book is, in turn, transferred to one or more third parties through credit derivatives that satisfy the eligibility requirements provided for in these regulations.

In the case of first-to-default derivatives, the exposure which would, in the absence of protection, produce the lowest risk-weight amount shall be considered the hedged exposure. The bank purchasing protection may apply the prudential treatment provided for in this sub-section to that exposure only if the exposure value is less than or equal to the notional value of the credit protection.

Where the credit derivative is an nth-to-default derivative, the effect of credit risk mitigation shall be recognized only if the (n-1)th protection has already been obtained or where (n-1) assets within the basket has/have already defaulted. In this case, the bank shall adopt a procedure analogous to that for first-to-default derivatives in calculating the risk-weighted amounts.

#### 6.2 Specific requirements

Without prejudice to the general requirements set out in Section II, recognition of credit derivatives shall be subject to the specific requirements applicable to guarantees (sub-section 5.2, points a), b), c) and d)) and the following conditions:

- a) subject to point b) below, the credit events specified under the credit derivative shall at a minimum include all the cases listed below, under the conditions specified:
  - i) the failure to pay the amounts due under the terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with or shorter than the grace period in the underlying obligation);
  - ii) the bankruptcy, insolvency or inability of the borrower to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events;
  - iii) the restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e. value adjustment or other similar debit to the income statement);
- b) b) where the credit events specified under the credit derivative do not include restructuring of the underlying obligation as described in point (a)(iii), the

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credit protection may nonetheless be allowed subject to a reduction in the recognized value as specified in sub-section 6.3 of this section;

- c) c) in the case of credit derivatives providing for cash settlement, a robust valuation process shall be in place in order to estimate loss reliably. There shall be a clearly specified period for obtaining post-credit-event valuations of the underlying obligations;
- d) d) if the protection buyer's right and ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation shall provide that any required consent to such transfer may not be unreasonably withheld;
- e) e) the identity of the parties responsible for determining whether a credit event has occurred shall be clearly defined. This determination shall not be the sole responsibility of the protection seller. The protection buyer shall have the right or ability to inform the protection provider of the occurrence of a credit event.

An asset mismatch under a credit derivative shall only be allowed if:

- a) the reference obligation or the obligation used for purposes of determining whether a credit event has occurred, as the case may be, ranks pari passu with or is junior to the underlying obligation;
- b) the underlying obligation and the reference obligation or the obligation used for purposes of determining whether a credit event has occurred, as the case may be, share the same borrower (i.e. the same legal entity) and there are in place legally enforceable cross-default or cross-acceleration clauses.

## 6.3 Calculation methods

Without prejudice to the provisions of the following sub-section, treatment of credit default swaps and total rate of return swaps for supervisory capital purposes shall be the same as that for guarantees set out in sub-section 5.4 of this section.

In the case of credit derivatives that do not include as a credit event restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that result in a credit loss event (e.g. the making of a value adjustment or other similar debits to the income statement), the value of the credit position:

- a) shall be reduced by 40% where the amount that the protection seller has undertaken to pay is not higher than the exposure value;
- b) shall be no higher than 60% of the exposure value where the amount that the protection provider has undertaken to pay is higher than the exposure value.

Credit linked notes issued by the lending bank shall be treated as cash collateral up to the amount collected.

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## 7. Unfunded mutual guarantees

Where mutual guarantee systems (for example, *confidi*) provide unfunded credit protection, the requirement set out in sub-section 5.2(e) shall be deemed satisfied where either of the following conditions are met:

- a) the bank has the right to obtain in a timely manner a provisional payment by the guarantor calculated to represent a robust estimate of the amount of the economic loss, including losses resulting from the non-payment of interest and other types of payment which the borrower is obliged to make, likely to be incurred by the bank proportional to the coverage of the guarantee. The bank shall establish the appropriateness of the payment with respect to the losses incurred;
- b) the loss-protecting effects of the guarantee, including losses resulting from the non-payment of interest and other types of payments which the borrower is obliged to make, justify treatment as a guarantee.

## 8. Maturity mismatches

## 8.1 Definition of maturity

Subject to a maximum of 5 years, the effective maturity of the protected asset shall be the longest possible remaining time before the borrower is scheduled to fulfil its obligations.

Subject to the following paragraph, the maturity of the credit protection shall be the time to the earliest date at which the protection may terminate or be terminated.

Where there is an option to terminate the protection that may be exercised at the discretion of the protection provider, the maturity of the protection shall be taken to be the time to the earliest date at which that option may be exercised. Where there is an option to terminate the protection that may be exercised at the discretion of the protection buyer and the terms of the arrangement at origination of the protection contain a positive incentive for the bank to call the transaction before contractual maturity, the maturity of the protection shall be taken to be the time to the earliest date at which that option may be exercised; otherwise such an option may be considered not to affect the maturity of the protection.

Where a credit derivative is not prevented from terminating prior to expiration of any grace period required for a default on the underlying obligation to occur, the maturity of the protection shall be reduced by the amount of the grace period.

# 8.2 Effects on the valuation of credit protection

Protection of less than three months residual maturity, the maturity of which is less than that of the underlying exposure, shall not be recognized.

Where there is a maturity mismatch, the credit protection shall not be recognized where the original maturity of the protection is less than one year.

Unfunded credit protection shall be recognized in the amount adjusted in accordance with Annex E for all banks.

Where the bank uses the simple method in the prudential treatment of financial collateral (see Annex B), the residual maturity of the guarantee shall not be less than that of the exposure.

#### SECTION IV

## FOUNDATION IRB APPROACH

# 1. Introduction

Banks that adopt IRB approaches in calculating the capital requirement for credit risk (see Chapter 1, Part 2) may use credit risk mitigation instruments recognized under the standardized approach, in accordance with the provisions of Sections II and III, except as otherwise provided for in this section.

Banks that adopt the foundation IRB approach may use the additional credit risk mitigation instruments specifically governed by this Section (IRB-eligible collateral): real estate collateral, other physical collateral, trade receivables and leasing.

#### UNIT 1

#### FUNDED CREDIT PROTECTION

# 2. Real estate collateral

#### 2.1 Eligible instruments

Residential and commercial real estate collateral may be recognized for the purpose of calculating capital requirements where the conditions for the recognition of reduced risk weights under the standardized approach are satisfied.

If these conditions are not satisfied, loans secured by real estate collateral may allocated among exposures in respect of specialised lending transactions, where the applicable conditions are met.

In the remaining cases, banks may not recognize any benefit and the loans in question shall be treated as unsecured exposures (see Chapter 2, Part 2).

## 2.2 Specific requirements

Without prejudice to compliance with the general requirements contained in Section II, banks shall comply with the specific requirements provided for loans secured by real estate collateral under the standardized approach in calculating the capital requirements, except for that concerning the ratio between the loan amount and the collateral value ("loan to value").

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# 3. Other physical collateral

### 3.1 Eligibility conditions

Banks may also take account of the risk mitigation effects of physical collateral other than financial collateral and real estate collateral provided that:

- a) there exist liquid markets for the expeditious and efficient disposal of the asset;
- b) the market prices for the collateral are well established and publicly available;
- c) there are reasons for believing that the net amount the bank receives when collateral is realised does not deviate significantly from these market prices.

Banks that intend to recognize the effects of collateral for the purpose of reducing its capital requirement shall be responsible for ascertaining that the foregoing conditions have been met.

By way of example, other physical collateral may include pledges, leasing and liens.

### 3.2 Specific requirements

In addition to the general requirements contained in Section II, in order to qualify for recognition, other physical collateral shall meet the following conditions:

- 1) the claim is senior to the repayment rights of other creditors, with the sole exception of statutory liens that establish a prior claim regardless of the moment they arise;
- 2) the loan agreement provides a detailed description of the collateral and specify in detail the manner and frequency of revaluations;
- 3) in the case of commodities, the bank has the right to physically inspect the property.

With regard to the transaction structure, the bank's credit policies shall address the appropriate requirements for the maximum ratio between the collateral and the exposure amount; the ability to liquidate the collateral readily, the ability to establish objectively a price or market value; the frequency with which the value can be readily obtained (including a professional appraisal or valuation) and the volatility of the value of the collateral. For this purpose, banks shall also ensure that:

- a) the value of the property shall be monitored at a minimum of once every year. More frequent monitoring shall be required where the market is subject to significant changes in conditions;
- b) the types of physical property accepted by the bank as collateral and the policies and practices in respect of the appropriate amount of each type of

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collateral relative to the exposure amount shall be clearly documented in internal credit policies and procedures;

- c) both initial valuation and revaluation take full account of any deterioration or obsolescence of the collateral. Particular attention shall be paid in valuation and revaluation to the effects of the passage of time on fashion- or datesensitive collateral;
- d) the property serving as collateral is adequately insured against damage.

### 3.3 Procedure for recognition for regulatory purposes

When a bank first receives a certain type of physical asset as collateral, it shall ensure that the eligibility requirements and the specific requirements applicable to that asset are met based on an assessment of the relevant factors.

The bank shall analyze the empirical evidence concerning the time required to realise the value of the collateral and the recovery rates of the secured exposure.

Upon initial application of these regulations, banks shall conduct this selfassessment, including on a cumulative basis, for types of physical assets that may have already been accepted as collateral at the date these regulations come into force that they plan to use to reduce their capital requirement.

When authorising the use of each bank's rating system for calculating the capital requirement, the Bank of Italy shall assess the appropriateness of the procedures adopted by the bank to determine whether the eligibility conditions and the specific requirements have been met.

### 4. Assignment of receivables

# 4.1 Eligible instruments

Receivables acquired by the bank as collateral or pledged to it linked to commercial transactions or other transactions with an original maturity<sup>18</sup> of less than or equal to one year may be recognized as credit risk reduction instruments, provided that the general requirements set out in Section II and the specific requirements established in sub-section 4.2 are met.

The treatment provided for under these regulations shall not apply to receivables associated with securitisations, credit derivatives and amounts owed by affiliated persons.

In addition, collection orders, delegations of payment and advances on invoices subject to final payment shall not be eligible for recognition since the borrower does not assume any obligation towards the creditor bank.

<sup>&</sup>lt;sup>18</sup> The original maturity shall be determined with reference to the time at which the claim of the assignor in respect of the assigned borrower arose.

The assignment of a portion of wages to secure loans (*cessione del quinto*) may be recognized, as may the delegation, expromission and assumption of debt if they effectively transfer the claim. See Section III, sub-section 5.1 concerning the possibility that the transactions specified in this sub-section may be treated as forms of unfunded credit protection.

# 4.2 Specific requirements

In order for receivables to be recognized as collateral, in addition to the general requirements set out in Section II, the following conditions shall be met:

- i) the bank shall have title to the receivables provided as collateral or a first priority claim on the receivables, with the sole exception of statutory liens;
- ii) the bank shall have a sound process for determining the credit risk associated with receivables acquired as collateral for the exposure. Such process shall include, among other things, analysis of the underlying borrower's business and industry and the types of customers with whom the borrower does business. Where the bank relies on the borrower/assignor to ascertain the credit risk of the assigned borrowers sold, it shall review the borrower's/seller's credit practices to ascertain their soundness and credibility;
- iii) the margin between the amount of the exposure and the value of the receivables shall reflect all material factors, including the cost of collection, concentration within the receivables pool pledged by an individual borrower, and potential concentration risk within the bank's total exposure. The bank shall maintain a continuous monitoring process appropriate to the receivables. In addition, compliance with loan covenants, environmental restrictions and other legal requirements shall be reviewed on a regular basis;
- iv) the receivables pledged by the borrower shall be diversified and not unduly correlated with the borrower. Where there is material positive correlation, the attendant risks shall be taken into account in the setting of margins for the collateral pool as a whole;
- v) receivables from affiliates of the borrower/assignor (including subsidiaries and employees) may not be recognized as risk mitigants;
- vi) the bank shall have a documented process for collecting receivable payments in distressed situations. This process shall be in place, even when the bank normally looks to the borrower/assignor for collection.

### 5. Leasing

Receivables arising in respect of transactions in which the lending bank leases property to a third party shall receive the same prudential treatment as exposures collateralised with the asset leased (specifically, real estate collateral if the property consists of land or buildings or other physical collateral in the case of assets other than real estate collateral or financial collateral), where, in addition to the general requirements set out in Section II, the following conditions are met:

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- depending on the type of asset leased, the specific requirements for real estate collateral in sub-section 2.2 or other physical collateral in sub-section 3.2 are met;
- there is robust risk management on the part of the lessor with respect to the use to which the leased asset is put, its age and the planned duration of its use, including appropriate monitoring of the value of the leased asset;
- the difference between the value of the unamortized amount and the market value of the leased asset is not so large as to overstate the credit risk mitigation attributed to the asset, unless this difference has been taken into account in calculating the LGD in accordance with Annex G.

Leases that expose the bank to residual value risk<sup>19</sup> shall be treated in accordance with the methods set out under the IRB approach.

### 6. Calculation methods

## 6.1 Financial collateral

For exposures secured by eligible financial collateral, the effects of the collateral shall be reflected in an LGD adjustment in accordance with the provisions of Annex F. Accordingly, banks shall determine EAD without taking account of the presence of financial collateral.

# 6.2 Common provisions for collateral eligible under the IRB approach (IRBeligible collateral) other than financial collateral

The LGD to be used in calculating the risk-weight amounts for the risk of exposures secured by IRB-eligible collateral other than financial collateral shall be determined as provided for in Annex G.

### 6.3 Value of IRB-eligible collateral other than financial collateral

Where the collateral provided consists of receivables, the value of the collateral shall be equal to its realisable value.

Where the collateral consists of real estate, the value of the collateral shall be the fair value of the asset (or the mortgage lending value<sup>20</sup>), reduced where necessary to take account of the findings of the reviews referred to in Chapter 1, Part 1, Section IV and any third-party priority claim on the property.

<sup>&</sup>lt;sup>19</sup> "Residual value risk" shall mean the exposure to potential losses caused by a decrease in the fair value of the asset below the estimated residual value at the time the lease agreement signed.

<sup>&</sup>lt;sup>20</sup> "Mortgage lending value" shall mean the value of the property as determined by a prudent assessment of the future marketability of the property taking into account long-term durable aspects of the property, the normal and local market conditions, the current use and appropriate alternative uses of the property. Speculative elements shall not be taken into account in assessing the mortgage lending value. Such value shall be documented in a clear and transparent manner.

### UNIT 2

### UNFUNDED CREDIT PROTECTION

# 7. Guarantees and credit derivatives

#### 7.1 Eligible protection providers

In addition to the persons in categories a) through d) specified in sub-section 5.3 of Section III, the undertakings identified in letter e) shall also be eligible for recognition as protection sellers even where they do not have a credit assessment by an ECAI but have been internally rated by the bank, in accordance with the regulations set out in Chapter 1, Part 2, as having a PD equivalent to that of an ECAI associated with credit quality step 2 or above.

### 7.2 Calculation method

For exposures secured by guarantees, credit derivatives or the other forms of funded credit protection described in Section III, sub-section 4, the risk weight of the protected portion of the exposure shall be determined using:

- the PD associated with the protection seller's credit quality step, if more favourable, or that associated with a step between that of the borrower and the protection seller where the bank deems that full substitution is not warranted;
- the appropriate risk-weighting function for the protection seller's category.

In the case of a subordinated exposure with non-subordinated protection, the LGD envisaged for subordinated exposures (75%) may be substituted with that for senior claims (45%) only if the protection seller also assumes the risk of subordination.<sup>21</sup>

For any uncovered portion of the exposure, the PD shall be that for the borrower's credit quality step and the LGD shall be that associated with the underlying exposure.

For purpose of calculating the covered portion of the exposure, the protection value shall be the adjusted value taking account of any currency or maturity mismatch between the exposure and the protection (see Annex D and Annex E, sub-section 2).

<sup>&</sup>lt;sup>21</sup> In essence, in the event of the default of the original borrower, the protection provider must be required to perform its obligation in respect of the protected bank as if the bank had a senior claim.

## 8. Double default

### 8.1 Method for calculating the double default effect

Banks may take account of double default effects in respect of financial assets whose credit risk is covered by guarantees or credit derivatives.

The double default effect framework is an alternative to the substitution approach, which envisages the use of the guarantor's PD. The bank may apply one of the two approaches separately for each exposure described in sub-section 8.2. The double default effect framework may be adopted if the conditions specified in this sub-section are met.

### 8.2 Eligible protection providers

Supervised institutions, insurance and reinsurance undertakings and export credit agencies (ECAs) may be recognised as eligible protection providers. The guarantor (or protection provider), which shall have sufficient expertise in providing unfunded credit protection, shall meet the following conditions:

- a) it regulated in a manner equivalent to that of banks or had, at the time the credit risk protection was provided, a rating from an ECAI associated with credit quality step 1, 2 or 3 under the standardized approach for corporate exposures;
- b) at the time the credit risk protection was provided, or for any period of time thereafter, it had been internally rated by the bank as having a PD equivalent to or lower than that associated with credit quality step 1 or 2 under the standardized approach for corporate exposures;
- c) at the time the credit risk protection was provided, and for any period of time thereafter, it has been internally rated by the bank as having a PD equivalent to or less than that associated with credit quality step 3 under the standardized approach for corporate exposures.

The protection provider and the underlying borrowers shall not be members of the same group.

Where credit protection is provided by ECAs, it shall not benefit from counter-guarantees by a central government.

Banks that apply the double default framework shall monitor the guarantor's continuing compliance with eligibility requirements, as failure to satisfy the requirements could have an impact on the capital requirement.

## 8.3 Hedged exposures

Only the following exposures shall be eligible for the double-default treatment:

- corporate exposures, excluding insurance and reinsurance undertakings

- exposures to public sector entities or regional and local governments that are not treated as exposures to central governments or central banks under the IRB approach;
- exposures to small or medium-sized companies classified as retail exposures.

# 8.4 Eligible guarantees and credit derivatives

Credit risk mitigation instruments recognized in the double-default framework include the following types of guarantees and credit derivatives:

- single-name credit derivatives or single-name guarantees;
- first-to-default basket credit derivatives. The treatment shall be applied to the asset within the basket with the lowest risk-weighted exposure;
- nth-to-default basket credit derivatives. In this case, the credit risk hedge shall be considered for double default purposes only if eligible (n-1)th protection has already been obtained or where (n-1) of the assets included in the basket have already defaulted. Where this is the case, the treatment shall be applied to the asset within the basket with the lowest risk-weighted exposure amount.

# 8.5 Other requirements

In order to be able to use the double default effect framework, the following additional requirements shall be met:

- a) the guarantees and credit derivatives shall meet all the requirements provided for under the rules governing credit risk mitigation techniques;
- b) the risk weight that is associated with the exposure prior to the application of the double default effect framework shall not already factor in any aspect of the credit mitigation;
- c) banks shall have the right and reasonable expectation to receive payment from the protection seller without having to take legal action in order to pursue the counterparty for payment. To the extent possible, banks shall take steps to satisfy themselves that the protection seller is willing to pay promptly should a credit event occur;
- d) the purchased credit protection shall absorb all credit losses incurred on the hedged portion of the exposure that arise due to the credit events outlined in the contract;
- e) if the contract provides for delivery (physical settlement) of the asset underlying the guarantee (or credit derivative), the deliverability of the underlying asset shall be legally certain. If a bank that purchases protection intends to deliver an obligation other than the hedged obligation, it shall ensure that the deliverable obligation is sufficiently liquid so that the bank would have the ability to purchase it for delivery in accordance with the contract;

- f) the terms and conditions of guarantees and credit derivatives shall be legally confirmed in writing by both the protection provider and the bank;
- g) banks shall have a process in place to detect excessive correlation between the creditworthiness of the protection provider and the guaranteed borrower due to their performance being dependent upon common factors beyond the systematic risk factor. An example of high correlation is the situation in which the guarantor of a supplier of goods and services is also one of the supplier's key customers and is a source of a high proportion of its revenues.

# 8.6 Method for calculating the double default effect

If the guarantees received and the credit derivatives purchased satisfy all the above requirements, the amount of the risk-weighted exposure for each transaction , may benefit from the double default effect, determined on the basis of the provisions of Annex H.

#### SECTION V

### ADVANCED INTERNAL RATING-BASED APPROACH

# 1. Introduction

Banks that adopt the advanced IRB approach in calculating the capital requirements for credit risk shall take account of the impact of the credit risk mitigation effects of using CRM techniques to estimate risk parameters.

Credit protection shall be recognized where the bank complies with the regulations set out in this section.

### 2. Funded credit protection

Funded credit protection shall be considered in the internal LGD estimates in the manner provided for in Chapter 1, Part 2. Banks shall establish internal requirements that are consistent with those set out in Section II.

## 3. Unfunded credit protection

Within the context of the internal rating system for calculating capital requirements, banks may elect to recognize the credit risk mitigation effects of guarantees, credit derivatives and other similar protection (See Section III, subsection 4), adjusting the PD and/or LGD provided that the relevant minimum requirements set out in sub-sections 3.1 and 3.2, and those set out in Section II are met.

When authorising the use of each bank's rating system for calculating the capital requirement, the Bank of Italy shall assess the adequacy of the procedures adopted by the bank to determine whether the minimum requirements have been met.

### 3.1 Recognized guarantees: specific requirements and adjustment criteria

Guarantees shall be recognized for risk mitigation purposes subject to the following conditions:

- banks shall have clearly specified criteria for the types of eligible guarantors;
- the same rules provided for calculating borrowers' PDs shall apply to eligible guarantors;
- guarantees prescribing conditions under which the guarantor may not be obliged to perform (conditional guarantees) shall be recognized provided that banks demonstrate to the Bank of Italy that the criteria for assigning exposures to grades adequately address any potential reduction in the risk mitigation effect.

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Banks shall have clearly specified criteria for adjusting risk parameters. These criteria shall address the guarantor's ability to perform under the guarantee, the likely timing of payments, the degree to which the guarantor's ability to perform under the guarantee is correlated with the borrower's ability to repay and the extent to which residual risk to the borrower remains.

# 3.2 Credit derivatives: specific requirements and adjustment criteria

The minimum requirements set out in sub-section 3.1 for guarantees shall also apply for the recognition of single-name credit derivatives.

The requirements set out in sub-section 6.2 of Section III shall apply to asset mismatches.

The criteria for adjusting PD or LGD estimates shall address the payout structure of the credit derivative and conservatively assess the impact this could have on the level and timing of recoveries. The bank shall also consider the extent to which other forms of residual risk remain.

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### SECTION VI

# METHOD OF ALLOCATING THE VARIOUS FORMS OF CREDIT PROTECTION

For the purposes of calculating the risk-weighted exposure amounts, banks shall determine the allocation of the effects of the various credit risk protection instruments acquired to the hedged exposures, in compliance with any contractual agreement with the protection provider concerning such allocation.

Where a bank has more than one form of credit risk mitigation covering a single exposure, it shall divide the exposure into parts covered by each type of credit risk mitigation instrument and it shall calculate the risk-weighted exposure amount separately for each part.

Similar treatment shall apply where the credit protection provided by a single guarantor have different maturities.

Where the same exposure or part of an exposure is covered by more than one credit risk mitigation instrument, the bank may take account of the protection effects of each instrument.

Where a bank that adopts the foundation IRB approach has both financial and physical collateral that are eligible to cover separate parts of the same exposure, it shall divide the volatility adjusted exposure value into parts covered by only one type of collateral (for example, financial collateral, receivables, real estate collateral, and other physical collateral) and apply the relevant treatment set out in this Chapter to each.

In no event may a bank calculate a risk-weighted exposure amount or an expected loss amount with respect to an exposure for which credit risk mitigation has been obtained that exceeds that for an identical exposure for which credit risk mitigation has not been obtained.

Where the credit protection effects have already been taken into consideration in calculating the risk-weighted exposure amount under the standardized approach (for example, loans secured by real estate collateral, rated exposures whose rating already incorporates the credit risk reduction effect) or by the regulatory function for calculating the capital requirement under the IRB approach (for example, loans secured by real estate collateral included in the retail portfolio), the regulations set out in this Chapter shall not apply with regard to the calculation methods.

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## ANNEX A

# FINANCIAL COLLATERAL. ELIGIBLE INSTRUMENTS

The following instruments may be recognized as eligible collateral:

- a) gold;
- b) cash on deposit and cash assimilated instruments held by the bank purchasing protection; these include credit linked notes issued by the bank purchasing protection.
- c) debt securities issued by:
  - i. central governments and their central banks, which securities have a specific rating from an ECAI/ECA of a credit quality step of between 1 and 4;
  - ii. international organizations and multilateral development banks to which a 0% risk weight is assigned;
  - iii. public sector entities and regional or local governments whose exposures are treated as exposures to the central government in whose jurisdiction they are established;
  - iv. multilateral development banks other than those under point ii), public sector entities and regional or local governments other than those under point iii) whose securities have a specific rating from an ECAI of a credit quality step of between 1 and 3;
  - v. other entities whose securities have a specific rating from an ECAI of a credit quality step of between 1 and 3;
- d) debt securities issued by supervised institutions and corporates, which securities have a specific rating from an ECAI/ECA of a credit quality step of between 1 and 3 applicable to short term exposures;
- e) unrated debt securities issued by entities whose exposures are treated as exposures to supervised institutions, provided that:
  - they are listed on a recognized exchange;
  - they qualify as senior debt;
  - all other issues of the same seniority by the issuing institution have a rating associated with credit quality steps 1 through 3;
  - the bank has no information to suggest that the issue would justify a rating, if applicable, below that indicated in the preceding indent;
  - the bank can demonstrate that the instrument has sufficient market liquidity;
- f) equities and convertible bonds included in a main index;

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g) units in collective investment undertakings if they have a daily public price quote and the collective investment undertaking's assets are invested in the instruments listed in letters a) through f) above.<sup>22</sup>

If the comprehensive method is used (see Annex b, sub-section 2) for the prudential treatment of financial collateral, the latter may also include:

- h) equities and convertible bonds not included in main index but traded on a recognized exchange;
- i) units in collective investment undertakings if they have a daily public price quote and the collective investment undertaking's assets are invested in instruments listed in letters a) through f) and h).<sup>23</sup>

Where a security has two ratings, account shall be taken of the less favourable assessment. Where the instrument has more than two ratings, account shall be taken of the two most favourable assessments. If these are different, the less favourable of the two shall apply.

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 $<sup>^{22}</sup>$  Any use of derivatives by a CIU to hedge investments in eligible financial instruments shall not prevent units in that CIU from being eligible.

<sup>&</sup>lt;sup>23</sup> See the previous note.

## ANNEX B

# COLLATERAL UNDER THE STANDARDIZED APPROACH. CALCULATION METHODS

## 1. Simple method

The risk weight envisaged for instruments provided as collateral shall apply, entirely or proportionately, to exposures secured, respectively, in whole or in part by financial collateral. The unsecured portion of the exposure shall receive the counterparty's (borrower's) risk weight.

The risk weight applied to the collateralized portion of the exposure shall be at least 20%, except in the cases expressly provided for in sub-section 1.1.

The collateral shall be assigned a value equal to the fair value of the underlying instrument.

### 1.1. Risk weights: exceptions to the 20% minimum threshold

The secured portion of the following transactions may receive a risk weight of 0% provided that the conditions listed below are met.

1. Repurchase transactions and securities lending and borrowing transactions, where:

- a) both the exposure and the collateral are cash or debt securities issued by the persons listed in Annex A, letter c), points i) through iii) and receive a risk weight of 0% for the purposes of calculating the capital requirement;
- b) both the exposure and the collateral are denominated in the same currency;
- c) either the maturity of the transactions does not exceed one day or both the exposure and the collateral are subject to daily marking-to-market or daily remargining;
- d) the time between the last marking-to-market before a failure to remargin by the counterparty and the liquidation of the collateral does not exceed four business days;
- e) the settlement of the transactions occurs within a settlement system proven for that type of transaction;
- f) the documentation covering the agreement is standard market documentation for these types of transactions;
- g) the documentation governing the transaction provides for immediate termination in the event the counterparty fails to physically deliver cash, securities or margins or otherwise defaults;

h) the counterparty is a core market participant.<sup>24</sup>

2. Over-the-counter derivatives transactions listed in the regulations governing counterparty risk (see Chapter 3) whose exposure is calculated in accordance with such regulations, subject to daily marking-to-market, collateralized by cash or cash-assimilated instruments where there is no currency mismatch.

3. Transactions in which the exposure and the collateral are denominated in the same currency and the collateral is either:

- cash on deposit or a cash assimilated instrument;
- debt securities issued by one of the entities listed in Annex A, letter c), points i) through iii), excluding public sector entities, if such securities have a 0% risk weight for the purpose of calculating the capital requirement and their fair value has been discounted by 20%.

Where a supervisory authority of a Member State has authorized the application of a 0% risk weight for repurchase transactions and securities lending and borrowing transactions involving securities issued by that sovereign, Italian banks may apply the same preferential treatment.

Banks shall apply a 10% risk weight to the secured portion of exposures connected with the transactions specified in point 1 where the counterparty is not a core market participant. The transactions specified in point 2 shall also be subject to the same risk weight if they are secured by debt securities issued by one of the entities listed in Annex A, letter c), points i) through iii), excluding public sector entities, if such securities have a 0% risk weight for the purpose of calculating the capital requirement.

## 2. Comprehensive method

The comprehensive method allows banks to take more direct account of the credit risk mitigation effect of financial collateral.

The risk weight for an assets secured by eligible financial collateral shall be obtained by multiplying the risk weight of the counterparty by an amount equal to the difference between the exposure amount and the value of the collateral.

In order to take account of market price volatility, an appropriate "haircut" shall be applied to both the collateral value and the exposure amount. With the

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 $<sup>^{24}</sup>$  For the purposes of the application of these rules, the category of core market participants shall include:

<sup>-</sup> the entities listed in Annex A, letter c), from point i) through iii) that receive a risk weight of 0% in calculating the capital requirement;

<sup>-</sup> entities whose exposures are treated as exposures to supervised institutions;

<sup>-</sup> other financial companies (including insurance companies) to which a risk weight of 20% applies in calculating the capital requirement under the standardized approach;

<sup>-</sup> regulated collective investment undertakings that are subject to capital or leverage requirements;

<sup>-</sup> regulated pension funds;

<sup>-</sup> recognised clearing organizations.

exclusion of cash, the volatility-adjusted exposure value shall be higher than the value of the original exposure, and vice-versa for collateral.

Where the exposure and the collateral are denominated in difference currencies, the amount of the collateral shall be further reduced to reflect possible foreign exchange volatility.

The exposure value under the comprehensive method shall be calculated as follows:

$$E^* = \max \{0; [E x (1 + HE) - C (1 - HC - HFX)]\}$$
(1)

where:

E\* is the "adjusted" exposure, which takes into account the credit risk mitigation effects of the financial collateral as well as volatility;

E is the exposure value used to calculate the capital requirement. In the case of off-balance-sheet positions, the exposure shall be the nominal value, i.e. applying a credit conversion factor of 100%;

- C is market value of the collateral;
- HE is the haircut appropriate to the exposure;
- HC is the haircut appropriate to the collateral;

H<sub>FX</sub> is the foreign exchange haircut.

In the case of exposures represented by loans and derivatives, HE shall be equal to zero. Banks may apply a haircut of zero to repurchase transactions and securities lending and borrowing transactions only where they possess the characteristics set out in sub-section 1.1 of this Annex.

Where a supervisory authority of a Member State has authorized the application of a zero haircut for repurchase transactions and securities lending and borrowing transactions involving securities issued by that sovereign, Italian banks may apply the same preferential treatment.

Where the collateral consists of a number of eligible instruments, the haircut shall be  $H = \sum i$  ai Hi, where ai is the proportion of the individual instrument to the total value of the collateral and Hi is the applicable haircut.

Where the bank revalues the exposure and the collateral on a less-than-daily basis, the haircuts applicable in the case of daily revaluation shall be scaled up using the following formula:

 $H = H_M \sqrt{\{[N_R + (T_M - 1)]/T_M\}}$ 

(2)

where:

H is the haircut to be applied;

H<sub>M</sub> is the haircut under daily revaluation;

 $N_R$  is the actual number of business days between revaluations (NR > 1);

 $T_M$  is the liquidation period for the transaction (see below).

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\* \* \*

In order to calculate haircuts, banks may use the parameters specified in subsection 2.1 (supervisory haircuts) or their own estimates under sub-section 2.2 (estimated haircuts). If the second approach is chosen, it shall be used for the full range of existing secured exposures, excluding immaterial portfolios, for which the supervisory haircut approach may be used.

### 2.1 Standard supervisory haircut approach

In the case of daily revaluation, the haircuts to be applied to exposures and collateral consisting of debt securities, equity securities, cash and gold are those specified in Tables 1 through 4 below. Such haircuts are broken down by the type of instrument and the liquidation period of the transaction as well as the credit quality step, the residual maturity and the issuer category in the case of debt securities.

In the case of less-than-daily revaluation, the haircut shall be scaled up using formula (2) in sub-section 2.

The liquidation period shall be 20 business days for secured lending transactions,<sup>25</sup> 5 business days for repurchase transactions and securities lending and borrowing transactions (except for transactions involving the transfer of commodities or guaranteed rights relating to title in commodities), and 10 business days for other capital market-driven transactions.

For the purposes of determining credit quality steps, the provisions of Annex A concerning the identification of the various categories of eligible securities shall apply.

With regard to the other types of instruments:

- for non-eligible securities or commodities repurchase transactions and lending and borrowing transactions, the haircut applicable to non-main index equities listed on a recognised exchange shall apply;
- the haircuts applicable to eligible units in collective investment undertakings shall be the weighted average haircuts that would apply to the assets in which the fund has invested, having regard to the liquidation period for capital market-driven transactions. If the bank does not know the instruments in which the fund has invested, it shall use the highest haircut that would apply to any of the assets in which the fund may invest on the basis of its rules;
- unrated debt securities issued by entities whose exposures are treated as exposures to supervised institutions that satisfy the eligibility criteria under Annex B, point e), shall receive a haircut that is the same as that for securities issued by such entities or by corporates with a rating associated with credit quality steps 2 or 3 as provided for in Chapter 1, Part 1.

<sup>&</sup>lt;sup>23</sup> Secured lending transactions are transactions that give rise to an exposure secured by financial collateral, other than capital market-driven transactions.

Credit quality step	Residual maturity	Debt securities described in Annex A, letter c), points i through iii			Debt securities described in Annex A, letter c), points iv and v		
		20 days	10 days	od (%)	20 days	10 days	d (%) 5 days
1	$\leq 1$ year	0.707	0.5	0.354	1.414	10 duys	0.707
	> 1 and $\leq$ 5 years	2.828	2	1.414	5.657	4	2.828
	> 5 years	5.657	4	2.828	11.314	8	5.657
2-3	$\leq 1$ year	1.414	1	0.707	2.828	2	1.414
	$> 1$ and $\leq 5$ years	4.243	3	2.121	8.485	6	4.243
	> 5 years	8.485	6	4.243	16.971	12	8.485
4	$\leq$ 1 year	21.213	15	10.607	NA	NA	NA
	$> 1$ and $\leq 5$ years	21.213	15	10.607	NA	NA	NA
	> 5 years	21.213	15	10.607	NA	NA	NA

TABLE 1 - Debt securities other than those with short-term ratings

TABLE 2 – Debt securities with short-term ratings.

	Debt securities described in Annex A, letter c), points i through iii			Debt securities described in Annex A, letter c), points iv and v		
quality step	Liquidation period (%)			Liquidation period (%)		
	20 days	10 days	5 days	20 days	10 days	5 days
1	0.707	0.5	0.354	1.414	1	0.707
2-3	1.414	1	0.707	2.828	2	1.414

	Liquidation period (%)			
Type of instruments or exposures	20 days	10 days	5 days	
Main index equities and main index convertible bonds	21.213	15	10.607	
Other equities and convertible bonds listed on a recognised exchange	35.355	25	17.678	
Cash	0	0	0	
Gold	21.213	15	10.607	

TABLE 3 – Equity instruments, cash and gold.

TABLE 4 – Haircuts for currency mismatches.

Liquidation period (%)						
20 days	10 days	5 days				
11.314	8	5.657				

### 2.2. The own estimates of haircuts

Banks authorized to use their internal models to calculate the capital requirement for market risk (see Chapter 4) may use their own estimates of the haircuts to be applied to the collateralized exposures and the related collateral, provided that the quantitative and qualitative conditions in this sub-section are met.

For debt securities with an investment grade rating, haircuts may be calculated for each category of instrument. In this case, the estimates shall reflect the volatility of the securities included in each category. In order to determine such categories, banks may take into consideration the type of issuer, the rating, the residual maturity and the modified duration of the securities.

For debt securities with a rating below investment grade and for other types of eligible financial collateral, the adjustments shall be calculated for each individual instrument.

In estimating the haircut, banks shall not take into account any correlations between unsecured exposures, collateral and/or exchange rates.

Banks that plan to use their own haircut estimates shall ensure that the calculation system satisfies the following quantitative requirements:

A1) it shall use a 99% one-tailed confidence interval;

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- A2) the liquidation period shall be 20 business days for secured lending transactions,<sup>26</sup> 5 business days for repurchase transactions (except for transactions that involve the transfer of commodities or guaranteed rights relating to title to commodities, for which the period is 10 days), and 10 business days for other capital market driven transactions;
- A3) for liquidation periods  $(T_N)$  other than those indicated in the preceding point  $(T_M)$  the haircuts shall be calculated using the following formula:

 $H = H_N \sqrt{T_M/T_N}$ 

Where H is the haircut to the applied;

 $H_N$  is the haircut for liquidation period  $T_N$ ;

 $T_M$  is the liquidation period referred to in point A2;

T<sub>N</sub> is the actual liquidation period used;

- A4) where revaluation is performed on a less-than-daily basis, the own volatility estimates shall be scaled up using formula (2) of sub-section 2;
- A5) banks shall take account of the illiquidity of lower-quality assets. Banks shall therefore use a longer liquidation period where they judge the traditional liquidation period to be inappropriate with respect to the liquidity of the collateral. They shall also perform stress tests to identify situations where empirical data may understate potential volatility;
- A6) the historical observation period shall be at least one year. For banks that use a weighting scheme or other methods, the weighted average time lag of the individual observations shall not be less than six months. The Bank of Italy may require the use of shorter observation periods where it believes that this is justified by a significant upsurge in price volatility;
- A7) the time series used shall be updated at least once every three months. Banks shall update them more frequently whenever market conditions change materially. This implies that haircuts shall also be calculated at least every three months.

Banks shall have an appropriate, comprehensive risk management system. Specifically, the following qualitative conditions shall be met:

- B1) the volatility estimates shall be used in the day-to-day risk management process, including in relation to internal exposure limits;
- B2) banks shall have sound procedures for verifying compliance with the policies and controls for the estimation of haircuts as well as for the integration of such estimations into the risk management process;
- B3) the system for calculating haircuts shall be reviewed regularly as part of the bank's internal auditing process. A general review of the operation of such systems shall be performed at least once a year and shall specifically address, at a minimum:

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<sup>&</sup>lt;sup>26</sup> Secured lending transactions are transactions that give rise to an exposure secured by financial collateral, other than capital market-driven transactions.

- the integration of estimated haircuts into daily risk management;
- the validation of any significant change in the process;
- the consistency, timeliness and reliability of the data sources used in estimating haircuts, including the independence of the sources;
- the accuracy and appropriateness of the assumptions underlying the estimation process.

## ANNEX C

## MASTER NETTING AGREEMENTS. CALCULATION METHODS

#### *1. Comprehensive method*

The exposure value fully adjusted for the volatility ( $E^*$ ) of exposures subject to a master netting agreement recognized for supervisory capital purposes with respect to securities financing transactions may be calculated using the supervisory haircut approach or the own estimates approach, as governed by Annex B, subsection 2.1 and 2.2 for the treatment of financial collateral under the comprehensive method. If the own estimates approach is adopted, the bank shall satisfy the conditions and requirements set out in Annex B, sub-section 2.2.

The fully adjusted exposure value E\* is obtained by netting the exposures under the agreement and the collateral as well as an increase that reflects the possible changes in the price of underlying securities and any foreign exchange risk.

Analytically:

 $E^* = \max \{0, [(\sum(E) - \sum(C)) + \sum(|E_{sec}| \times H_{sec}) + (\sum|E_{fx}| \times H_{fx})]\}$ 

where:

E is the value for each separate exposure under the agreement that would apply in the absence of the credit protection;

C is the value of the securities or commodities borrowed, purchased or received or the cash borrowed or received in respect of each such exposure;

 $\Sigma(E)$  is the sum of all the exposures (E) under the agreement;

 $\Sigma(C)$  is the sum of all forms of collateral (C) under the agreement;

E<sub>sec</sub> is the net position (long or short) in each type of security (or commodity);

 $E_{fx}$  is the net position (positive or negative) in a given currency, other than the settlement currency of the agreement;

H<sub>sec</sub> is the haircut appropriate to a particular type of security (or commodity);

H<sub>fx</sub> is the foreign exchange haircut.

The net position in each type of security or commodity  $(E_{sec})$  shall be calculated by subtracting from the total value of the securities or commodities of that type lent, sold or provided under the master netting agreement, the total value of securities or commodities of that type borrowed, purchased or received under the agreement.

"Type of security" shall mean all the securities which are issued by the same entity, have the same issue date and the same original maturity, are subject to the same terms and conditions and are subject to the same liquidation periods as indicated in Annex B, sub-section 2.1.

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The "net position in each currency", other than the settlement currency of the master netting agreement ( $E_{fx}$ ), shall be calculated by subtracting from the total value of securities denominated in that currency lent, sold or provided under the master netting agreement added to the amount of cash in that currency lent or transferred under the agreement, the total value of securities denominated in that currency borrowed, purchased or received under the agreement added to the amount of cash in that currency lent or transferred.

The haircut appropriate to a given type of security or cash position ( $H_{sec}$ ) shall be applied to the absolute value of the positive or negative net position in the securities of that type.

The foreign exchange risk haircut  $(H_{fx})$  shall be applied to the net positive or negative position in each currency other than the settlement currency of the master netting agreement.

# 2. Internal VaR models approach

Banks may use an internal VaR models approach in calculating the fully adjusted exposure value (E\*) of exposures under a master netting agreement recognized for supervisory capital purposes with respect to securities financing transactions to take account of correlation effects between positions in securities subject to the master netting agreement and the liquidity of the instruments involved. The bank may use its internal models for margin lending transactions if the transactions are covered under a bilateral master netting agreement that meets the requirements set out under the rules governing counterparty risk.

Only banks that have obtained specific authorization from the Bank of Italy or that have received authorization to use internal models for market risk may use internal VaR models for calculating E\*.

The bank may use the internal models approach independently of the choice it has made between the standardized approach and the internal ratings based approach for calculating the capital requirement for credit risk. Where the bank decides to use an internal models approach, it shall do so for all counterparties and securities, excluding immaterial portfolios, where it may use the comprehensive method.

Banks that elect the internal models approach shall verify that the risk management system resulting from transaction covered by the master netting agreement used is conceptually sound and are implemented with integrity and that, in particular, the following qualitative standards are met:

- a) the internal risk-measurement model used for calculating potential price volatility for the transactions is closely integrated into the daily risk-management process of the bank and serves as the basis for reporting risk exposures to the management body of the bank;
- b) the bank has a risk control unit that is independent from operating units and reports directly to the management body. The unit shall be responsible for designing and implementing the bank's risk management system. It shall produce and analyse daily reports on the output of the risk-measurement

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model and on the appropriate measures to be taken in terms of position limits;

- c) the daily reports produced by the risk-control unit are reviewed by a level of management with sufficient authority to enforce reductions of positions taken by individual traders and of overall risk exposure;
- d) the bank has sufficient staff skilled in the use of the sophisticated models used in the risk-control unit;
- e) the bank has established procedures for checking and ensuring compliance with a documented set of internal policies and controls concerning the overall operation of the risk-measurement system;
- f) the bank's models have a proven track record of reasonable accuracy in measuring risks, demonstrated through the back-testing of its output using at least one year of data;
- g) the bank frequently conducts a rigorous programme of stress testing, the results of which are reviewed by the management body and are reflected in the policies and limits it sets;
- h) the bank conducts, as part of its regular internal auditing process, an independent review of its risk-measurement system. This review shall include both the activities of the operating units and of the independent risk-control unit;
- i) the bank conducts a review of its risk-management system at least once a year;
- j) the internal model meets the qualitative requirements for the integrity of the model-making process (see Chapter 3).

The bank shall ensure that the calculation of the potential change in value shall meet the following minimum quantitative standards:

- a) at least daily calculation;
- b) a 99th percentile, one-tailed confidence interval;
- c) a 5-day equivalent liquidation period, except in the case of transactions other than securities repurchase transactions or securities lending or borrowing transactions, where a 10-day equivalent liquidation period shall be used;
- d) an effective historical observation period of at least one year, unless a shorter observation period is justified by a significant upsurge in price volatility;
- e) three-monthly dataset updates.

The internal risk-measurement model shall capture a sufficient number of risk factors in order to capture all material price risks.

Banks may use empirical correlations within risk categories and across risk categories if it has been ascertained that the bank's system for measuring correlations is sound and implemented with integrity.

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The internal VaR models provide estimates of the potential change in the amount of the unsecured exposure ( $\sum E - \sum C$ ). The fully adjusted exposure value (E\*) shall be calculated using the following formula:

 $E^* = \max \{0, [(\Sigma(E) - \Sigma(C)) + (output of the internal model)]\}$ 

where:

E is the value each separate exposure under the agreement would have in the absence of credit protection;

C is the value of the securities or commodities borrowed, purchased or received or the cash borrowed or received in respect of each such exposure;

 $\Sigma(E)$  is the sum of all exposures (E) under the agreement;

 $\Sigma(C)$  is the sum of all forms of collateral (C) under the agreement.

The previous business days' model output shall be used to calculate E\*.

For the purposes of calculating the capital requirement, E\* shall be treated as the value of the counterparty exposure in respect of transactions subject to the master netting agreement.

Banks that use internal models may not apply the more favourable risk weight of 0% to the securities repurchase transactions or securities lending or borrowing transactions described in Annex B, sub-section 1.1, point 1.

### ANNEX D

# UNFUNDED CREDIT PROTECTION. TREATMENT OF CURRENCY MISMATCHES

Where unfunded credit protection is denominated in a currency different from that in which the exposure is denominated (a currency mismatch) the value of the credit protection shall be reduced by the application of a haircut ( $H_{FX}$ ) as follows:

 $G^* = G \times (1 - H_{FX})$ 

where

G is the nominal amount of the credit protection;

G\* is G adjusted for any foreign exchange risk;

 $H_{\text{FX}}$  is the haircut for any currency mismatch between the credit protection and the underlying obligation.

The haircuts to be applied in the case of currency mismatches may be calculated based on either the supervisory haircut approach or the own estimates approach (see Annex B, sub-sections 2.1. and 2.2.)

## ANNEX E

# MATURITY MISMATCHES. VALUATION OF CREDIT PROTECTION

1. Funded credit protection for banks that apply the comprehensive method to financial collateral

The maturity of the credit protection and that of the exposure shall be reflected in the adjusted value of the collateral according to the following formula:

 $C_{VAM} = C_{VA} x (t-t^*)/(T-t^*)$ 

where:

 $C_{VA}$  is the volatility adjusted value of the collateral as specified in Annex B, subsection 2 ([C  $(1 - H_C - H_{FX})$ ]) or the amount of the exposures, whichever is lower;

t is the number of years remaining to the maturity date of the credit protection calculated in accordance with the rules contained in Section III, sub-section 8.1, or the value of T, whichever is lower;

T is the number of years remaining to the maturity date of the exposure calculated in accordance with the rules contained in Section III, sub-section 8.1, or 5 years, whichever is lower;

t\* is 0.25.

 $C_{VAM}$  shall be taken as  $C_{VA}$  further adjusted for maturity mismatch to be included in the formula for the calculation of the fully adjusted value of the exposure (E\*) set out in Annex B, sub-section 2.

## 2. Unfunded credit protection for all banks

The maturity of the credit protection and that of the exposure shall be reflected in the adjusted value of the credit protection according to the following formula:

 $G_A = G^* x (t-t^*)/(T-t^*)$ 

Where:

- G\* is the amount of the protection adjusted for any currency mismatch;

- G<sub>A</sub> is G\* adjusted for any maturity mismatch;

- t is the number of years remaining to the maturity date of the credit protection calculated in accordance with the rules contained in Section III, sub-section 8.1, or the value of T, whichever is lower;

- T is the number of years remaining to the maturity date of the exposure calculated in accordance with the rules contained in sub-section 8.1, or 5 years, where the former is higher;

- t\* is 0.25.

 $G_A$  is then taken as the value of the protection for the purposes of calculating the value of the protection.

### ANNEX F

# FINANCIAL COLLATERAL UNDER THE IRB APPROACH. CALCULATION METHOD

The LGD to be used in calculating risk-weighted exposure amounts for the purposes of Section IV, sub-section 6.1 shall be LGD\*, calculated using the following formula:

 $LGD^* = LGD \times (E^*/E)$ 

where:

LGD is the LGD that would apply to the exposure under the foundation IRB approach if the exposure was not collateralized;

E\* is the "adjusted" exposure value, which takes account of the reduction in credit risk produced by the financial collateral as well as the effects of price and currency volatility, calculated in accordance with Annex B, sub-section 2;

E is the value of the exposure that would apply to the exposure under the foundation IRB approach if the exposure was not collateralized. The exposure value of off-balance-sheet assets shall be calculated using a credit conversion factor of 100% rather than the percentages indicated in Chapter 1, Part 2, Section 5, sub-section 1.3.

Banks may only use the comprehensive method to calculate  $E^*$ , choosing between the supervisory haircut approach or the own estimates approach (see Annex B, sub-sections 2.1. and 2.2).

For the purposes of applying a 0% risk weight to the secured portion of the transactions indicated in Annex B, sub-section 1.1, the category of "core market participant" shall also include other financial companies (including insurance undertakings) that do not have a credit assessment from a recognized ECAI and are internally rated by the bank as having a PD equivalent to that associated with the credit assessment of an ECAI associated with credit quality step 2 or above.

ANNEX G

# ELIGIBLE COLLATERAL UNDER THE IRB APPROACH OTHER THAN FINANCIAL COLLATERAL. CALCULATION OF LGD

The LGD to be used in calculating the risk weights of exposures secured by eligible IRB collateral other than financial collateral shall be LGD\*, calculated as described below based on the degree of coverage of the exposure provided by the collateral (C/E).

Where the ratio of the value of the collateral (C) and the exposure value (E):

- is below a threshold level of C\* (i.e. the required minimum collateralized level for the exposure) as indicated for each type of collateral in Table 1, LGD\* shall be equal to the LGD under the foundation IRB approach for unsecured exposures to the counterparty (specifically 45% for senior claims and 75% for subordinated claims);
- 2) exceeds the higher threshold level of C<sup>\*\*</sup> (i.e. the required level of collateralization to receive full LGD recognition), LGD\* shall be that prescribed in Table 1.

Where the required level of collateralization  $C^{**}$  is not achieved in respect of the exposure as a whole, the exposure shall be considered to be two exposures: LGD\* pursuant to point 2) shall be assigned to the part in respect of which the required level of collateralization  $C^{**}$  (equal to  $C/C^{**}$ ) is achieved; the remainder shall be assigned the LGD\* pursuant to point 1).

	LGD* for senior claims or contingent liabilities	LGD* for subordinated claims or contingent claims	Required minimum collateralization level of the exposure (C*)	Required minimum level of over- collateralization of the exposure (C**)
Receivables	35%	65%	0%	125%
Residential real estate/commerci al real estate	35%	65%	30%	140%
Other physical collateral	40%	70%	30%	140%

Table – Minimum LGD for secured parts of exposures.

Banks may assign a 50% risk weight to the part of the exposure fully collateralized by residential or commercial real estate situated within the territory of an EU Member State in which the competent supervisory authority has

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authorized its banks to apply this prudential treatment because the local real estate markets are well-developed and long-established with sufficiently low loss-rates.

By way of derogation, until 31 December 2012 banks may, subject to the levels of collateralization C\* and C\*\* indicated in Table 1, assign an LGD\*:

- of 30% for senior exposures in the form of commercial real estate leasing;
- of 35% for senior exposures in the form of equipment leasing.<sup>27</sup>
- of 30% for senior exposures secured by residential and commercial real estate.

At the end of this period, the derogation shall be reviewed.

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 $<sup>^{27}</sup>$  This refers to the notion of equipment leasing envisaged under IAS 16, which includes equipment, machinery and transport equipment.

### ANNEX H

## **DOUBLE DEFAULT. CALCULATION METHOD**

Where the guarantees received and the credit derivatives purchased meet the requirements set out in sub-section 8 of Section IV, the risk-weighted exposure for each transaction may benefit from the "double default" effect. This benefit in terms of a reduction in risk-weighted assets is calculated on the basis of the following formula:

$$RWA_{DD} = RW * EAD * (0.15 + 160 * PD_g)$$
(1)

where:

RWA<sub>DD</sub> is the amount of the credit risk-weighted exposure that takes account of the double default effect;

RW is the risk weight obtained by applying the formula for exposures to corporates, considering the PD of the secured borrower and the LGD of a direct comparable exposure to the guarantor (protection provider);

EAD is the exposure at the moment of default with respect to the hedged transaction;

 $PD_g$  is the PD of the guarantor.

In place of the LGD of a comparable direct exposure to the guarantor (protection provider), consideration shall be taken of the LGD associated with the unhedged facility to the borrower depending on whether, in the event both the guarantor and the borrower default during the life of the hedge transaction, available evidence and the structure of the guarantee indicate that the amount recoverable would depend on the financial condition of the borrower.

The maturity M is equal to the effective maturity of the credit protection, with a minimum of 1. The maturity adjustment coefficient b (see Chapter 1, Part 2, Annex B) shall be calculated with PD being the lesser between the PD of the guarantor and the PD of the borrower.

Formula (1) above shall also apply to exposures to small and medium-sized enterprises that satisfy the criteria for classification in the retail portfolio.

Where the residual maturity of the credit protection is less than that of the original exposure, the double default effect shall only be calculated for the effectively hedged portion, in accordance with the rules for maturity mismatch.

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### PART 2

### SECURITIZATION

#### SECTION I

# GENERAL PROVISIONS

### 1. Introduction

For supervisory capital purposes, securitizations are transactions involving one or more assets for which the credit risk profile is divided into two or more positions (tranches) with different levels of subordination in supporting losses on the securitized assets.

This category includes: (i) "traditional" securitizations, in which an entity transfers a specified portfolio of assets to a special-purpose vehicle that finances the purchase by issuing securities (asset-backed securities, ABS); and (ii) "synthetic" securitizations, in which risk is transferred without transferring the assets, typically through the use of credit derivatives. Synthetic securitization transactions include transactions hedged by tranched credit protection.

Securitizations have an impact on the financial position of banks, including those that transfer the assets or risks and those that purchase the securities issued by the special-purpose vehicle or the credit risk.

Under certain conditions the originator bank (originator) may exclude securitized assets from the calculation of capital requirements and, where the bank adopts an internal ratings based approach, the related expected losses.<sup>28</sup> Investor banks shall comply with the capital requirements based on the characteristics of the tranches acquired.

A number of methods for calculating the risk-weighted value of securitization positions are envisaged. Banks shall select the method to be applied on the basis of the methodology (standardized or internal ratings based approach) that the bank would have applied to the securitized assets in calculating the capital requirement for capital risk.

Where a bank adopts the standardized approach in calculating the capital requirement for credit risk, the risk-weighted amount of the securitized assets underlying the securitization position shall be calculated using a method that normally assigns a risk weight based on a rating assigned by an ECAI to securitization positions (see Section III, sub-section 2).

Where a bank adopts an internal ratings based (IRB) approach (foundation or advanced) in calculating the capital requirement for credit risk, it shall calculate

 $<sup>^{28}</sup>$  Securitizations undertaken prior to 30 September 2005 shall continue to receive the previous regulatory treatment.

the risk-weighted amount of securitization positions using one of the approaches described below (see Section III, sub-section 3).

The first (the Ratings Based Method) determines risk weights on the basis of external ratings, the number of securitized assets and the seniority of the position. The second allows banks to calculate the capital requirement for a specific securitization tranche, even in the absence of an external rating, using a supervisory formula.

Securitizations that involve the issue of asset-backed commercial paper (ABCP) by the special-purpose vehicle shall be subject to specific treatment (the Internal Assessment Approach).

Where the securitized assets were treated in part with the standardized approach and in part with the IRB approach, the bank shall calculate the riskweighted amount of the corresponding securitization positions using the approach adopted for the securitized assets accounting for the predominant portion of the overall securitized portfolio.

For supervisory capital purposes, banks may use risk mitigation techniques to reduce the capital requirement for securitization positions. The methods for using these techniques are described in Section IV.

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, sub-paragraphs a), b) and d), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraphs a), b) and d), 2-ter and 3-bis, which, for the purpose of carrying out consolidated supervision, establishes

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that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking or to the components of the banking group with regard to capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

 the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

# 3. Definitions

For the purposes of these regulations:

- *"asset-backed commercial paper (ABCP) programme*" shall mean a programme of securitizations in which the securities issued by the special-purpose vehicle predominantly take the form of commercial paper with an original maturity of one year or less;
- *"asset-backed securities (ABS)*" shall mean securities issued by securitization vehicles as part of securitization transactions having different levels of subordination in supporting losses;
- *"securitized assets*" shall mean individual assets or groups of assets that have been securitized. These include, for example, loans, debt securities, equity securities, ABS securities and loan commitments);

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- *"revolving assets"* shall mean assets in which the exposure may change as a result of drawings and repayments made within a contractually-agreed ceiling (for example, credit facilities);
- "*securitization*" shall mean a transaction that divides the credit risk of an asset or portfolio of assets into two or more tranches and in which:
  - payments in the transaction are dependent on the performance of the asset or portfolio of assets in question;
  - tranches have different degrees of subordination in supporting the losses of the securitized assets or portfolio;
- "synthetic securitization" shall mean a securitization transaction in which the transfer of credit risk in two or more tranches is achieved through the use of credit derivatives or guarantees with no transfer of the asset or portfolio of assets. Synthetic securitizations shall include transactions in which it is possible, using credit protection, to isolate within a portfolio composed of one or more assets a risk component that supports the first-loss portion of the portfolio (tranched transactions);
- "traditional securitization" shall mean a securitization through which credit risk is transferred by selling the securitized assets to a special-purpose vehicle that issues securities (ABS) that do not represent payment obligations of the originator. Traditional securitizations shall include the transfer of credit risk by means of loans granted by the vehicle to the originator (subparticipation);
- *"originator"* shall mean the entity that either:
  - directly or indirectly originates the securitized on- and/or off-balance sheet assets;
  - acquires a third party's assets onto its own balance sheet then securitizes them;
- *"early amortization provision"* shall mean a contractual provision that, upon the occurrence of specified events, triggers repayment of investors' securitization positions prior to the originally stated maturity of the securities issued;
- "*excess spread*" shall mean the difference between the revenue flows from the securitized assets and the costs and expenses connected with the securitization (for example, interest paid to holders of the ABS securities and servicing commissions);
- *"investor"* shall mean the person that holds a risk position in a securitization;
- *"liquidity facility"* shall mean the securitization position arising from a contractual agreement to provide funding to ensure the timeliness of cash flows to investors;
- " $K_{irb}$ " shall mean the sum of:
  - the capital requirement in respect of the securitized assets calculated under the IRB approach as if the assets had not been securitized;

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- the amount of expected losses associated with securitized assets calculated using the IRB approach;
- "*clean-up call option*" shall mean a contractual option for the originator to repurchase or extinguish the securitization positions before all of the securitized assets have been repaid, when the amount of outstanding exposures falls below a certain threshold. In a traditional securitization, this is usually achieved through the repurchase of the remaining securitization positions. In a synthetic securitization, the option usually takes the form of a clause that extinguishes the credit risk protection of the securitized asset;
- "*securitization position*" shall mean any type of exposure to a securitization, such as, for example, securities issued by special-purpose vehicles, liquidity facilities, subordinated loans, interest rate or currency derivative transactions entered into as part of a securitization;
- *"first losses"* shall mean losses on securitized portfolios the amount of which reduces the right of securitization positions to receive payments, starting with that with the highest degree of subordination;
- *"sponsor"* shall mean the entity, other than the originator, that establishes and manages an ABCP or other securitization scheme in which securitized exposures are acquired from third parties;
- "*tranches*" shall mean contractually established segments of credit risk associated with an exposure or a number of exposures, in which each segment is associated with a greater or lesser degree of subordination in supporting losses than another segment, without taking account of any credit protection provided by third parties directly to holders of positions in the tranches.

Securitization exposures that cover the "first loss" incurred by the securitized portfolio represent the junior risk (for example, junior securities, subordinated loans);

- "*special-purpose vehicle (SPV)*": shall mean the company or other legal entity other than the bank, organized for the purpose to carrying out one or more securitizations which possess the following characteristics: its activities are limited solely to those appropriate to accomplishing that objective; the structure of the vehicle is designed to isolate the obligations of the vehicle from that of the orignator; the holders of the beneficial interests in it may pledge or exchange those interests without restriction. Securitization companies as defined in Article 3 of Law 130 of 30 April 1990 shall satisfy these requirements;
- "*credit enhancement*" shall mean a contractual arrangement whereby the credit quality of a securitization position is better than what it would have been in the absence of this enhancement. Credit enhancement may be provided by more junior tranches in the securitization and other types of credit protection;
- "implicit support" shall mean credit enhancement provided by the originator or by the sponsor in excess of its contractual obligations to reduce actual or potential losses by holders of securitization positions.

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# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

# 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Part:

— authorization to use internal credit quality assessments to determine the capital requirements for positions in respect of ABCP programmes lacking external or inferred ratings (Annex A, sub-section 3): Banking Supervision Department.

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### SECTION II

### MINIMUM REQUIREMENTS FOR THE TRANSFER OF CREDIT RISK

# 1. Introduction

This Section establishes the minimum requirements for the recognition of the transfer of credit risk and the supervisory capital treatment that the originator shall apply to securitized assets. Where the securitization meets these requirements, the originator may:

- in the case of a traditional securitization, exclude the securitized assets from the calculation of the credit risk-weighted exposure amount and, where applicable, expected losses;
- in the case of a synthetic securitization, calculate the credit risk-weighted exposure amount and, where applicable, the expected losses associated with the securitized assets in accordance with the rules established in this Section.

Where these requirements are not met, the securitization shall not be recognized for supervisory capital purposes.

The accounting treatment of the securitizations is not relevant for the purposes of their recognition for supervisory capital purposes.

# 2. Traditional securitizations

A traditional securitization effectively transfers credit risk where the following conditions are met:

- a) significant credit risk associated with the securitized assets has been transferred to third parties (see sub-section 4);
- b) the securitization documentation reflects the economic substance of the transaction;
- c) the securitized assets are not subject to claims by the originator and its creditors, including in the event the originator is subject to bankruptcy proceedings or receivership. Compliance with this condition shall be supported by the opinion of legal counsel with specific experience in the sector. Securitizations carried out in accordance with Law 130/99 satisfy this requirement;
- d) the transferee is a special-purpose vehicle;
- e) the securities issued by the special-purpose vehicle do not represent payment obligations of the originator;
- f) the originator does not maintain effective or indirect control over the transferred assets. The originator shall be considered to have maintained effective control over the transferred assets if it except as provided for in paragraph g) has the right to repurchase the assets from the transferee in -63 –

order to realize the related benefits or is obliged to re-assume the transferred risk. The originator bank's retention of servicing rights or obligations shall not in itself constitute indirect control of the assets sold;

- g) clean-up call options shall be permitted, provided that:
  - they are exercisable at the discretion of the originator;
  - they are only exercisable when the unamortized amount of the securitized assets is 10% or less of the lower of the nominal value of the securitized assets and the sale price;
  - they are not structured to avoid losses to credit enhancement positions or other positions held by investors, other than the originator or the sponsor;
  - are not otherwise structured to provide credit enhancement;<sup>29</sup>
- h) the contracts that govern the securitization do not contain clauses, except for the early amortization provision referred to in Section III, sub-section 4, that:
  - require the originator to improve the credit quality of securitization positions by, for example, altering the securitized assets or increasing the yield payable to investors, other than the originator and the sponsor, in response to a deterioration in the credit quality of the securitized assets;
  - increase the yield payable to holders of securitization positions in response to a deterioration in the credit quality of the securitized assets.

### 3. Synthetic securitizations

Synthetic securitization transactions effectively transfer credit risk when, in addition to the conditions set out in sub-section 2, the following conditions are met:

- a) the credit protection by which the credit risk is transferred complies with Part 1 of this Chapter. For this purpose special-purpose vehicles shall not be recognized as eligible unfunded credit protection providers;<sup>30</sup>
- b) the instruments used to transfer credit risk do not contain terms or conditions that:
  - impose significant materiality thresholds below which credit protection is deemed not to be triggered if a credit event occurs;

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<sup>&</sup>lt;sup>29</sup> Specifically, securitized assets shall not include exposures in default, unless the repurchase price of the asset is less than or equal to their fair value on the date the clean up call option is exercised. In the case of unlisted assets, fair value shall be established by parties independent of the originator bank (and the banking group to which it belongs) and other parties involved in the securitization (arranger, servicer, etc.). For the definition of exposures in default, see Chapter 1, Part 1, Section VI, sub-section 1.

 $<sup>^{30}</sup>$  Accordingly, where credit risk is transferred using a credit default swap entered into by a special-purpose vehicle, the protection of the securitized assets would not be ensured by the special-purpose vehicle itself, but by the assets posted as collateral by the vehicle.

- allow for the termination of protection due to deterioration of the credit quality of the underlying exposures;
- require positions in the securitization to be improved by the bank;
- increase the bank's cost of credit protection or the yield payable to holders of positions in the securitization in response to a deterioration in the credit quality of the underlying pool;
- c) an opinion is obtained from qualified legal counsel confirming the enforceability of the credit protection in all relevant jurisdictions.

### *3.1 Treatment of securitized assets by the originator*

Where the above conditions are met, the originator shall calculate the capital requirement as follows:

- a) it shall divide the amount of the securitized assets into tranches (junior, mezzanine and senior) based on the transfers achieved through credit protection;
- b) for securitization positions retained (i.e. the credit risk has not been transferred), the originator shall determine the capital requirement by applying the criteria set out in Section III, not the general criteria. For banks that adopt the IRB approach, the expected losses in respect of the securitized assets shall be zero;
- c) for securitization positions in which the risk has been transferred to third parties, the originator shall apply the rules set out in Section IV regarding the form of protection used to mitigate credit risk.<sup>31</sup> In this case, the originator shall take account of any maturity mismatches between the credit protection received and the securitized assets as specified below.

The maturity of the securitized exposures shall be equal to the longest maturity of the exposure up to a maximum of 5 years. The maturity of the credit protection shall be determined in accordance with Part 1, Section III, sub-section 8.

For all securitization positions except for those with a risk weight of 1,250%, the risk weight shall be adjusted to take account of maturity mismatches in accordance with the following formula

 $RW^* = [RW(SP) \times (t - 0.25)/(T - 0.25)] + [RW(Ass) \times (T - t)/(T - 0.25)]$ 

where RW\* is the risk-weighted exposure amount adjusted to take account of maturity mismatches; RW(Ass) is the risk-weighted exposure amount for exposures as if they had not been securitized; RW(SP) is the risk-weighted exposure amount calculated as if there were no maturity mismatches; T is the maturity of the underlying exposures expressed in years; t is the maturity of the credit protection expressed in years.

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<sup>&</sup>lt;sup>31</sup> The risk positions retained by the originator after the application of credit risk mitigation techniques shall be treated as securitization positions as specified in paragraph b).

# 4. Significant credit risk transfer

Where the capital requirement calculated under the securitization regulations (post-securitization requirement) is equal to or greater than the amount calculated for the securitized assets (pre-securitization requirement), taking account of the values of the securitized assets at the date the securitization transaction is carried out, the transfer of credit risk shall not be deemed significant and, therefore, the securitization shall not be recognized for supervisory capital purposes.

Where the post-securitization capital requirement is less than the presecuritization requirement, taking account of the values of the latter at the date the securitization transaction is carried out, the following standards shall apply:

- if the originator holds junior securitization positions (subject to a 1,250% risk weight or deduction) alone or together with senior positions or if it holds solely senior positions, credit risk shall be considered to have been transferred significantly and, therefore, the securitization may be recognized for supervisory capital purposes;
- 2) if the originator holds mezzanine securitization positions not risk weighted at 1,250%, alone or together with junior and/or senior positions, two situations may be distinguished:
  - a) the ratio between the post-securitization capital requirement and the pre-securitization capital requirement is less than 90%; in this case the originator shall be responsible for assessing the significance of the transfer of credit risk having regard to the economic substance of the transaction;
  - b) the ratio between the post-securitization capital requirement and the pre-securitization capital requirement is at least 90%; in this case, the transfer of credit risk shall not be deemed significant and, therefore, the securitization shall not be recognized for supervisory capital purposes.

### 5. Implicit support

Where the originator provides implicit support to a securitization, it shall calculate a capital requirement for all the securitized assets, as if the securitization had not been carried out.

The originator shall publicly disclose, in accordance with the disclosure requirements set out in Title IV, Chapter 1, that it has provided implicit support and the impact of such support on its supervisory capital.

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### SECTION III

# CALCULATION OF THE CAPITAL REQUIREMENT FOR SECURITIZATION POSITIONS

# 1. Introduction

A number of methods for calculating the risk-weighted value of securitization positions are envisaged. Banks shall select the method to be applied on the basis of the methodology (standardized or internal ratings based approach) that the bank would have applied to the securitized assets in calculating the capital requirement for capital risk.

Where a bank adopts the standardized approach in calculating the capital requirement for capital risk in respect of the securitized assets underlying the securitization position, the risk-weighted amount shall be calculated using a method that normally assigns a risk weight based on a rating assigned by an ECAI to securitization positions (see sub-section 2).

Where a bank adopts an internal ratings based (IRB) approach (foundation or advanced) in calculating the capital requirement for credit risk, it shall calculate the risk-weighted amount of securitization positions using one of the approaches described below (see sub-section 3).

Where a bank holds two or more securitization positions or portions of positions that represent an exposure to the same risk, they shall be treated as a single position to the extent they overlap.<sup>32</sup> In calculating the risk-weighted amounts, the bank shall take into account only the position or portion of a position which corresponds to the highest risk weight.

Where the credit risk of a securitization position is covered using an eligible risk mitigation instrument, the risk-weighted value of such position shall take such risk mitigation into account as provided for in Part 1 and Section IV.

Banks that use eligible credit risk mitigation techniques to provide credit protection in respect of securitization positions shall be deemed to hold such positions directly.

Banks that provide credit enhancement for securitization positions shall deduct any gains on sale from their Tier 1 capital.<sup>33</sup>

The credit exposure equivalent of off-balance-sheet securitization positions such as guarantees issued and loan commitments shall be equal to the nominal value multiplied by a credit conversion factor of 100%, unless otherwise specified.

The credit exposure equivalent of securitization positions arising from a financial derivative instrument shall be determined in accordance with Chapter 4.

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 $<sup>^{32}</sup>$  Such overlapping of exposures normally occurs with liquidity facilities.

<sup>&</sup>lt;sup>33</sup> "Gain on sale" is defined as any increase in the supervisory capital associated with gains arising from the sale of securitized assets at a price above nominal value, such as expected future margin income.

Where a bank provides credit protection using nth-to-default derivatives, two situations may be distinguished:

- a rating has been assigned to the credit derivative by an ECAI: in this case the provisions of this Chapter shall apply;
- a credit derivative has not been rated by an ECAI : in this case, the provisions of Chapter 1, Parts 1 and 2 shall apply.

# 2. Banks that adopt the standardized approach

For the originator and the sponsor, the risk-weighted value of all the positions in the same securitization shall not exceed the risk-weighted value of the securitized assets calculated as if they were not securitized (cap).

The cap shall be determined by applying a 150% risk weight to all past due items and high-risk items (see Chapter 1, Part 1).<sup>34</sup>

The capital requirement for all positions in the same securitization shall not exceed 8% of the cap. $^{35}$ 

For entities other than the originator, the non-risk-weighted amount of the securitization position shall correspond to the balance-sheet value, adjusted where applicable to take account of prudential filtres. For originator banks where the the traditional securitization complies with the significant credit risk transfer requirement for supervisory capital purposes, but does not pass the derecognition test under IAS 39, the value of any securitization positions held by the originator shall be determined as if the transferred assets had been derecognized and the securitization positions had been recognized.

### 2.1 Rated securitization positions

For securitization positions assigned a credit assessment by an ECAI, the risk-weighted amount shall be calculated by applying to the exposure value the risk weight corresponding to the credit quality step, in accordance with Tables 1 and 2.

<sup>&</sup>lt;sup>34</sup> Any gains on sale deducted from Tier 1 capital shall not be taken into consideration in calculating the cap.

<sup>&</sup>lt;sup>35</sup> For banks belonging to a banking group, this requirement shall be reduced by 25%.

TABLE 1					
Securitization positions other than ones with short-term ratings					ratings
Credit quality step	1	2	3	4	5 and below
Risk weight	20%	50%	100%	350%	1250%

TABLE 2					
Securitization positions with short-term ratings					
Credit quality step	1	2	3	All other ratings	
Risk weight	20%	50%	100%	1250%	

Where the credit assessment made by an ECAI takes account of a credit risk mitigation instrument provided for the entire securitization that is recognized for supervisory capital purposes, the assessment may be used to determine the position's risk weight. Where the credit assessment by the ECAI takes account of a credit risk mitigation instrument provided for the entire securitization that is not recognized for supervisory capital purposes, the assessment may not be taken into consideration for the purposes of riskweighting the position.

Where credit risk protection is provided directly to an individual securitization position, a credit assessment made by an ECAI that reflects such protection shall not be considered. In this case, the general rules on the recognition of credit risk mitigation instruments shall apply.

The use of assessments by different ECAIs for positions in different tranches of the same securitization is not permitted.

# 2.2 Unrated securitization positions

The bank shall apply a risk weight of 1,250% to unrated securitization positions except as provided for below.

### 2.2.1 Look-through approach

Banks may apply the look-through approach to securitization positions other than a first loss tranche provided that the bank knows the composition of the securitized assets at all times.

Under on the look-through approach, the bank shall apply a risk weight to unrated securitization positions equal to the product of:

- a) the weighted-average risk weight (with weights equal to the values for the individual assets) for the securitized assets, calculated on the basis of the standardized approach for calulating the capital requirement for credit risk;
- b) a concentration ratio, equal to the ratio between:
  - i) the sum of the nominal amounts of all the tranches of the securitization; and
  - ii) the sum of the nominal amounts of the tranches junior to or pari passu with the tranche in which the securitization position is held, including that tranche itself.<sup>36</sup>

The resulting risk weight shall not be greater than 1,250% or lower than any risk weight applicable to a rated tranche more senior than that in which the securitization position is held.

### 2.2.2 Positions connected with ABCP programmes

Banks may apply to securitization positions connection with ABCP programmes, other than eligible liquidity facilities (as provided for in subsection 2.2.3), a risk weight that is the greater of 100% or the highest of the risk weights that would be applied to any of the securitized assets under the standardized approach for calculating the capital requirement for credit risk.

To receive such treatment, the position shall satisfy the following requirements:

- it is in a second loss or better tranche and the first loss tranche provides meaningful credit enhancement to the second loss tranche;
- the bank considers the credit quality to be at least equivalent to an investment grade asset;
- the bank that holds the position does not also hold a position in the first loss tranche of the same securitization.

# 2.2.3 Liquidity facilities

The prudential treatment of eligible liquidity facilities provides for the application of a conversion factor of 20% or 50% depending on whether the original maturity is one year or less or greater than one year, and a risk weight corresponding to the highest risk weight that would be applied to any of the securitized assets under the standardized approach for calculating the capital requirement for credit risk.

Liquidity facilities shall be deemed eligible where the following conditions are met:

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<sup>&</sup>lt;sup>36</sup> For example, a securitization tranche could have a senior tranche of 10, a mezzanine tranche of 6 and a junior tranche of 4: the concentration ratio for the mezzanine tranche would be 2 (20/10), and for the senior tranche 1 (20/20).

- a) the contractual clauses relating to the liquidity facility clearly identify and limit the circumstances under which the facility may be drawn;
- b) it is not possible for the liquidity facility to be drawn so as to provide credit enhancement by covering losses already incurred at the time of draw (for example, by providing liquidity in respect of assets in default at the time of draw or by acquiring assets at more than fair value);
- c) the liquidity facility is not used to provide permanent or regular funding for the securitization;
- repayment of draws on liquidity facilities are not subordinated to the claims of other creditors of the securitization, except for payments arising in respect of interest rate or currency derivative contracts, fees or other such payments nor be subject to waiver or deferral;
- e) it is not possible for the liquidity facility to be drawn after all applicable credit enhancements from which the facility would benefit (specific or general) are exhausted;
- f) the facility includes a specific provision that:
  - provides for an automatic reduction in the amount that can be drawn equal to the amount of the assets in default; or,
  - where the securitized portfolio consists of rated assets, terminates the facility if the average quality of the securitized assets falls below the equivalent of investment grade.

With regard to liquidity facilities that may only be drawn only in the event of general market disruption, a conversion factor of 0% may be applied, provided that the liquidity facility in question satisfied the conditions set out in paragraphs a) through f) above.<sup>37</sup>

A conversion factor of 0% shall apply to liquidity facilities that are unconditionally revocable without advance notice, provided that the conditions set out in paragraphs a) through f) above are satisfied and the repayment of draws on the facility are senior to any claims on the cash flows arising from the securitized assets.

# 3. Bank that apply the internal ratings based approach

For originator or sponsor banks and, for those able to calculate  $K_{IRB}$ , for other investor banks, the capital requirement for securitization positions shall not exceed the requirement that the bank would have calculated using the IRB approach for the securitized assets as if they had not been securitized.<sup>38</sup>

<sup>&</sup>lt;sup>37</sup> A general market disruption exists where more than one special-purpose vehicle across different securitizations are unable to roll over maturing commercial paper and that inability is not the result of an impairment of the vehicle's credit quality or of the credit quality of the securitized assets.

 $<sup>^{38}</sup>$  Any gains on sale deducted from Tier 1 capital shall not be taken into consideration in calculating the maximum requirement.

Specifically, the capital requirement shall not be greater than the sum of the following two elements:

- 8% <sup>39</sup> of the risk-weighted amounts that would have been obtained if the assets had not been securitized;
- the expected losses of the securitized assets.

The non-risk-weighted amount of on-balance-sheet securitization positions shall be equal to the balance sheet value gross of specific value adjustments, taking account of prudential filtres (see Title I, Chapter 2).

### 3.1 Hierarchy of approaches for calculating risk-weighted amounts

For securitization positions rated by an ECAI or position in respect of which an inferred rating may be used, the Ratings Based Method shall be used to calculate the risk-weighted exposure amount (see Annex A, sub-section 1).

Unrated securitization positions shall be assigned an inferred rating equivalent to that of the most senior rated securitization positions subordinate to the securitization position in question. Positions in respect of rated securitizations possessing such characteristics shall be defined as "reference positions".

In order to use inferred ratings, the following minimum operational requirements shall be met:

- the reference positions are subordinate in all respects to the unrated securitization position;<sup>40</sup>
- the maturity of the reference positions is equal to or longer than that of the unrated securitization position;
- on an ongoing basis, any inferred rating is updated to reflect any changes in the credit assessment of the reference positions.

For securitization positions lacking an external or inferred rating, the Supervisory Formula Method shall be used (see Annex A, sub-section 2), except that in the case of ABCP programmes in respect of which the Internal Assessment Approach may be used (see Annex A, sub-section 3).

Investor banks other than the originator or the sponsor may adopt the Supervisory Formula Method if they are able to determine the necessary parameters for applying the formula.

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 $<sup>^{39}</sup>$  For banks belonging to a banking group, this requirement shall be reduced by 25%.

<sup>&</sup>lt;sup>40</sup> Credit protection provided for reference positions shall be considered when determining the degree of subordination of the latter to the unrated securitization position. For example, if the reference positions are covered by guarantees issued by a third party or other forms of credit enhancement and if such protection is not available for the unrated securitization position, the unrated securitization position may not be assigned an inferred rating.

The Bank of Italy shall verify the bank's ability to perform such calculation during the process of authorizing internal ratings systems for calculating the credit requirement for credit risk.

Unrated securitization positions for which an inferred credit assessment may not be used shall be risk weighted at 1,250% where:

- in the case of originator and sponsor banks, those that are unable to calculate K<sub>IRB</sub> or, for ABCP programme positions, do not use the Internal Assessment Approach;
- in the case of other investor banks, those that have not adopted the Supervisory Formula Method or, for ABCP programme positions, the Internal Assessment Approach.

See Annex A, sub-section 4 for the treatment of liquidity facilities.

# 4. Additional capital requirements for securitizations of revolving assets with early amortization provisions

In the case of the sale of revolving assets through a securisation transaction that contains an early amortization provision, the orginator bank shall calculate a capital requirement in addition to that for its securitization positions to cover the risk underlying the repurchase of the securitized assets.

Where the securitized assets include both revolving and non-revolving items, the originator shall apply the additional requirement to that portion of the securitized pool that contains the revolving assets.

In calculating the additional requirement, a distinction shall be made between the originator's interest and the investors' interest.

"Originator's interest" shall mean the value of the portion held by the originator in a portfolio of revolving exposures, the drawn amounts of which have been securitized. This portion shall be equal to the ratio between the amount of the securitized drawn amounts whose cash flows<sup>41</sup> are not available to repay investors in the securitization and total securitized drawn amounts. The undrawn amounts shall also be multiplied by this ratio to determine the portion of the available margin attributable to the originator and the portion attributable to the investors.<sup>42</sup>

"Investors' interest" shall mean the portion of the pool of revolving assets that forms the complement to the originator's interest.

<sup>&</sup>lt;sup>41</sup> The cash flows are those generated by principal and interest collections in respect of the securitized assets and other associated amounts.

 $<sup>^{42}</sup>$  For example, bank X holds credit facilities linked to the use of credit cards by their customers in the amount of 130, of which 100 has been drawn (undrawn balance: 30). Bank X then transfers all of these credit facilities to a special-purpose vehicle. Of the 100 drawn, 10% (10) is retained by the originator, while for the remaining 90% (90), the special-purpose vehicle issues junior, mezzanine and senior securities. The ratio of 10 to 100 (10%) represents the percentage used under the terms of the contract to allocate repayments and losses between the originator and the investors in the ABSs. The originator's interest is 13, i.e. 10 plus 10% of 30; the investors' interest is the complement to 130, i.e. 117.

The originator's interest shall not be subordinate to the investors' interest.

The exposure of the originator associated with its rights in respect of originator's interest shall not be considered a securitization position but as a proportionate exposure to the securitized assets as if they had not been securitized and included in the calculation of the capital requirement for credit risk.

In determining the additional requirement, the risk-weighted amount shall be obtained by multiplying the amount of the investors' interest by the product of the appropriate conversion factor and the average risk weight for the securitized assets, calculated under the standardized method as if the assets had not been securitized.

The appropriate conversion factors shall be based on two factors:

- the speed of the repayment mechanism, i.e. the "controlled" or "uncontrolled" nature of the early amortization provision;
- the type of revolving assets securitized, i.e. whether or not they are unconditionally cancellable without notice by the originator.<sup>43</sup>

An early amortization provision shall be considered to be "controlled" where the following conditions are met:

- a) the originator bank has an appropriate capital and liquidity management plan in place to ensure that it has sufficient capital and liquidity available in the event of an early amortization;
- b) throughout the duration of the transaction there is a pro-rata sharing between the originator's interest and the investors' interest of payments of interest and principal, expenses, losses and recoveries based on the value of the assets securitized at one or more reference points during the month;
- c) the amortization period is sufficient to repay or recognize as in default at least 90% of the total debt (the sum of the originator's interest and the investors' interest) outstanding at the beginning of the early amortization period;
- d) during the amortization period, the speed of repayment shall be no more rapid that would have been achieved by straight-line amortization.

Securitization transactions with early amortization clauses that do not meet the conditions set out in paragraphs a) to d) above shall be considered transactions with "uncontrolled" early amortization provisions.

In the case of securitizations involving retail revolving assets that are unconditionally cancellable without notice and are subject to an early amortization provision that is triggered when the excess spread falls to a certain level, the appropriate conversion factor based on a comparision between the three-month average excess spread and the contractually established excess spread level at which excess spread is required to be trapped.<sup>44</sup> Where the

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<sup>&</sup>lt;sup>43</sup> An example of a credit facility unconditionally cancellable without notice is that linked with credit cards.

<sup>&</sup>lt;sup>44</sup> Excess spread is considered "trapped" when its amount is available to cover any losses of the securitization.

securitization does not contractually provide for excess spread to be trapped, the trapping point shall be deemed to be 4.5 percentage points greater than the excess spread level that triggers early amortization. The appropriate conversion factor shall be determined separately for each retail securitization transaction with controlled and uncontrolled early amortization provisions (see Table 3), expressed as the ratio between the three-month average excess spread and trapping level excess spread.

TABLE 3       Community for the solution of the solutio				
Ratio between the average excess spread and trapping level excess spread	Securitizations with "controlled "early amortization provision	Securitizations with "uncontrolled" early amortization provision		
Greater than 133.33%	0%	0%		
From less than 133.33% to 100%	1%	5%		
From less than 100% to 75%	2%	15%		
From less than 75% to 50%	10%	50%		
From less than 50% down to 25%	20%	100%		
Less than 25%	40%	100%		

In the case of securitization transactions with controlled early amortization provisions involving committed retail revolving assets (i.e., not unconditionally cancellable without prior notice) or revolving assets other than retail revolving assets, the appropriate conversion factor shall be 90%.

In the case of securitization transactions with uncontrolled early amortization provisions involving committed retail revolving assets or revolving assets other than retail revolving assets, the appropriate conversion factor shall be 100%.

The total capital requirement (maximum requirement) for the originator bank — equal to the sum of the requirement for the securitization positions and the additional requirement for the investors' interest — shall not exceed the

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requirement that the bank would have calculated for the securitised assets<sup>45</sup> if they had not been securitized.<sup>46</sup>

Originator banks shall not be required to calculate any additional capital requirement for:

- securitizations of revolving assets whereby investors remain fully exposed to the credit risk of future draws by borrowers, so that the risk on the securitized assets does not return to the originator even after an early amortization event has occurred; this occurs even where the early amortization provisions mirror the time structure of the revolving assets transferred;
- securitizations where any early amortization provision is triggered solely by events not related to the financial performance of the securitized assets or of the originator, such as, for example, material changes in tax laws or other regulations.

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<sup>&</sup>lt;sup>45</sup> The assets in respect of the originator's interest shall not be included among the securitized assets.

<sup>&</sup>lt;sup>46</sup> Any gains on sale deducted from Tier 1 capital shall not be taken into consideration in calculating the maximum requirement.

### SECTION IV

### CREDIT RISK MITIGATION ON SECURITIZATION POSITIONS

# 1. Eligible forms of credit protection

Without prejudice to the provisions of the following paragraph, eligible credit protection instruments for securitization positions shall be those permitted under the standardized approach for credit risk. Recognition shall be subject to compliance with the minimum requirements established therein.

For banks that use one of the IRB approaches (see Section III, sub-section 3), eligible unfunded credit protection providers under the foundation IRB approach may also be recognized.

### 2. Calculation method

For banks that use the standardized approach (see Section III, sub-section 2) and the Ratings Based Method (Annex A, sub-section 1), the amount or risk weight of a securitization position in respect of which recognized credit protection has been obtained may be calculated in accordance with the provisions envisaged under the standardized approach for credit risk (Part 1, Section III).

For this purpose, banks that use the Ratings Based Method may not use the financial collateral simple method.

Where risk-weighted amounts for securitization positions are calculated using the Supervisory Formula Method (see Annex A, sub-section 2), a distinction shall be made between full credit protection and partial credit protection.

In the case of full credit protection, in order to calculate the capital requirement for the protected position, the bank shall determine the "effective risk weight" of such position. This shall be obtained by dividing the risk-weighted amount of the position by the non-risk weighted amount of the position and multiplying the result by 100.

In the case of financial collateral, the risk-weighted amount of the protected position shall be determined by multiplying E\* (i.e. the amount of the position corrected for the collateral, calculated as provided for in Part 1, Annex B) by the effective risk weight of the securitization position.

In the case of guarantees and credit derivatives, the risk-weighted amount of the securitization position shall be calculated using the following formula:

$$RAW = [G_A \times Fp] + [(E - G_A) \times "effective risk weight"].$$

where:

- G<sub>A</sub> is the amount of the guarantee adjusted for any currency or maturity mismatches, calculated in accordance with Part 1, Annex E;
- Fp is the risk weight of the protection seller;

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- E is the amount of the securitization position.

Partial protection means that only a part of the amount of the securitization position held by the bank is covered. In this case, a distinction shall be made between the following three situations:

- a) the protection covers first losses on the position held by the bank;
- b) the protection provides proportionate coverage of the losses produced by the position held by the bank;
- c) the first losses produced by the securitization position remain with the bank that holds the position.

In cases a) and b), the bank shall determine the capital requirement for the covered position in accordance with the rules for full credit protection.

In case c), the bank shall divide the securitization position, depending on the circumstances, into two or more distinct positions. The uncovered portion of the securitization position, which remains with the bank that holds the position, shall be considered to have the lowest credit quality among the positions produced by the division. For the purposes of calculating the risk-weighted amount of the position with the lowest credit quality, the provisions of Annex A, sub-section 2 shall apply, setting T equal to e\* in the case of funded credit protection and to T-g in the case of unfunded credit protection, where

- e\* is the ratio of E\* to S;
- E\* is the amount of the covered securitization position adjusted for financial collateral;
- S is the total amount of the securitized assets;
- g is the ratio of  $G_A$  to S;
- G<sub>A</sub> is the nominal amount of the protection adjusted for any currency or maturity mismatches.

In the case of guarantees and credit derivatives, the risk weight of the protection seller shall be applied to the portion g of the covered securitization position.

### SECTION V

# REDUCTION IN RISK-WEIGHTED AMOUNTS OF SECURITIZATION POSITIONS

# 1. Value adjustments

For banks that adopt IRB approaches to calculate the capital requirement for credit risk, the risk-weighted amount of a securitization position may be reduced by any value adjustments made in respect of that position, multiplied by the risk weight applied to the position. The reduction in question may only be performed for individual positons on the basis of the value adjustments applied to those specific positions.

No offsetting shall be allowed between securitization positions in a single transaction or between positions in respect of different securitization transactions.

The risk-weighted amount of a securitization position to which a 1,250% risk weight is assigned may be reduced by the bank that holds the position by 12.5 times the amount of the excess of any specific value adjustments made to the securitized assets over the amount of the expected loss on such assets.

### 2. Deductions from supervisory capital

For securitization positions risk-weighted at 1,250%, banks may, as an alternative to calculating the capital requirement, deduct the value of the positions from their supervisory capital (50% from Tier 1 and 50% from Tier 2).

For the purpose of determining the amount to be deducted, the bank may take account of the effects of credit protection in accordance with the provisions of Section IV.

Where a bank makes elects to deduct the amount, the amount deducted shall be subtracted from the maximum requirement provided for in sub-sections 2 and 3 of Section III.

For the purposes of the above provisions, the following shall apply to banks that adopt IRB approaches in calculating the capital requirement for credit risk:

- a) the value of the securitization position may be adjusted in accordance with sub-section 1;
- b) where the Supervisory Formula method is used and L < KIRBR and [L+T] > KIRBR, the securitization position shall be treated as two positions with L equal to KIRBR for the most senior position in the securitization.

# ANNEX A

# METHODS FOR CALCULATING THE CAPITAL REQUIREMENT FOR SECURITIZATION POSITIONS FOR BANKS THAT APPLY THE IRB APPROACH

# 1. Ratings Based Method

Under the Ratings Based Method, the risk-weighted amount of a rated securitization position shall be calculated by applying to the exposure value the risk weight associated with the credit quality steps set out in Tables 1 and 2.

The risk-weighted amount shall then be multiplied by 1.06, except where the positions are risk-weighted at 1,250% or are subject to deduction from supervisory capital.

TABLE 1Positions other than those with short-term credit assessments				
Credit quality step	Risk weight			
	А	В	С	
1	7%	12%	20%	
2	8%	15%	25%	
3	10%	18%	35%	
4	12%	20%	35%	
5	20%	35%	35%	
6	35%	50%	50%	
7	60%	75%	75%	
8	100%	100%	100%	
9	250%	250%	250%	
10	425%	425%	425%	
11	650%	650%	650%	
Below 11	1250%	1250%	1250%	

TABLE 2           Positions with short-term credit assessments					
Credit quality step	Risk weight				
	А	В	С		
1	7%	12%	20%		
2	12%	20%	35%		
3	60%	75%	75%		
All other credit assessments	1250%	1250%	1250%		

Column A of Tables 1 and 2 shall be applied where the securitization positions are in the most senior tranche. In determining a tranche's degree of seniority, banks shall not take account of amounts owed under interest rate or currency derivative contracts, fees due or other similar payments.

A securitization position in the most senior tranche of the securitization may be risk-weighted at 6% (instead of 7%, as indicated in Tables 1 and 2), provided that:

- the tranche is senior with respect to another tranche of the same securitization to which a 7% risk weight applies;
- this is justified by the loss absorption qualities of the subordinate tranches of the securitization;
- the securitization position has an external credit assessment associated with credit quality step 1 of Tables 1 or 2 or, if it is unrated, the requirements set out in Section III, sub-section 3.1 are satisfied, where "reference positions" refer to positions in the subordinate tranche referred to above that would receive a risk weight of 7%.

Column C of Tables 1 and 2 shall be applied where the positions in in a securitization in which the effective number of securitized assets is fewer than six. In calculating the effective number of securitized assets, exposures to a group of connected customers<sup>47</sup> shall be treated as a single securitized exposure. The effective number of assets shall be calculated as follows:

$$N = \frac{\left(\sum_{i} EAD_{i}\right)^{2}}{\sum_{i} EAD_{i}^{2}}$$

where EADi represents the sum of the value of all the assets in respect of the ith borrower.

<sup>&</sup>lt;sup>47</sup> Refer to the definition of "connected clients" in the provisions governing risk concentration (Title V, Chapter 1, Section I, sub-section 3).

In the case of "resecuritization" (securitization of securitization positions), the bank shall consider the number of positions in the resecuritization portfolio and not the number of underlying securitized assets.

Where the portfolio share associated with the largest position  $(C_1)$  is available, the bank may compute N as the ratio of 1 to  $C_1$ .

Column B of Tables 1 and 2 shall be applied to all other securitization positions.

# 2. Supervisory Formula Method

The capital requirement for a securitization tranche obtained using the Supervisory Formula Method shall be based upon five elements, calculated internally by the bank:

- 1. the capital requirement for the securitized assets computed using the IRB approach (K<sub>IRB</sub>);
- 2. the credit enhancement level of the tranche in question (L);
- 3. the thickness of the tranche (T);
- 4. the effective number of securitized assets (N);
- 5. the average loss rate in the event of default (LGD), weighted on the basis of the securitized assets.

The risk-weighted exposure of a securitization position shall be equal to:

$$E * max [7\%; 12.5 * (S[L+T] - S[L]) / T]$$

where:

$$S[x] = \begin{cases} x & if \quad x \le Kirbr \\ Kirbr + K[x] - K[Kirbr] + (d \cdot Kirbr/\omega)(1 - e^{\omega(Kirb - x)/Kirb}) & Kirbr < x \end{cases}$$

where:

E represents the securitization exposure;

$$h = (1 - Kirbr / ELGD)^{N}$$

$$c = Kirbr / (1 - h)$$

$$v = \frac{(ELGD - Kirbr) Kirbr + 0.25 (1 - ELGD) Kirbr}{N}$$

$$f = \left(\frac{v + Kirbr^{2}}{1 - h} - c^{2}\right) + \frac{(1 - Kirbr) Kirbr - v}{(1 - h) \tau}$$

$$g = \frac{(1 - c)c}{f} - 1$$

$$a = g \cdot c$$

$$b = g \cdot (1 - c)$$

$$d = 1 - (1 - h) \cdot (1 - Beta [Kirbr; a, b])$$

$$K [x] = (1 - h) \cdot ((1 - Beta [x; a, b]) x + Beta [x; a + 1, b] c).$$

$$\tau = 1000, \text{ and}$$

$$\omega = 20.$$

Specifically, if a bank holds, for example, a junior securitization position smaller in percentage terms than  $K_{irbr}$ , then the risk weight shall be 1,250%, since:

$$E * \max [7\%; 12.5 * (S[L+T] - S[L]) / T] = E * 12.5$$

as:

S(L+T)=L+T and S(L)=L therefore: (S[L+T] - S[L]) / T = 1.

In these equations, *Beta* [x; a, b] refers to the cumulative beta distribution with parameters a and b evaluated at x.

The "thickness" of the tranche in which the securitization position is held by the bank (T) is measured as the ratio of a) the nominal amount of the tranche to b) the sum of the exposures in respect of the securitized assets (on- and offbalance-sheet<sup>48</sup>). For the purposes of calculating T, the value of the exposure of an OTC derivative instrument where the related replacement cost is not positive shall be equal to the potential future exposure calculated in accordance with Chapter 3.

 $K_{irbr}$  is the ratio of a)  $K_{IRB}$  to b) the sum of the exposures in respect of the securitized assets (on- and off-balance-sheet<sup>49</sup>).  $K_{irbr}$  shall be expressed in decimal form (for example, for a  $K_{IRB}$  equal to 15% of the portfolio,  $K_{irbr}$  would be expressed as 0.15).

The credit enhancement level (L) is the ratio of a) the nominal amount of all the tranches subordinate to that in which the securitization position is held to b) the sum of the exposures in respect of securitized assets. Gains on sale shall not be included in the calculation of L. Amounts due from counterparties under OTC derivatives contracts that represent represent tranches subordinate to those in

<sup>&</sup>lt;sup>48</sup> The latter are multiplied by the related credit conversion factors.

<sup>&</sup>lt;sup>49</sup> The latter are multiplied by the related credit conversion factors.

question may be measured at their replacement costs (i.e. without considering potential future exposures) in calculating credit enhancement levels.

The effective number of securitized assets (N) shall be calculated in accordance with sub-section 3.2.1.

The weighted-average LGD for the securitized assets (ELGD) shall be computed as follows:

$$ELGD = \frac{\sum_{i} LGD_{i} \cdot EAD_{i}}{\sum_{i} EAD_{i}}$$

where LGDi represents the average LGD associated with all the securitized assets to the ith obligor and LGD is determined in accordance with the IRB approach adopted by the bank.

In the case of resecuritization, an LGD of 100% shall be applied to the securitized positions.

When default and dilution risk for purchased receivables are treated in an aggregate manner within a securitization,<sup>50</sup> the ELGD shall be constructed as the weighted average of the LGD for credit risk and 75% LGD for dilution risk. The weights for this weighted average shall be the capital requirements for, respectively, the credit risk and dilution risk of the securitized assets.

If the value of the largest securitized asset,  $C_1$ , does not exceed 3% of the sum of the values of all the securitized assets, the LGD may be set to 50% and N to either:

1) 
$$N = \left(C_1 C_m + \left(\frac{C_m - C_1}{m - 1}\right) \max\{1 - m C_1, 0\}\right)^{-1}$$

2)  $N = 1/C_1$ 

where  $C_m$  is the ratio the sum of the values of the largest "m" securitized assets to the sum of the values of all the securitized assets. The level "m" may be set by the bank.

For securitizations involving retail exposures, h and v may be set equal to zero.

## 3. Internal assessment approach for positions in ABCP programmes

With the prior authorization of the Bank of Italy, banks may calculate the capital requirements for positions lacking an external or inferred rating in an ABCP programme on the basis of an internal credit assessment subject to compliance with the following conditions concerning:

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 $<sup>^{50}</sup>$  For example, where an over-collateralization is available to cover any losses arising from either source of risk.

### a) Banks:

- the bank shall demonstrate that its internal assessment of the credit quality of the position reflects the publicly available assessment methodology used by one or more ECAI for assigning ratings to securities backed by assets of the type securitized;
- 2. the ECAIs referred to in paragraph 1) shall include those that have provided an external rating for the commercial paper issued from ABCP programmes similar to that considered. Quantitative elements, such as stress factors, used in assessing the position to a particular credit quality shall be at least as conservative as those used in the relevant assessment methodology of the ECAIs in question;<sup>51</sup>
- 3. in developing its internal assessment methodology, the bank shall take into consideration the relevant published ratings methodologies of the ECAIs referred to in paragraphs 1) and 2) that rate the commercial paper of ABCP programmes with securitized assets similar those of the programme in question. This consideration shall be documented by the bank and updated regularly, in line with paragraph 6) below;
- 4. the bank's internal assessment methodology shall include rating grades. There shall be a correspondence between such rating grades and the credit assessments of the ECAIs referred to in paragraphs 1) and 2). The correspondence shall be explicitly documented;
- 5. the internal assessment methodology shall be used in the bank's internal risk management processes, as well as in its decision making, management body reporting and capital allocation processes;
- 6. regular reviews shall be performed of the internal assessment process and the quality of the internal assessments of the credit quality of the bank's positions in an ABCP programme. If an internal function of the bank performs such reviews, it shall be independent of the ABCP programme business line, as well as the customer relationship;
- 7. the bank shall track the results of its internal ratings over time to evaluate the performance of its internal assessment methodology and shall make adjustments, as necessary, to that methodology when the performance of the credit quality of the positions routinely diverges from that indicated by the internal ratings;
- b) the ABCP programme:
  - 1. the positions in commercial paper issued by the ABCP programme shall have an external rating;

<sup>&</sup>lt;sup>51</sup> Where (i) the commercial paper issued by an ABCP programme is rated by two or more ECAIs and (ii) the different ECAIs' benchmark stress factors require different levels of credit enhancement to achieve the same external rating equivalent, the bank shall apply the ECAI stress factor that requires the most conservative or highest level of credit protection. If one of the ECAI's should make changes to its methodology, including the stress factors, that adversely affect the external rating of the programme's commercial paper, then the revised rating methodology shall be considered in evaluating whether the internal assessments assigned to the ABCP programme assets need to be revised.

- 2. the ABCP programme shall incorporate underwriting standards in the guidelines on credit and investment concerning receivables under the programme;
- 3. the ABCP programme's underwriting standards shall contain minimum asset eligibility criteria that, in particular:
  - i. exclude the purchase of defaulted assets;
  - ii. limit excess concentration to individual obligors or geographical areas;
  - iii. limit the maturity of the assets to be purchased;
- 4. the ABCP programme shall have collection policies and processes that take into consideration the operational capability and credit quality of the servicer;
- 5. the aggregated estimate of loss on a asset portfolio that the ABCP programme is considering purchasing shall take account of all sources of potential risk, such as, for example, credit and dilution risk;
- 6. The ABCP programme shall be based on decisions to purchase the underlying assets that are structured to mitigate potential credit deterioration of the underlying portfolio.

The requirement for the assessment methodology of the ECAIs to be publicly available may be waived if it is found that due to the specific features of the securitization – for example its unique structure – there is as yet no publicly available ECAI assessment methodology.

The bank shall assign the internally calculated credit rating to the unrated securitization position. Where, at the inception of the securitization, the internal rating is investment grade, it shall be treated as equivalent to a credit assessment by a recognized ECAI for the purposes of calculating risk-weighted exposure amounts (see Tables 1 and 2).

# 4. Provisions common to all three approaches

Liquidity facilities shall be treated like any other securitization position, subject to application of a conversion factor of 100%, except as specified below.

A conversion factor of 20% may be applied to the nominal amount of a liquidity facility that may only be drawn in the event of a general market disruption and that meets the conditions for eligible liquidity facilities pursuant to Section III, sub-section 2.2.3.

A conversion factor of 0% may be applied to the nominal amount of a liquidity facility that meets the conditions for revocable liquidity facilities pursuant to Section III, sub-section 2.2.3.

### 

# TITLE II

4

Chapter 3

# **COUNTERPARTY RISK**

TITLE II - Chapter 3

# **COUNTERPARTY RISK**

### SECTION I

### GENERAL PROVISIONS

# 1. Introduction

Counterparty risk is the risk that the counterparty to a transaction involving financial instruments could default before the final settlement of the transaction.

Counterparty risk affects certain types of specifically identified transactions, (see Section II) possessing the following characteristics: 1) they generate an exposure equal to their positive fair value; 2) their market value changes over time in relation to developments in underlying market variables; 3) they generate an exchange of payments or an exchange of financial instruments or commodities for payments.

Counterparty risk is a specific type of credit risk, which generates a loss if the transactions entered into with a counterparty have a positive value at the time of default. Unlike credit risk in respect of a loan, where the probability of loss is unilateral, since only the lending bank faces the risk, counterparty risk normally generates a bilateral risk of loss: the market value of the transaction may be positive or negative for both of the counterparties.

Consistent with international supervisory guidelines, these regulations require banks and banking groups to comply with capital requirements for counterparty risk.

This chapter focuses on the rules for quantifying the exposure value. Except in certain special cases, the corresponding capital requirement shall be calculated using the counterparty risk weights established by the rules regarding credit risk (see Chapter 1, Parts 1 and 2).

These regulations envisage a number of methods for calculating the exposure value, each of increasing complexity and sensitivity to risk:

- the mark-to-market method;
- the standardized method;
- the EPE internal model method.

The use of the EPE internal model method shall be subject to the authorization of the Bank of Italy.

These calculation methods shall apply to exposures allocated to the banking book and the supervisory trading book.

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For certain types of transactions (securities or commodities repurchase/reverse repurchase transactions, securities or commodities lending or borrowing transactions and margin lending transactions),<sup>1</sup> banks may use the calculation methodologies established under the regulations governing credit risk mitigation techniques (see Chapter 2, Part 1, Annexes B and C) in addition to the EPE internal model:

- the simplified method;
- the comprehensive method with supervisory volatility adjustments;
- comprehensive method with internal volatility adjustments;
- VaR internal model method.

The following types of netting agreements may be recognized for the purposes of reducing exposure value:

- a) bilateral contracts for novation of derivatives contracts between the bank and its counterparty;
- b) other bilateral agreements for netting derivatives contracts between the bank and its counterparty;
- c) bilateral contractual cross product netting agreements.

Recognition shall depend on compliance with regulatory requirements (see Section II, sub-section 10).

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, sub-paragraphs a), b) and d), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

<sup>&</sup>lt;sup>1</sup> Securities financing transactions (SFTs).

• Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:

- a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 53, paragraph 3, which gives the Bank of Italy the power, *inter alia* to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraphs a), b) and d), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph a) that permit the use of:

- a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by

an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

— the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006;

# 3. Definitions

In these regulations:

- "contractual cross product netting agreement" shall mean a written agreement between a bank authorized to use the EPE-type internal model method and a counterparty, which creates a single obligation as the balance of the netting of all positions relating to specific bilateral agreements and all transactions belonging to different product categories, included in the agreement;
- "*margin agreement*" shall mean a written agreement that governs the obligations of a party to supply collateral (for example, a cash deposit) to a second counterparty when the exposure of that second counterparty exceeds a specified threshold;
  - *"threshold*" shall mean the largest amount of the exposure of one counterparty to another beyond which the lender has the right to call for collateral;
  - *"margin period"* shall mean the maximum time permitted in which to supply collateral once the threshold is exceeded;
  - *"grace period"* shall mean the period of time under the agreement that may elapse between the counterparty's default and the quantification of the exposure.
  - *"margin period of risk"* shall mean the sum of the margin period and the grace period;
- "other bilateral agreements for netting derivatives contracts" shall mean written agreements between a bank and a counterparty under which mutual

claims and obligations are automatically netted in such a way that fixes one single net balance, without novation;

- "bilateral contracts for novation of derivatives contracts" shall mean written agreements between an intermediary and a counterparty under which mutual claims and obligations are automatically amalgamated in such a way that fixes one single net amount and thus creates a legally binding, single new contract extinguishing former contracts;
- "perfectly matching contracts" shall mean forward foreign-exchange contracts or similar contracts in which a notional principal is equivalent to the cash flows in cases in which the sums are payable or fall due on the same date and in the same currency;
- *"central counterparty"* shall mean an entity that legally interposes itself between counterparties to contracts traded within one or more financial markets, becoming the buyer to every seller and the seller to every buyer;
- "Expected Positive Exposure" (EPE) shall mean the methodology for estimating the future credit exposure of transactions exposed to counterparty risk on the basis of the weighted average – over a specified period of time – of the expected credit exposures, whose weights are represented by the ratio between the time period of the single expected exposure and the entire period of time considered;
- *"margin lending"* shall mean the credit extended by a bank in connection with the purchase, sale, carrying or trading of securities by the counterparty requiring the exchange of margins. Margin lending does not include traditional lending secured by securities collateral;
- "CDS index (for example, iTraxx)" shall mean a credit derivative contract with an underlying set of reference entities which correspond to specified notional values. Under the contract, the protection buyer, in exchange for the periodic payment of a contractually defined amount (credit spread) proportionate to the entire notional amount, shall receive from the protection provider, upon the occurrence of specified credit events, the notional amount in relation to each of the names affected by credit events upon delivery of the relevant underlying obligations (physical delivery). Upon the occurrence of each credit event the notional amount shall be reduced proportionately.

The contract shall terminate at the contractually specified date or upon the occurrence of a credit event involving the final reference entity,<sup>2</sup> whichever comes first;

— "netting set" shall mean a group of transactions with a single counterparty that are subject to a legally enforceable bilateral netting agreement and for which netting is recognized under supervisory regulations (see Section II, subsection 10). For the purposes of the rules governing counterparty risk, each

 $<sup>^2</sup>$  These contracts are substantively the same as a set of credit default swaps on individual reference entities (single-name derivative contracts) with the same counterparty and maturity.
transaction that is not subject to a legally enforceable netting agreement and is recognized under supervisory regulations shall be its own netting set;

- "hedging set" shall mean the group of long and short positions within a single netting set for which only their balance is relevant as the exposure value to be considered under the Standardized Method set out in sub-section 6;
- "long settlement transactions" shall mean forward transactions where a counterparty undertakes to deliver (receive) a security, a commodity or foreign exchange amount against the receipt (delivery) of cash, other financial instruments or commodities at a settlement date that is contractually specified as more than the lower of the market standard for transactions of the same type and five business days after the date on which the transactions were entered into;
- *"securities financing transactions"* shall mean securities or commodities repurchase/reverse repurchase transactions, securities or commodities lending or borrowing transactions and margin lending transactions;
- "capital market-driven transactions" shall mean any transaction giving rise to an exposure secured by financial collateral which includes a provision conferring upon the bank the right to receive margin frequently. This includes margin lending and over-the-counter (OTC) derivatives with the exchange of margins between counterparties;
- *"banking book"* shall mean all positions other than those allocated to the supervisory trading book (see Chapter 4, Part 1, Section I, sub-section 3.1);
- "*current market value*" shall mean the net market value of a portfolio of transactions within a netting set with a counterparty. Both positive and negative values shall be used in calculating current market value.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

## 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in the Chapter:

- authorization to use the EPE internal model method in quantifying counterparty risk exposure (Section II, sub-section 7.4): Banking Supervision Department;
- authorization to revert to the standardized method or the mark-to-market method in quantifying counterparty risk exposure (Section II, sub-section 7.4): Banking Supervision Department;
- authorization to use more conservative approaches than the EPE internal model method in quantifying counterparty risk exposure (Section II, subsection 8): Banking Supervision Department;
- *authorization to use a lower alpha coefficient (Annex C, sub-section 2):* Banking Supervision Department;
- authorization to use the effective duration of exposures in place of M in EPE internal models (Annex C, sub-section 3): Banking Supervision Department.

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#### SECTION II

## INDIVIDUAL REQUIREMENTS

## 1. Determination of the individual capital requirement

These regulations establish the rules for calculating the value of exposures subject to counterparty risk. Except as otherwise provided for in this section, the related capital requirement shall be calculated by using the counterparty risk weights provided in the regulations governing credit risk (standardized approach or IRB approach).

The individual capital requirement shall be equal to 8% of risk-weighted assets.

For banks belonging to banking groups, the individual capital requirement shall be reduced by 25%, in accordance with the provisions of Chapter 6, Section II, sub-section 5.

Banks shall be required to always comply with this requirement.

## 2. Transaction categories

The capital treatment of counterparty risk shall be applied to the following categories of transactions:

- 1. OTC financial and credit derivative instruments;
- 2. securities financing transactions (SFTs);
- 3. long settlement transactions.

Exposures in respect of transactions under categories 1 and 3 entered into with a central counterparty and that have not been rejected by the central counterparty shall be attributed a value of zero in calculating the capital requirement if the exposures the central counterparty has to its own contractual counterparties are fully collateralized on a daily basis.

For the purposes of calculating counterparty risk, exposures related to the following transactions shall be attributed a value of zero:

- a) credit derivatives in which the bank acts as the protection buyer for assets allocated to the banking book or transactions exposed to counterparty risk;
- b) credit derivatives allocated to the banking book in which the bank acts as the protection seller, since they are subject to the capital requirement for credit risk for the entire notional value as guarantees issued.

Exposures in respect of or guaranteed by exchanges or clearing houses recognized by Member States or other countries in accordance with Part III, Title

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I, Chapter I, of the Consolidated Law on Financial Intermediation shall be treated as exposures to banks for the purposes of calculating counterparty risk.

## 3. Calculating the exposure value

In calculating the exposure value, banks shall apply the methods specified in Table 1 in accordance with the type of transaction.

Table	1
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Exposure categories	Methods for calculating the exposure value
OTC derivatives	1. mark-to-market method <sup>3</sup>
	2. standardized method
	3. EPE internal model method
SFTs	1. CRM – simplified method <sup>4</sup>
	2. CRM – comprehensive method with supervisory volatility
	adjustments
	3. CRM – comprehensive method with internal volatility
	adjustments
	4. $CRM - VaR$ internal model method <sup>5</sup>
	5. EPE internal model method
Long settlement	1. mark-to-market method
transactions	2. standardized method
	3. EPE internal model method

Without prejudice to the specific provisions governing the standardized and EPE internal model methods (see sub-sections 6 and 7), the mark-to-market, standardized and EPE internal model methods may be used, for the same category of transaction, in combination on a permanent basis by different entities within a banking group, but not at the individual level by the same bank.

The exposure value of long settlement transactions may be determined using any of the methods indicated above, regardless of those used for other categories of transactions (OTC derivatives and SFTs).<sup>6</sup>

The value of an exposure in respect of a given counterparty shall be:

- equal to the sum of the individual exposures within each netting set;
- calculated taking into account any effects of risk mitigation recognized under the regulations governing CRM. To this end, the bank shall comply with all

<sup>&</sup>lt;sup>3</sup> In the case of collateralized OTC derivative instruments, the value of the collateral shall be determined using the comprehensive method envisaged under the rules governing risk mitigation techniques.

<sup>&</sup>lt;sup>4</sup> This method shall only be applicable to banking book exposures.

<sup>&</sup>lt;sup>5</sup> This method shall only be applicable to exposures under the master contractual netting agreements recognized pursuant to CRM regulations.

<sup>&</sup>lt;sup>6</sup> For the purpose of calculating the capital requirement, banks that use IRB approaches may use the risk weights envisaged in the standardized method for credit risk purposes on a permanent basis, regardless of the materiality of their positions.

the conditions provided therein regarding the methods for calculating the credit risk capital requirement used by the bank.

## 4. Special rules for supervisory trading book exposures

For the purpose of calculating the capital requirement for counterparty risk in respect of exposures in the supervisory trading book, banks shall apply:

- the same weightings envisaged by the methodology used under the rules governing credit risk;<sup>7</sup>
- only the comprehensive method in calculating the impact of financial collateral.<sup>8</sup>

These regulations cover repurchase/reverse repurchase transactions and securities lending/borrowing transactions involving financial instruments and commodities that may be allocated to the supervisory trading book. Specifically, financial instruments and commodities that are not eligible under CRM regulations shall be treated as follows:

- 1. the "comprehensive method with supervisory volatility adjustments": banks shall apply the supervisory haircuts envisaged for "other equities or convertible bonds listed on a recognized exchange" (see Chapter 2, Annex B);
- 2. the "comprehensive method with internal volatility adjustments": banks shall estimate a specific volatility adjustment for each financial instrument and commodity;
- 3. "VaR internal model method": banks shall take account of these financial instruments and commodities in estimating VaR.

For OTC derivatives concerning commodities, all commodities qualifying for allocation to the supervisory trading book shall be eligible as collateral. The provisions of points 1) and 2) for SFTs shall apply to such commodities.

Credit derivative allocated to the supervisory trading book entered into with external counterparties and connected with identical internal contracts hedging banking book positions shall be excluded from the calculation of counterparty risk, provided that the external contracts comply with the requirements established in the regulations governing credit risk mitigation techniques.

# 5. Mark-to-market method

The mark-to-market method shall only be used for transactions involving OTC derivatives and long settlement transactions.

 <sup>&</sup>lt;sup>7</sup> Banks that use IRB approaches shall take into account the adjustment factor for small and medium-sized entities.
 <sup>8</sup> See Chapter 2, Part 1, Annex B, sub-section 2.

This method enables the calculation of the market value of a bank's claim in respect of a transaction. The calculation methodology approximates the cost that the bank would incur to find another party willing to assume the contractual obligations of the original counterparty in the event the latter should default.

The mark-to-market method is divided into the two steps described in Annex A.

#### 6. Standardized method

The standardized method may be used only for exposures arising in respect of OTC derivatives and long settlement transactions.

This method may be used by banks that, although not authorized to use internal models, intend to use more sensitive risk management methodologies than the mark-to-market method.

This approach replicates, in a simplified manner, the calculation methodologies envisaged by the internal model method.

Under the standardized method, the exposure value shall be equal to the product of the following two factors:

- a) the greater of the net current market value of transactions with a given counterparty and an EPE value as determined under the regulations;
- b) a coefficient denominated beta.

Annex B sets out the rules for making the calculation.

## 7. EPE internal model method

The EPE internal model method, which may be used for all categories of transactions exposed to counterparty risk, shall be authorized by the Bank of Italy subject to verification of compliance with the quantitative and organizational requirements contained in these regulations.

The methodology for calculating the exposure value is set out in Annex C.

# 7.1 Scope of application the internal model method

Regardless of the method adopted by banks for calculating capital requirements for credit risk (standardized or IRB approach), the EPE internal model method may be used for calculating counterparty risk exposure for all categories of exposure to such risk.

Banks may apply the internal model method to the following exposure categories: a) OTC derivatives; b) SFTs; and c) a combination of the previous two

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categories. Exposures in respect of long settlement transactions may be included in each of these three categories.

The internal model method shall be applied to all transactions in the category for which the bank has been granted authorization.

The internal model method shall not be applied to exposures that are immaterial in terms of size or risk. "Immaterial" assets shall be those that, where measured using the mark-to-market method, generate a capital requirement that is less than 2% of the total capital requirement calculated for all assets in the same category. Banks shall regularly verify compliance with this condition.

The partial use of methods other than the internal model method shall not be adopted selectively to reduce the capital requirement.

#### 7.2 Organizational requirements

Where not otherwise specified, the organizational requirements for authorization to use the internal model in calculating the market risk capital requirements (see Chapter 4, Part 3, Section II), in particular those regarding organization and internal controls, shall apply. The provisions of Title I, Chapter I, Part 4 shall apply to matters concerning corporate governance.

The following specific provisions shall also apply.

a) Policies and processes

Banks shall establish counterparty risk management policies, processes and systems that shall be updated and applied with diligence.

Banks shall not conduct business with a counterparty unless they have first assessed its creditworthiness.

The outputs concerning counterparty risk exposures shall be reviewed on a daily basis by personnel with the authority to enforce reductions in positions taken by individual credit managers and traders.

#### b) Risk control units

Bank shall have a control unit that is responsible for the counterparty risk measurement system, including the design and initial and subsequent implementation of the internal model.<sup>9</sup>

The unit:

- shall be adequately staffed;
- shall control the integrity of the data used as inputs for the model and shall produce and analyze the output of the model, including the evaluation of the relationship between risk exposure measures and credit and trading limits;

<sup>&</sup>lt;sup>9</sup> Counterparty risk control may be performed by the unit responsible for market risk control.

 shall be independent from those units responsible for originating, renewing or trading exposures and shall report directly to the management body.

The work of this unit shall be closely integrated into the day-to-day credit risk management process of the bank. The reports and other analyses produced by the unit shall be used in the process of managing and controlling counterparty risk.

## c) Measurement, management and control systems

The counterparty risk measurement system shall enable the bank to calculate daily and intra-day use of credit lines. The bank shall measure current exposure gross and net of collateral.

For internal purposes, the bank shall calculate and monitor peak exposure, estimated based on the confidence interval deemed most appropriate by the bank, at the portfolio and counterparty levels. The bank shall also produce indicators for measuring concentration risk in respect of groups of related counterparties, industries, markets and other aggregation criteria deemed relevant.

The system of internal limits shall be consistent with the counterparty risk measurement model. This consistency shall be maintained over time.

The bank shall have adequate internal regulations governing the control system and policies. The counterparty risk management system shall be adequately documented, including with regard to the techniques and methodologies used.

## d) Stress testing

Banks shall have stress testing processes to measure its capital adequacy in respect of counterparty risk under adverse market conditions.

Stress testing of counterparty risk shall consider:

- market and credit risk factors jointly, taking account of their degree of correlation;
- the concentration of the exposure to individual counterparties or groups of counterparties;
- the risk that liquidating the counterparty's positions could trigger an adverse movement in market variables that would impact its own positions.

## e) Wrong-way risk

In measuring counterparty risk, the bank shall take account of wrong-way risk, i.e. the likelihood that the default probabilities of its counterparties and the related exposures are positively correlated with general market developments.

The bank shall have procedures in place to identify, monitor and control – from the inception of a transaction and continuing through the life of the transaction – cases of specific wrong-way risk, or the likelihood that the probability of default of a counterparty and the related exposures are positively correlated due to the nature of the transaction.

## f) Integrity of the modelling process

The internal model shall reflect transaction terms in a timely and complete manner. These terms shall include at least contract notional amounts, maturity, reference assets, margining arrangement and netting arrangements. The internal control unit shall formally and periodically verify the consistency of the data used by the model with the original data.

The bank shall have internal procedures for ensuring that the transactions within the netting set are accompanied by a legally recognized netting agreement. Similar procedures shall be established to ensure that the collateral used to mitigate the bank's counterparty risk complies with the prescriptions of the rules governing credit risk mitigation.

With regard to the market data used in model calculations, the bank shall have an independent process for validating the prices and other variables supplied by the operating units. All data shall be updated in a timely and complete manner and stored in a database system subject to formal, periodic controls by the internal control unit using a procedure comprising verification of integrity and accuracy.

The EPE calculation model shall undergo internal validation, governed by appropriate formalized processes encompassing analysis and testing of the model's statistical soundness and completeness.

In order to make their estimate of EPE more conservative, banks authorized to use the internal model method shall, at a minimum, perform the following control procedures, storing the data and outputs:

- a) the identification and measurement of exposure to specific wrong-way risk;
- b) for exposures with a rising risk profile after one year, comparison on a regular basis the estimate of EPE over one year with EPE over the life of the exposure;
- c) for exposures with a residual maturity below one year, comparison on a regular basis the replacement cost (current exposure) with the realized exposure profile.

## g) Internal use

The internal model used in calculating counterparty risk exposure shall be closely integrated into the day-to-day risk management process. The bank shall keep a record of the actual internal use of the internal model.

The bank shall demonstrate that it used the counterparty risk measurement model prior to authorization by the Bank of Italy. The requirement for verification of internal use is also satisfied where the bank uses other counterparty risk measurements, such as peak exposure,<sup>10</sup> provided that these measurements are based on the same distribution of expected exposures used in estimating EPE.

 $<sup>^{10}</sup>$  Peak exposure means a high percentile (for example, 95% or 99%) of the distribution of exposures at any particular future date before the maturity date of the longest maturity transaction in the netting set.

The bank shall have the operational capacity to estimate the expected exposure (EE) daily, unless it can demonstrate that its exposures to counterparty risk warrant less frequent calculation. The EE shall be computed along a time profile of forecasting horizons  $(t_k)$  that adequately take into account the time structure of cash flows and maturity of contracts, with a degree of accuracy proportionate to the materiality and composition of the exposures.

The exposure of all the contracts within a netting set shall be measured and controlled for the entire life of the transactions (not just to the one-year horizon). The bank shall have procedures in place to measure and control counterparty risk in cases in which the exposure has a maturity greater than one year. EE measurements beyond the one-year horizon shall be considered in internal capital allocation.

## h) Internal review

Within the internal review process, banks shall conduct an independent review of the entire counterparty risk management system at least once a year. At a minimum, the review shall address:

- a) the adequacy of the documentation;
- b) the organization of the control unit;
- c) the integration of counterparty risk measures into daily risk management;
- d) the approval process for the risk pricing models and valuation models used by front and back-office personnel;
- e) the validation of any significant changes in the counterparty risk measurement process;
- f) the ability of the model to capture all transactions exposed to counterparty risk;
- g) the integrity and reliability of the information system, as well as the accuracy and completeness of the data for measuring, managing and controlling counterparty risk;
- h) verification of the consistency, timeliness and reliability of data sources used to run internal models, including the independence of such data sources;
- i) verification, on a sample basis, of the model's accuracy through frequent back-testing;
- j) compliance with the regulatory requirements for recognition of netting agreements.

## 7.3 Quantitative requirements

The internal counterparty risk quantification model shall comply with the following requirements:

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- 1. the bank shall estimate exposure to counterparty risk using the internal model on a daily basis, unless it can demonstrate that a less frequent calculation is warranted;
- 2. developments in market variables for calculating counterparty risk shall forecast over a one-year time horizon, unless otherwise provided in margin agreements;
- 3. the pricing models adopted to calculate the counterparty risk exposure may differ from those used to measure market risk (VaR) over a short time horizon. Pricing models for options shall account for the nonlinearity of option values;
- 4. the internal model shall capture transaction-specific information in order to aggregate exposures within the netting sets;
- 5. the internal model shall also include specific information to capture the effect of margin agreements. Specifically, the model shall take account of both the current amount of margin and future changes in margin. In addition, the model shall capture other aspects, such as the nature (bilateral or unilateral) of margin agreements, the frequency of margin calls, the margin period of risk, the minimum threshold, and the minimum transfer amount;
- 6. in estimating volatilities and correlations, the model shall use at least three years of historical data. The data shall cover a full range of economic conditions and in any case shall comprise a full business cycle. The estimates shall be updated quarterly or more frequently if market conditions warrant;
- 7. the bank shall conduct backtesting on representative counterparty portfolios. Specifically, the bank shall ensure the representativeness of the portfolios in terms of their sensitivity to the risk factors to which the bank is exposed.

Backtesting shall compare effective exposures with expected exposures, the latter calculated based on the probability distribution of the different market variables considered by the model and for different time horizons. Historical data on relevant market factors (interest rates, equity prices, foreign exchange rates, etc.) shall be used to compute the value that would have been recorded for each portfolio at the different time horizons. These values shall be compared with the corresponding expected exposures generated by the model. The tests shall be performed for a number of dates, so as to cover a broad spectrum of market conditions (e.g. rising interest rates, declining interest rates, high volatility, etc.).

The bank shall promptly notify the Bank of Italy of any divergences found during the back-testing program if these divergences have a material impact on the correct calculation of counterparty risk exposure.

## 7.4. Authorization

The Bank of Italy shall authorize the use of internal methods for calculating exposures in respect of counterparty risk subject to verification of compliance with the organizational and quantitative requirements set out in this Chapter.

Without prejudice to the provisions of this sub-section, the provisions governing the authorization procedure in Title I, Chapter 1, Part 5 shall apply.

Banks may gradually roll out application of the model to different types of transactions within the category of exposures for which authorization is received.

During this period, banks shall use one of the other methods available (markto-market method or standardized method) to measure the counterparty risk exposure in respect of transactions that are not yet covered by the internal model. To this end, banks shall provide the Bank of Italy with a plan specifying the procedures and timetable for rolling out the internal model method for all material exposures.

Rollout of the internal model method shall be completed within seven years. Derogations from this limit may be granted for highly complex banking groups.

Banks that have obtained authorization to use the internal model method shall not revert to the use of the other available methods except for demonstrated good cause and subject to the authorization of the Bank of Italy.

## 8. Use of models other than the EPE model

The Bank of Italy shall authorize the use of models other than the EPE model for measuring counterparty risk, provided that these models are more conservative.

The authorization procedure established in Title I, Chapter I, Part 5 shall apply.

Banks shall periodically verify that the alternative model adopted remains more conservative.

In all cases, banks shall comply with the requirements established in subsections 7.2 and 7.3.

## 9. Methods specified under the regulations governing credit risk mitigation

The methods for calculating counterparty risk exposure envisaged under the regulations governing credit risk mitigation for exposures in respect of SFTs shall be governed by the provisions of Chapter 2, Part 1.

#### 10. Requirements for recognition of contractual netting

The following types of contractual netting shall be recognized for the purpose of calculating the capital requirement for counterparty risk:

a) bilateral contracts for novation of derivatives contracts between a bank and a counterparty;

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- b) other bilateral agreements for netting derivatives contracts between a bank and a counterparty;
- c) bilateral contractual cross-product netting agreements. The netting of transactions between members of the same group shall not be recognized for the purpose of calculating capital requirements.

10.1 SFTs

The regulations governing credit risk mitigation (see Chapter 2, Part 1, Section III, sub-section 1.2) shall apply to the recognition of master contractual netting agreements for SFTs.

10.2 Derivate contracts

The following requirements shall apply to derivative instruments.

The risk mitigation effect shall be recognized provided that the bank:

- has a contractual netting agreement with its counterparty that creates a single legal obligation, corresponding to the net balance of all included transactions, so that in the event of counterparty failure to perform owing to default, bankruptcy, liquidation or any other similar circumstance, the bank would have a claim to receive or an obligation to pay only the net sum of the positive and negative mark-to-market values of the included individual transactions;
- 2. has obtained legal opinion to the effect that, in the event of a legal challenge, the relevant judicial and administrative authorities would confirm the effects of the agreements referred to point 1) under:
  - the law of the jurisdiction in which the counterparty is incorporated and, if a foreign branch of a counterparty is involved, also under the law of the jurisdiction in which the branch is located;
  - the law that governs the individual transactions netted;
  - the law that governs any contract or agreement necessary to effect the contractual netting;
- 3. has in place procedures for ensuring that the legal validity of its contractual netting is kept under review in light of the possible changes to the relevant laws;
- 4. maintains all required documentation in its files;
- 5. factors in the effects of the contractual netting agreement in calculating the each counterparty's aggregate credit risk exposure and manages its counterparty risk on such a basis;
- 6. aggregates, for each counterparty, the individual transactions subject to netting to obtain the legally material exposure to each counterparty. This aggregate

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shall be factored into credit limit management and capital allocation processes.

No contract containing a provision which permits a non-defaulting counterparty to make limited payments only, or no payments at all, to the estate of the defaulter, even if the defaulter is a net creditor (a 'walkaway' clause), may be recognized as risk-reducing.

## 10.3 Requirements for recognition of cross-product netting

Contractual cross-product netting agreements may include exposures arising in respect of: 1) securities or commodities repurchase/reverse repurchase transactions, securities or commodities lending or borrowing transactions; 2) margin lending transactions; and 3) OTC derivatives contracts.

In addition to the conditions set out in sub-sections 10.1 and 10.2, contractual cross-product netting agreements shall also meet the following specific conditions:

- a) the net sum referred to in point 1) of sub-section 10.2 shall refer to all bilateral master agreements and all individual transactions included in the contractual cross product netting agreement;
- b) the legal opinions referred to in point 2) of sub-section 10.2 shall address the validity and enforceability of the entire contractual cross-product netting agreement and the impact of the netting arrangement on the material provisions of any included bilateral master agreement;
- c) the bank shall have procedures in place with the characteristics set out in point
   3) of sub-section 10.2 to verify that any transaction in a netting set is covered by a legal opinion;
- d) each bilateral master agreement and each individual transaction included in the contractual cross-product netting agreement shall meet the requirements for recognition of bilateral netting and, where applicable, for recognition of the effects of credit risk mitigation.

## 10.4 Netting of positions belonging to different portfolios

Bilateral contractual netting agreements regarding SFTs and/or other capital market-driven transactions allocated to the banking book and the supervisory trading book shall be recognized provided that both of the following requirements are met:

- a) all transactions are measured at fair value on a daily basis;
- b) any asset borrowed, acquired or received as collateral qualifies as financial collateral recognized for credit risk mitigation purposes for the banking book.

## SECTION III

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# CONSOLIDATED CAPITAL REQUIREMENT

The consolidated capital requirement shall be equal to 8% of risk-weighted assets.

Banking groups and other persons specified in Section I, sub-section 4, shall comply with this requirement on a continuous basis.

ANNEX A

## **MARK-TO-MARKET METHOD**

The mark-to-market method shall only be used for OTC derivatives and long settlement transactions regardless of the portfolio in which they are classified.

For each netting set, the credit equivalent shall be calculated as the sum of the replacement cost and the future credit exposure ("add-on"), taking account of the effect of the contractual netting, using the following formula:

Credit equivalent =  $(RC + add-on) - C_A$ 

Where:

- *RC* is the replacement cost, which is to be considered net where netting arrangements are in place;
- *add-on* is the future credit exposure, to be replaced by "net add-on" where netting arrangements are in place;
- $C_A$  is the collateral amount adjusted for market price volatility, calculated using the comprehensive method provided for in the CRM regulations,<sup>11</sup> taking account, where appropriate, of netting arrangements.

## a) Replacement cost

The replacement cost of each contract is its fair value, if positive. The fair value is positive if the bank has a claim on its counterparty.

## b) Future credit exposure ("add-on")

The credit exposure shall reflect the probability that the future fair value of the contract, if positive, may increase or, if negative, may turn positive. This probability is linked to the volatility of the underlying market variables as well as the residual life of the contract.

The future credit exposure is determined for all contracts with both positive and negative fair values regardless of the portfolio to which they have been allocated, multiplying the notional principal amount of each contract by the percentages specified in Table 2 on the basis of the residual maturity of the transactions.

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<sup>&</sup>lt;sup>11</sup> For the purposes of establishing the liquidation period, banks that adopt supervisory volatility adjustments shall apply the rules governing capital-market-driven provided for in the CRM regulations.

					Table 2 <sup>12</sup>
Residual maturity <sup>13</sup>	Interest- rate contracts	Contracts concerning foreign exchange and gold	Contracts concerning equities	Contracts concerning precious metals except gold	Contracts concerning commodities other than precious metals
One year or less	0%	1%	6%	7%	10%
From over one year to five years	0.5%	5%	8%	7%	12%
Over five years	1.5%	7.5%	10%	8%	15%

For contracts concerning assets, indices or rates that do not fall within one of the five categories indicated in Table 2, the percentages for contracts concerning commodities other than precious metals shall apply.

Where the bank uses the expanded maturity ladder approach to calculate commodity position risk,<sup>14</sup> it may calculate the future credit exposure in respect of commodities contracts using the percentages specified in Table 3 in place of those in the columns "Contracts concerning precious metals except gold" and "Contracts concerning commodities other than precious metals" in Table 2.

				Table 3
Residual maturity	Precious metals (except gold)	Base metals	Agricultural products	Other, including energy products
One year or less	2%	2.5%	3%	4%
From over one year to five years	5%	4%	5%	6%
Over five years	7.5%	8%	9%	10%

<sup>&</sup>lt;sup>12</sup> For contracts with multiple exchanges of principal, the future credit exposure percentages shall be multiplied by the number of remaining payments in the contract.

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<sup>&</sup>lt;sup>13</sup> For contracts that are structured to settle the outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity would be set equal to the time until the next reset date. In the case of interest rate contracts that meet these criteria and have a remaining maturities of over one year, the percentage shall be no lower than 0.5%.

<sup>&</sup>lt;sup>14</sup> See Chapter 4, Part 2, Section VI, sub-section 4.

## Credit derivatives in the supervisory trading portfolio

The add-on for credit derivatives such as total rate of return swaps (TRORs) and credit default swaps (CDSs) for both the protection buyer and seller shall be calculated by multiplying the notional value by:

- 5% where the reference obligation can be considered a qualifying item for the purposes of treating specific position risk;
- 10% in other cases.

The seller of credit protection through a CDS shall calculate the future credit exposure only where the contract has a close-out clause under which the CDS can be liquidated on market terms in the event of the insolvency of the protection buyer. The future credit exposure shall be less than or equal to the amount of unpaid premiums.

A CDS index shall be broken down into as many CDSs as there are individual reference entities making up the index, with the total amount being assigned to each position in an amount equal to the exposure to each reference entity. The above rules shall be applied to each CDS.

Single-name credit spread derivatives (forwards, futures, options and credit spread swaps) shall receive the prudential treatment applied to credit default swaps. Multiple-name credit spread derivatives (for example, forwards, futures, options and swaps on iTraxx) shall receive the same treatment as CDS indices. Specifically, such contracts shall be broken down into as many CDSs as there are individual reference entities in the index. Each resulting CDS shall receive the treatment envisaged for single-name CDSs.

In the case of basket credit derivatives providing n<sup>th</sup>-to-default protection, the add-on is determined by:

- 1. ranking the reference obligations in decreasing credit quality order beginning with non-qualifying items in accordance with the regulations governing specific risk;
- 2. considering the  $n^{th}$  reference obligation and applying the risk weighting associated with it. For example, in the case of first-to-default" contracts ( $n^{th} = 1$ ), the risk weighting is determined by the lowest quality reference obligation in the basket.

#### c) Effects of contractual netting

In the case of contracts for novation, the single net amounts fixed by the contract may be weighted rather than the gross amounts. Accordingly, the replacement cost and the future credit exposure may be obtained by taking account of the contract for novation.

In the case of other netting agreements, the exposure to the contracts in a netting set shall be calculated as the sum of:

1. the net replacement cost at the market price of the contracts, if positive;

2. the future credit exposure of the netted positions (net add-on).

net add-on = 0.4 \* gross add-on + 0.6 \* NGR \* gross add-on

where NGR = net-to-gross ratio

For the calculation of the potential future credit exposure according to the above formula perfectly matching contracts included in the netting agreement may be taken into account as a single contract with a notional principal equivalent to the net amounts.

Banks may calculate the NGR in one of the two following ways:

- <u>separate calculation</u>, under which an NGR is calculated for each counterparty as the quotient of the net replacement cost for all the netting sets with a given counterparty (numerator) and the gross replacement cost for all contracts in each netting set with that counterparty (denominator);
- <u>aggregate calculation</u>, under which a single NGR is calculated as the quotient of the sum, for all counterparties, of the net replacement costs for each netting set (numerator) and the total gross replacement cost for all contracts in each netting set (denominator).

The method selected shall be used consistently for all counterparty risk exposures determined using the mark-to-market method.

#### ANNEX B

## STANDARDIZED METHOD

The Standardized Method may only be used for OTC derivatives and long settlement transactions regardless of the portfolio to which they are allocated.

The exposure, net of collateral, shall be calculated separately for each netting set as follows.

Exposure value = 
$$\beta * \max(FVP - FVC ; \sum_{j} \left| \sum_{i} RPT_{ij} - \sum_{l} RPC_{lj} \right| * CCF_{j})$$
 (1)

where:

FVP = fair value of the portfolio of transactions within the netting set gross of collateral;

FVC = fair value of the collateral assigned to the netting set;

i = index designating transaction;

j = index designating the hedging set. Each hedging set corresponds to a risk factor for which risk positions of opposite sign can be offset to yield a net position;

l = index designating collateral;

 $RPT_{ij}$  = risk position from transaction i with respect to hedging set j. It can be seen as the result of breaking down each transaction into its constituent risk positions.<sup>15</sup>

 $RPC_{lj}$ = risk position from collateral l with respect to hedging set j. The collateral received from a counterparty has a positive sign and collateral posted to a counterparty has a negative sign.

 $CCF_i$  = supervisory credit conversion factor with respect to hedging set j.

 $\beta$  = supervisory coefficient, equal to 1.4.

a) Mapping of transactions to risk positions and quantification of the positions

#### Transactions with a linear risk profile

Where transactions with a linear risk profile (for example, forward contracts, futures, swaps, TRORs)<sup>16</sup> that provide for the exchange of an instrument (for example, debt securities, equities, commodities, etc.) against payment, the payment leg is referred to as the cash position, while the underlying instrument represents the position in the underlying. Linear transactions that do not provide

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<sup>&</sup>lt;sup>15</sup> For example, a forward foreign exchange transaction (euro vs. foreign currency) generates three risk positions: a position in euros, a position in interest rates in foreign currency and a position in foreign currency.

<sup>&</sup>lt;sup>16</sup> TRORs shall be broken down into a combination of an IRS and a credit derivative.

for the exchange of the underlying represent two cash positions in the contractually established notional amount.

For transactions with a linear risk profile with equities (including equity indices) or commodities,<sup>17</sup> the cash position is mapped to an interest rate risk position. The position in the underlying is mapped to a risk position in the respective equity (equity index) or commodity. Where settlement is in a foreign currency, account is also taken of the exposure to exchange rate risk, giving rise to a risk position in the currency.

For transactions with a linear risk profile with a debt instrument as the underlying (for example, loans or bonds), both the cash position and the position in the underlying are mapped to interest rate risk position. Where at least one of the transaction legs is denominated in a foreign currency, once again the exposure to exchange rate risk is taken into account by mapping the leg to an exchange rate risk position. Foreign exchange basis swaps<sup>18</sup> do not give rise to an exchange rate exposure.

For underlying positions in debt instruments and for cash positions (regardless of the type of transaction involved), the size of the risk position is given by the effective contractual notional value,<sup>19</sup> translated into euros, multiplied by the modified duration of the debt instrument or the cash position.

For underlying positions in equities or commodities, the size of the risk position denominated in euros is given by the fair value multiplied by the quantity of the underlying.

Two exceptions to this treatment are permitted:

- banks may disregard the interest rate risk for cash positions with a remaining maturity of less than one year;
- transactions with no exchange of principal (for example, interest rate swaps) in which the payment legs are denominated in the same currency may be treated as a single aggregate transaction; in this case, the treatment for cash positions shall apply to the aggregate transaction, which is mapped to an interest rate risk position in relation to the residual maturity of the contract<sup>20</sup> in an amount equal to the notional value multiplied by the total net modified duration of the instrument.<sup>21</sup>

Banks shall adopt the mark-to-market method for transactions in debt securities or cash positions for which it is not possible to calculate the modified duration.

<sup>&</sup>lt;sup>17</sup> Contracts concerning gold and other precious metals are treated as those concerning commodities.

<sup>&</sup>lt;sup>18</sup> Foreign exchange basis swaps are swaps in which a floating rate denominated in foreign currency is swapped for a different floating rate in the same foreign currency.

<sup>&</sup>lt;sup>19</sup> This value shall take account of any contractually established leverage effects.

 $<sup>^{20}</sup>$  This is calculated as the difference between the residual maturity of the fixed leg and the residual maturity of the floating leg.

<sup>&</sup>lt;sup>21</sup> The net modified duration of a swap is equal to the algebraic sum of the modified duration of the fixed leg and the modified duration of the floating leg.

#### Credit default swaps

Credit default swaps shall be mapped to the appropriate risk position in an amount equal to the notional value of the underlying debt instrument multiplied by the remaining maturity of the credit default swap.

CDS indices shall be broken down into as many CDSs as there are individual reference entities in the index, each of which shall be treated in accordance with the treatment envisaged for single-name CDSs.

For basket credit derivatives, the transaction shall be mapped to the appropriate risk position for the reference obligation with the highest specific risk in the case of first-to-default derivatives; for n<sup>th</sup>-to-default derivatives, the transaction shall be mapped to the appropriate risk position for the reference obligation with the n<sup>th</sup>-highest specific risk. The size of the risk position shall be equal to the notional value of the CDS multiplied by the remaining maturity of the CDS.

# Transactions with a non-linear risk profile

Transactions with a non-linear risk profile (for example, options and swaptions) give rise to two positions: a position in the underlying, to be mapped to an appropriate risk profile, and a cash position, to be mapped to an interest rate risk position. The size of both risk positions is equal to the delta equivalent value of the underlying instrument, with the exception of cases in which the underlying is a debt instrument or a cash position. In the latter situations, the size of the risk position is equal to the delta equivalent value of the underlying instrument multiplied by the modified duration of the debt instrument or the cash position.

Where the bank is unable to calculate the delta for a transaction with a nonlinear risk profile, it shall treat the transaction using the mark-to-market method.

Linear single-name credit spread derivatives (for example, forwards or swaps on credit spreads) shall be broken down into two legs: a position in the underlying and a cash position. The latter shall be treated as an interest rate risk position, while the position in the underlying shall be treated in the manner prescribed for CDSs.

Linear multiple-name derivatives (for example, forwards on CDS indices) shall be broken down into two legs: a position in the index and a cash position. The latter shall be treated as an interest rate risk position, while the position in the index shall be separated into as many positions in CDSs as there are index components, each of which shall be treated in the manner prescribed for CDSs.

Non-linear derivatives (for example, credit spread options, iTraxx options) shall be treated in the manner prescribed for linear derivatives, except that the size of the risk position shall be equal to the delta equivalent value of the notional value of the derivative multiplied by the residual maturity of the underlying CDS or CDS index.

## b) Calculation of the "net risk position"

Each risk position shall be included in the appropriate hedging set. For each hedging set the absolute value amount is calculated for the net risk position, i.e. the algebraic sum of the individual risk positions in each hedging set. The net risk position is represented by the following segment of formula (1):

$$\left|\sum_{i} RPT_{ij} - \sum_{l} RPC_{lj}\right|$$

The hedging sets to be used in calculating the net risk positions are the following:

## i) Interest rate risk positions: qualifying issuers

A "qualifying issuer" is any issuer with a capital requirement (risk weight) equal to or less than 1.6% (20%) for specific risk in the supervisory trading portfolio. Positions in underlyings in respect of such issuers and the corresponding cash positions, as well as interest rate risk positions in respect of cash collateral received from qualifying counterparties shall be assigned – separately for each currency – to six hedging sets.

The six hedging sets are defined by a combination of the following criteria:

- the type of issuer to which the interest rates are referenced: 1) central governments and equivalent entities; 2) other entities;
- residual maturity by repricing date:<sup>22</sup> 1) less than 1 year; 2) from 1 year to 5 years; 3) over 5 years.

# ii) Interest rate risk positions: credit default swaps, qualifying issuers

There shall be one hedging set for each issuer of an underlying debt instrument in a credit default swap.

#### iii) Interest rate risk positions: non-qualifying issuers

A "non-qualifying issuer" is any issuer with a capital requirement (risk weight) greater than 1.6% (20%) for specific risk in the supervisory trading portfolio (see Chapter 4, Part 2, Section II, sub-section 2.2). Positions in underlyings in respect of such issuers and the corresponding cash positions, as well as interest rate risk positions in respect of cash collateral received from non-qualifying counterparties shall be assigned to a separate hedging set for each non-qualifying issuer.

<sup>&</sup>lt;sup>22</sup> For a definition of residual maturity by repricing date, see the instructions for general risk in respect of debt securities for the standardized method set out in Circular 155 "*Istruzioni per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali*" pages 7.1.14 et seq.

All risk positions in respect of the same issuer (including those in respect of the credit default swaps referred to in point b) may be assigned to a single hedging set.

## iv) Other risk positions

For transactions concerning underlying instruments other than debt instruments (for example, equities or precious metals), the risk positions shall be assigned to the same hedging set only if the instruments are identical or similar. The similarity of instruments shall be established as follows:

- 1. for equities, similar instruments are those of the same issuer. An equity index is treated as a separate issuer;
- 2. for precious metals, similar instruments are those of the same metal. A precious metal index is treated as a separate precious metal;
- 3. for electric power, similar instruments are those delivery rights and obligations that refer to the same peak or off-peak load<sup>23</sup> time interval within any 24-hour interval;
- 4. for commodities (other than those referred to in points 2 and 3), similar instruments are those of the same commodity. A commodity index is treated as a separate commodity.

Underlying instruments of OTC derivatives that are not in any of the above hedging sets shall be assigned to separate hedging sets for each category of underlying instrument. For the purpose of applying the credit conversion factor, each of such hedging sets shall be assigned to the category "Other underlyings of OTC derivatives".

<sup>&</sup>lt;sup>23</sup> "Peak" load time interval refers to an interval in which electricity demand is at a peak, in accordance with electricity market practice, while "off-peak" time intervals refer the other periods of the day.

# c) Credit conversion factors

The credit conversion factors to be applied to the net risk positions for each hedging set are set out in the following table:

	Table 4
Hedging set	Credit conversion factor
Interest rates for risk positions in respect of the debt instruments of qualifying issuers	0.2%
Interest rates for risk positions in respect of the debt instruments of qualifying issuers underlying credit default swaps	0.3%
Interest rates for risk positions in respect of the debt instruments of non-qualifying issuers	0.6%
Exchange rates	2.5%
Electric power	4%
Gold	5%
Equities, equity indices	7%
Precious metals (excluding gold)	8.5%
Other commodities (excluding precious metals and electric power)	10%
Other underlyings of OTC derivatives	10%

Banks shall have internal procedures to verify that, prior to including a transaction in a hedging set, the transaction is covered by a legally enforceable netting contract that meets the requirements set out in Section II, sub-section 10.

Banks that make use of collateral to mitigate their counterparty risk shall comply with the requirements established under CRM regulations.

## ANNEX C

## **EPE INTERNAL MODEL METHOD**

# 1. Calculating exposure value

The exposure value shall be calculated for each netting set.

In calculating the exposure value, the model shall consider the distribution of changes in the market value of the netting set attributable to changes in material risk factors (equities, indices, interest rates, exchange rates, etc.) and then compute the exposure value at each future date over one year.

Banks may take account of eligible financial collateral in the calculation if the quantitative and qualitative requirements for the model are met for the collateral.<sup>24</sup>

In EPE-type internal model methods, the exposure value of a given netting set shall be calculated using the following formula:

*Exposure* = 
$$\alpha \times EffectiveEPE$$

where:

 $\alpha$  is a prudential coefficient;

*EffectiveEPE* is the effective expected positive exposure calculated as the average of effective expected exposures over a time horizon of one year.<sup>25</sup> It shall be calculated using the following formula:

$$EffectiveEPE = \sum_{k=1}^{\min(1 \text{ year, maturity})} EffectiveEE(t_k) \times \Delta t_k$$
(2)

where:

 $\Delta t_k = t_k - t_{k-1}$  represents the intervals between future dates at which the bank estimates the expected exposures. It is possible for expected exposures to be calculated at future dates that are not equally spaced over time, i.e.  $\Delta t_k$  may not be constant;

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<sup>&</sup>lt;sup>24</sup> Banks that adopt the IRB approach in quantifying credit risk shall not take account of collateral in estimating LGD to the extent to which the collateral has been considered in EPE internal models in quantifying EAD.

 $<sup>^{25}</sup>$  Where all contracts have a maturity of less than one year, the time horizon shall be the maturity of the transaction with the longest maturity.

*EffectiveEE* $(t_k)$  is the effective expected exposure at time *t* computed as the maximum expected exposure estimated to time *t* and calculated as follows:

$$EffectiveEE(t_k) = \max[EffectiveEE(t_{k-1}); EE(t_k)]$$
(3)

where  $EE(t_k)$  is the expected exposure at time *t* computed as the average of the distribution of positive values of the exposures in a netting set at time *t*. This distribution is obviously a function of the distribution of market risk factors at time *t*.

In estimating the distributions of exposure values, banks may adopt simulation approaches and analytical models as long as the model takes account of any material non-normality in the exposure distributions.

The  $\alpha$  coefficient shall be equal to 1.4. The Bank of Italy may require the use of a higher coefficient in the presence of a high concentration of exposures in respect of a small number of counterparties, high exposure to wrong-way risk, high correlation among exposures to different counterparties or other features of the counterparty risk exposure that suggest that a coefficient of 1.4 would be imprudent.

## 2. Own estimate of $\alpha$

Banks may use an internal estimate of  $\alpha$ , which shall in any case not be lower than 1.2, subject to the authorization of the Bank of Italy.

The internal estimate of  $\alpha$  shall be equal to the ratio of: a) economic capital for counterparty risk estimated on the basis of a joint simulation of the factors underlying the market and credit risk of a set of positions representative of the portfolio of counterparty risk positions, and b) the economic capital for the same portfolio where EAD is held constant and equal to EPE. Both measures shall be estimated for a confidence interval of 99.9% with a holding period of one year.

In particular, the estimate of economic capital used in the numerator shall capture dependencies between the distributions of market values of positions across counterparties, between the probabilities of default across counterparties and between default risk and market risk. To this end, the volatilities and correlations of the market risk factors used in the joint simulation (in the numerator) shall be conditioned on the credit risk factors to reflect potential increases in volatilities and correlations in an economic downturn.

Banks shall ensure that the numerator and denominator are computed in a consistent fashion with respect to the modelling methodology, parameter specifications and portfolio composition. The approach used shall be based on the bank's economic capital approach and be well documented. In addition, banks' shall review their estimates of  $\alpha$  on at least a quarterly basis, and more frequently when the composition of the portfolio varies over time.

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## 3. Determination of effective maturity

For netting sets with a remaining maturity of more than one year, the effective maturity (M) shall be calculated with the following formula:

$$M = \min\left(\frac{\sum_{k=1}^{t_k \le 1 \text{ year}} Effective EE_k \times \Delta t_k \times df_k + \sum_{t_k > 1 \text{ year}}^{maturity} EE_k \times \Delta t_k \times df_k}{\sum_{k=1}^{t_k \le 1 \text{ year}} Effective EE_k \times \Delta t_k \times df_k};5\right)$$
(4)

where  $df_k$  is the risk-free discount rate for time  $t_k$  and the remaining symbols have the meanings given for formulas (2) and (3).

Subject to the authorization of the Bank of Italy, banks that take account of counterparty credit risk in calculating the value of expected exposures may replace formula (4) with the calculation of the effective duration of the exposures in the netting set.

For netting sets in which all contracts have a remaining maturity of less than one year, the provisions governing the treatment of effective maturity under the IRB approach for calculating the credit risk capital requirement shall apply (see Chapter 1, Part 2, Section V, sub-section 1.4).

#### 4. Margin agreements

The model adopted to calculate effective EPE may take account of the effects of any margin agreements with counterparties in reducing expected exposure.

Where, however, the model cannot take account of margin agreements, these may be included in the EPE calculation using the simplified method set out below. The effective EPE for a counterparty with whom a margin agreement is in place shall be the lower of:

- the threshold, if positive, under the margin agreement plus an add-on that reflects the potential increase in exposure over the margin period of risk. The add-on is computed as the expected increase in the netting set's exposure over the margin period of risk, beginning from a current exposure of zero.<sup>26</sup> A floor of five business days for netting sets consisting only of SFTs subject to

 $<sup>^{26}</sup>$  In this case the add-on is equal to the expected exposure (EE) at the end of the margin period of risk, assuming that the current exposure is equal to zero.

daily remargining and daily mark-to-market, and ten business days for all other netting sets shall be imposed on the margin period of risk;<sup>27</sup>

- effective EPE without taking account of margin agreements.

<sup>&</sup>lt;sup>27</sup> For netting sets that under netting agreements across different exposure classes (see Section II, sub-section 10.3) include exposures in respect of SFTs and OTC derivatives, the minimum margin period of risk shall be 10 business days.

# TITLE II

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Chapter 4

# **MARKET RISK**

TITLE II - Chapter 4

## MARKET RISK

PART ONE

# **GENERAL PROVISIONS**

## SECTION I

#### GENERAL PROVISIONS

## 1. Introduction

Banks and banking groups shall comply on an ongoing basis with capital requirements for risks generated by operations in markets for financial instruments, foreign exchange and commodities.

Capital requirements may be calculated using a standardized measurement method, or an internal models approach subject to compliance with organizational and quantitative requirements and prior authorization by the Bank of Italy.

The regulations identify and govern the treatment of the following risks:

a) with regard to the supervisory trading book:

<ul> <li>position risk</li> </ul>	(Part 2 – Section II)
<ul> <li>settlement risk</li> </ul>	(Part 2 – Section III)
<ul> <li>— concentration risk</li> </ul>	(Part 2 – Section IV)

b) with regard to the entire balance sheet:

— foreign exchange risk	(Part 2– Section V)
<ul> <li>— commodities risk</li> </ul>	(Part 2 – Section VI)

The standardized method described in Part 2 allows banks to calculate their total capital requirement using a building-block approach, under which the total requirement is obtained by summing the individual capital requirements for the risks listed above.

The internal models approach, which is governed by the provisions of Part 3, may be used in respect of position risk, foreign exchange risk and commodities risk.

Compliance with the capital requirements established by these regulations shall fulfil the capital obligations required of banks authorized pursuant to Article 19, paragraph 4, of the Consolidated Law on Financial Intermediation under the implementing regulations issued by the Bank of Italy.

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The capital requirements established by these regulations are a minimum prudential requirement, given the impossibility of fully anticipating changes in the prices of securities and exchange rates and market developments in general.

Compliance with the capital requirements is therefore not sufficient: banks shall also establish control procedures and systems that ensure the sound and prudent management of risk.

## 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, sub-paragraphs a), b) and d), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:

- a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 53, paragraph 3, which gives the Bank of Italy the power, *inter alia* to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraphs a), b) and d), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, sub-paragraph a) that permit banking groups to use:

- a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

— the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

The regulations also take account of the regulations issued by the Bank of Italy pursuant to Article 6, paragraph 1, sub-paragraph a) of the Consolidated Law on Financial Intermediation.

## 3. Definitions

For the purposes of these regulations the following definitions shall apply:

### 3.1 Supervisory trading book

Positions held with trading intent shall mean those held intentionally for short-term resale and/or with the intent of benefiting in the short term from differences between the purchase and sale prices, or the changes in the price or the interest rate. Positions shall mean proprietary positions and positions arising from client servicing or market making.

The supervisory trading book shall consist of positions in financial instruments<sup>1</sup> and commodities held for trading or to hedge risks relating to other elements of the same book. Financial instruments shall be either free of any restrictive covenant on their tradability or able to be hedged completely. Banks shall establish strategies, policies and processes for managing the position or portfolio in accordance with the requirements set out in Annex A, Part A.

Banks shall also establish and maintain systems and controls to manage their supervisory trading book in accordance with specified criteria. Specifically, banks shall measure the fair value of positions in the supervisory trading book using a robust measurement system subject to appropriate control procedures (see Annex A, Part B).

Where a bank hedges a banking book credit risk exposure using a credit derivative booked in its supervisory trading book and the hedge is established by way of internal derivatives contracts, the banking book exposure may be deemed hedged for capital purposes provided that the derivative is acquired from a third party and meets the requirements of CRM regulations. In this case, the credit derivative forming the hedge shall not be included in the supervisory trading book for capital requirement purposes.

## 3.2 Other definitions

— "foreign currency assets and liabilities" shall mean all on- and off-balancesheet assets and liabilities in respect of each currency, including transactions in euros indexed to the exchange rates of foreign currencies. Transactions in gold shall be treated as foreign currency transactions;

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<sup>&</sup>lt;sup>1</sup> Loans and receivables classified as "financial assets held for trading" shall be excluded.

- *"notional principal"* of off-balance-sheet transactions shall mean the contractually defined nominal amount of the transactions;
- "borrower" shall mean an individual obligor or group of connected obligors;<sup>2</sup>
- "delivery versus payment" (DVP) shall mean the settlement of transactions where the counterparties simultaneously exchange performance (delivery of cash in exchange for financial assets or vice-versa);
- "*delta-equivalent value*" shall mean the fair value of the underlying financial assets (or, where none, the notional principal) multiplied by the delta;
- "duration" shall mean the indicator of the sensitivity of the price of a debt instrument to small parallel shifts in the yield curve, measured as the average maturity of all the cash flows in respect of principal and interest generated by the instrument, weighted by the present value of the cash flows;
- *"delta"* shall mean the ratio of the expected change in an option price and a small change in the price of the financial instrument underlying the option.

Delta approximates the probability that the option will be exercised and is calculated as the first derivative of the fair value of the option with respect to that of the underlying instrument;

- "gamma" shall mean the rate of change of delta;
- "vega" shall mean the sensitivity of the value of an option with respect to a change in the implicit volatility of the price;
- "regulated market" shall mean a multilateral system administered and/or operated by the market manager, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments - in the system and in accordance with its nondiscretionary rules - in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorized and functions regularly;
- "off-balance-sheet transactions" shall mean derivatives contracts and:
  - a) unsettled cash or forward contracts for the sale of securities, currencies and commodities;
  - b) irrevocable commitments to purchase arising in respect of participation in an underwriting syndicate for the placement of securities;
- *"banking book"* shall mean all positions not booked in the supervisory trading book;
- *"matched position"* shall mean the lesser of the two amounts in respect of a gross debtor position and a gross creditor position;
- "gross short (or debtor) position" shall mean the technical overdrafts, securities to be delivered in respect of unsettled transactions (cash or forward) and other off-balance-sheet transactions giving rise to an obligation or right to sell specified securities, indices or interest rates;
- "gross foreign currency short (or debtor) position" shall mean the foreign currency liabilities, foreign currencies to be delivered in respect of unsettled

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<sup>&</sup>lt;sup>2</sup> Refer to the definition of "connected borrowers" in Title V, Chapter 1, Section I, sub-section 3).

transactions (cash or forward) and other off-balance-sheet transactions giving rise to an obligation or right to sell foreign currency assets;

- "gross general equity position" shall mean the absolute value of the sum of all net long and short equity positions;
- "net general equity position" shall mean the difference between the sum of net long positions and the sum of net short positions in individual equities in the portfolio;
- "gross long (or creditor) position" shall mean the securities holdings, securities to be received in respect of unsettled transactions (cash or forward) and other off-balance-sheet transactions giving rise to an obligation or right to purchase specified securities, foreign currencies, commodities, indices, interest rates or exchange rates;
- "gross long (or creditor) foreign currency position" shall mean the foreign currency assets, foreign currencies to be received in respect of unsettled transactions (cash or forward) and other off-balance-sheet transactions giving rise to an obligation or right to purchase foreign currency assets;
- *"net foreign currency position "* shall mean the difference between the gross long position and the gross short position in each currency;
- "net long or short position" in a security shall mean the difference between the gross on- and off-balance-sheet creditor and debtor positions in respect of the same issue of debt securities. For this purpose, banks shall not take account of futures and other off-balance-sheet transactions that envisage the option upon maturity of delivering securities from different issues as well as derivatives contracts on interest rates and indices. With regard to credit derivatives, netting shall be permitted in the following cases: a) credit derivatives with the same terms and conditions (maturity, reference assets, etc.); b) long cash positions hedged by TROR contracts (or vice versa), provided that there is an exact match between the reference assets and the hedged assets and there is no maturity mismatching. For equity securities, netting shall involve the same type of securities issued by the same issuer; for derivatives on equity indices, netting shall be permitted provided that they refer to the same index and have the same maturity;
- *"residual position"* shall mean the residual amount from netting, equal to the difference between a long position and short position;
- "specific risk" shall mean the risk of losses caused by adverse changes in the price of traded financial instruments due to factors associated with the issuer's situation. The following definitions shall apply for the purposes of these regulations with regard to the forms of specific risk:
  - *idiosyncratic risk* shall mean the risk of price changes due to daily trading activity;
  - *event risk* shall mean the risk of rapid movements in prices that are greater than those in the general market, due, for example, to a change in rating grade or announcements of mergers/acquisitions;
  - *default risk* shall mean the risk of non-performance by the issuer;
- "backtesting" shall mean tests that compare changes in the value of the portfolio with risk measures generated by the model. With regard to backtesting, the following definitions shall apply:
- *"hypothetical change in the portfolio"* shall mean the hypothetical revaluation difference of the portfolio, where the hypothetical revaluation of the portfolio on day *t* shall refer to the value obtained by multiplying the quantities presented in the portfolio on day *t*-1 by the prices on day *t*;
- *"effective net change in the portfolio"* shall mean the difference between the effective revaluations of the portfolio, where the effective revaluation is determined by subtracting commissions, the results of any intraday trading and accrued interest from the operating result;
- "value at risk (VaR)" shall mean the maximum potential loss that would result from a price change with a given probability over a specified time horizon.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

Banks for which the supervisory trading book is normally less than 5% of the total assets and in any case does not exceed  $\in$ 15 million shall be exempt from compliance with these regulations with regard to supervisory trading book.

Where the supervisory trading book exceeds 6% of total assets or exceeds  $\notin$ 20 million, banks shall comply with these requirements until the next reporting date.

# 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in Part 2 of this Chapter:

 authorization to use specific methods for calculating the capital requirement for positions in funds issued in non-EU and non-G10 countries (Section II, sub-section 4.3): Banking Supervision Department.

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The following units shall be responsible for the administrative procedures referred to in Part 3 of this Chapter:

- exemption from application of add-on factor (Section IV, sub-section 4): Banking Supervision Department;
- imposition of measures to improve the model in the event of an excessive number of exceptions (Section IV, sub-section 4): Banking Supervision Department;
- revocation of authorization to use the internal model for calculating capital requirements for market risks (Section IV, sub-section 4): Banking Supervision Department;
- authorization to use the internal model for calculating capital requirements for market risk (Section VI): Banking Supervision Department.

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#### SECTION II

# CAPITAL REQUIREMENTS

# 1. Individual capital requirement

The capital requirement for market risk for banks that adopt the standardized measurement method shall be equal to the sum of the capital requirements calculated for position risk (see Part 2, Section II), for settlement risk (see Part 2, Section III), for concentration risk (see Part 2, Section IV), for foreign exchange risk (see Part 2, Section V) and for commodities risk (see Part 2, Section VI). The capital treatment of options is set out in Part 2, Section VII.

The capital requirement for market risks for banks that adopt the internal model approach shall be calculated on the basis of internally generated risk measures (see Part 3, Section IV).

Where a bank adopts a combination of the standardized and internal model methods (see Part 3, Section IV, sub-section 3), the total capital requirement shall be calculated by summing the capital requirement obtained using the standardized method with that obtained using the internal model method.

Banks shall comply with this requirement on an ongoing basis.

For banks belonging to banking groups, the individual capital requirement shall be reduced by 25%, in accordance with the provisions of Chapter 6, Section II, sub-section 5.

## 2. Consolidated capital requirement

The capital requirement for banking groups shall be calculated to support position, settlement, concentration, foreign exchange and commodities risks.

Banking groups and the other persons specified in Section I, sub-section 4 shall comply with this requirement on an ongoing basis.

Where the internal model is adopted in calculating capital requirements by only some of the members of a banking group, the capital requirements shall be equal to the sum of the capital requirements calculated using the internal model and the requirements obtained using the standardized method.

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# PART 2

# STANDARDIZED MEASUREMENT METHOD

#### SECTION I

# GENERAL PROVISIONS

# 1. Introduction

The standardized method gives rise to a separate capital requirement for each type of risk.

With regard to position risk, assets held in the supervisory trading book shall be distinguished based on the nature of the financial instrument and the corresponding material risk factor.

Specifically, the following types of risks shall be identified:

- interest rate risk;
- the risk of events tied to the individual issuer; this is comparable to credit risk;
- the risk related to general developments in equity markets;
- the risk related to the performance of individual shares.

Debt securities are exposed to the risk of changes in interest rates (general position risk) and the risk of issuer default (specific position risk), for which there are two separate capital requirements.

Debt securities for which the issuer's performance is linked not to interest rates but to other variables in general shall be treated using one of two methods depending on whether or not they can be separated into elementary financial instruments.

The general position risk in respect of debt securities whose prices depend on interest rates shall be calculated using a procedure that takes account of maturity.

Specific position risk shall be calculated on the basis of the nature of the issuer. Credit risk mitigation shall be recognised, using various methods, provided that specific conditions are met (see Section II, sub-section 2.2).

Conversely, taking positions in credit derivatives without a corresponding position to be hedged gives rise to the assumption of a credit risk that shall be treated as the specific risk in respect of debt securities using the procedures set out in Section II, sub-section 2.3.

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The risk of changes in the value of equity securities depends on a general risk factor, namely general market developments, and specific risk factors, produced by events that affect each security individually. The regulations therefore require the calculation of two capital requirements, one for the general risk position and one for the specific risk position.

The capital requirement for concentration risk (see Section IV) regards supervisory trading book positions that cause the "individual limit" provided for in Title V, Chapter 1 to be exceeded.

The capital requirement for settlement risk shall be calculated for supervisory trading book positions that have not been settled following maturity (see Section III).

Options shall be subject to separate treatment from that adopted for other types of securities. Banks may use three different methods, of increasing complexity (see Section VII).

The simplified method shall only be adopted by banks that use a limited range of purchased options. In this case, options shall be excluded from the calculation of position risk (general and specific) in the supervisory trading book, foreign exchange risk and commodities risk. The capital requirement for options calculated using this method shall be added to those referred to above.

Other banks may apply the other two methods.

The delta-plus method involves transforming an options position into a position in the underlying securities with the same risk profile, as measured, with a linear approximation, by delta. Capital requirements for gamma and vega risks, which are not captured by delta, shall be calculated separately (see Section VII, paragraph 3).

The third method is the scenario approach. In this case, options shall be excluded from the calculation of the general risk in the supervisory trading book, foreign exchange risk and commodities risk. The capital requirement for options calculated using this method shall be added to those referred to above.

In the case of complex financial instruments, banks shall take account of all risk factors that affect their measurement in accordance with the methods set out in Section II.

# SECTION II

# POSITION RISK IN THE SUPERVISORY TRADING BOOK

# 1. Introduction

Position risk describes the risk in respect of fluctuations in the prices of securities owing to factors related to market developments and the situation of the individual issuer.

Position risk, which is calculated for the bank's supervisory trading book, consists of two separate components:

a) *general risk*, which refers to the risk of losses caused by adverse movements in the prices of financial instruments in general.

For example, for debt securities this risk is associated with an adverse change in the level of interest rates; for equity securities it is associated with an adverse general movement in the market;

b) *specific risk*, which refers to the risk of losses caused by adverse movements in the price of financial instruments due to factors related to the individual issuer's situation.

Separate calculations of the position risk and the related capital requirements shall be made for:

- debt securities and other financial instruments whose values depend on interest rates and creditworthiness, including credit derivatives (see subsection 2);
- equity securities and other financial instruments whose values depend on the developments in the equity market (see sub-section 3);
- units in collective investment undertaking (CIUs) and other financial instruments whose values depend on developments in the value of the CIUs (see paragraph 4).

Banks that are not able to properly measure and manage the risks associated with financial instruments sensitive to multiple risk factors shall not conduct business in these instruments.

Where positions originate with financial instruments that are sensitive to more than one risk factor, the capital requirements shall be calculated on the basis of the requirements for the individual risk components isolated using one of the following two approaches, where applicable:

1. separation into elementary contractual components (securities and derivatives) that are sensitive to one type of risk only and application of the capital treatment for the corresponding type of risk;

2. transformation of a complex instrument into a series of sensitivity positions to material risk factors and application of the capital treatment for the corresponding type of risk to those positions. These sensitivity positions shall be calculated using a standard market measurement model or based on an internal measurement model notified previously to the Bank of Italy.

Where the bank elects the second approach, the entire financial instrument shall not be subject to the specific risk requirement, but rather shall receive that for counterparty risk.<sup>3</sup>

Where the bank holds positions that originate with financial instruments whose values depend on risk factors not expressly envisaged by the regulations (for example, weather derivatives and catastrophe bonds), the position risk and the corresponding capital requirement shall be computed using the rules for the risk factor that the bank considers most closely correlated. If none of the risk factors mentioned is sufficiently correlated with the risk on which the price of the security in question depends, a capital requirement of 15% of the value (notional for derivatives and market for other types of instruments) of the contract shall be applied and netting shall be permitted only for identical instruments of opposite sign.

Banks may choose between two different methods for treating convertible bonds. The first involves including convertible bonds among debt securities. The second involves treating them as debt securities or equity securities based on the likelihood of conversion (through the delta equivalent value).<sup>4</sup> Where a bank adopts this method, it shall apply it to all securities of the same type.

# 2. Position risk in respect of debt securities

In calculating position risk for debt securities, banks shall take account of supervisory trading book positions in respect of:

- debt securities whose values depend on interest rates or similar risk factors (e.g., inflation rates) represented by on-balance-sheet assets and derivatives contracts on debt securities;
- interest rate derivatives;
- credit derivatives;
- other instruments whose values depend on interest rates or similar risk factors.

Securities being lent shall be included in the calculation of position risk.

 $<sup>^{3}</sup>$  In calculating counterparty risk exposure – using the mark-to-market, standardized or internal model methods – the financial instrument shall be treated as a derivative sensitive to the risk factor – among those to which the entire instrument is exposed – which gives rise to the greatest counterparty risk exposure (see Chapter 3).

<sup>&</sup>lt;sup>4</sup> In this case, the capital requirements for vega and gamma shall also be calculated.

## 2.1 General risk on debt securities

Banks may use two alternative methods for calculating the general risk on debt securities. The first is based on the maturity of the debt instruments, the second on their duration.

The adoption of the duration method is irrevocable, except in exceptional circumstances.

## 2.1.1 Maturity method

The capital requirement for general risk on debt securities shall be calculated using a interest rate risk measurement system that envisages, as described in detail in Annex B, sub-section 1, the calculation of the net position for each issue and the resulting distribution, separately for each currency, into time-bands. This is given by the sum of the values of the residual positions and the matched positions, the latter weighted using the method set out in Annex B, sub-section 1.<sup>5</sup>

# 2.1.2 Duration method

The procedure to be followed in using the duration method is set out in Annex B, sub-section 2.

### 2.1.3 Treatment of derivatives

All derivatives and other off-balance-sheet transactions in the supervisory trading book whose values primarily depend on interest rates shall be converted, using the methods described below, into positions in the underlyings and shall be subject to the capital requirement for general and specific risk.

Positions of opposite sign in derivatives of the same type<sup>6</sup> may be offset where the following conditions are met:

- a) the positions have the same nominal value and are denominated in the same currency;
- b) the reference rate for floating-rate positions is identical or the nominal interest rate for fixed-rate positions does not differ by more than 0.15% annually;

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<sup>&</sup>lt;sup>5</sup> The calculation of the capital requirement for offset positions is designed to take into account the possibility that opposite positions in the same time-band may not have the same residual maturity and the risk that the yields of different financial instruments, despite having the same maturity, may experience different variations in market value (basis risk). A similar problem arises in offsetting between different time-bands, which does not allow a bank to take account of imperfect correlation between interest rates for the different maturities.

 $<sup>^{6}</sup>$  Including other off-balance-sheet transactions involving unsettled sale transactions and irrevocable purchase commitments.

c) the next interest fixing date (for floating-rate positions) or the residual maturity (for fixed-rate positions) correspond within the following limits: 1) less than one month hence: same day; 2) between one month and one year hence: within seven days; 3) over one year hence: within 30 days.

The first measurement method consists in treating the positions, by residual maturity, as a combination of a cash asset and a cash liability of equal amount.

For example:

- off-balance-sheet transactions in which fixed-rate flows are exchanged for floating-rate flows (e.g., interest rate swaps) correspond to a combination of a fixed-rate asset (liability) and a floating-rate liability (asset). Banks shall therefore record a long (short) position corresponding to the fixed-rate asset (liability) in the time-band for the maturity of the contract<sup>7</sup> and a short (long) position corresponding to a floating-rate liability (asset) slotted in the timeband preceding the next interest fixing date;
- 2) for other off-balance-sheet transactions (e.g., forwards, futures, forward rate agreements, swaps) banks shall record a long position (or short) in the timeband related to the settlement date and a short position (or long) in the timeband for the residual maturity of the contract.<sup>8</sup>

The second method consists of using present value or sensitivity approaches to calculate positions, which shall be broken down based on maturity or average duration.<sup>9</sup> Specifically, banks may use one of the following two methods:

- the first method consists of converting the individual payments in respect of the derivative into their present values. For this purpose, each payment shall be discounted using zero coupon cash yields. A single net present value shall be entered into each time-band, as with zero coupon bonds; these values shall be multiplied by the weights given in Annex B, Table 1;
- an alternative method which may be used only by banks that adopt the duration method for calculating general risk for debt securities (see subsection 2.1.2) – consists of calculating the sensitivity (duration) of the net present value<sup>10</sup> of the derivative implied by the change in the yield for each maturity. Each sensitivity (duration) obtained shall be multiplied by the present value of the derivative and allocated to the corresponding time-band set out in Annex B, Table 3. The output shall be weighted for the hypothetical change in yield only.

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<sup>&</sup>lt;sup>7</sup> Maturity of entire reference term of the contract.

<sup>&</sup>lt;sup>8</sup> Residual maturity of the underlying financial instrument for forwards; time remaining to the settlement date plus maturity of the underlying financial instrument or the reference period for forward rate agreements and for derivatives with a notional underlying instrument (e.g., futures traded on the Italian Futures Market (MIF)).

<sup>&</sup>lt;sup>9</sup> In this case, prior offsetting shall not apply to contracts that meet the conditions set out in points a), b) and c) of this sub-section.

<sup>&</sup>lt;sup>10</sup> The net present value shall be computed using spot zero coupon yields.

2.2 Specific risk on debt securities

# 2.2.1 Calculation of the capital requirement

The capital requirement for specific risk on debt securities shall be calculated as follows: the net positions in each security in the supervisory trading book, calculated in accordance with the rules governing netting, shall be allocated to uniform categories based on the nature of the issuer or obligor, the existence of risk mitigation instruments, any external or internal credit assessment and residual maturity. Each category shall be assigned a weight in accordance with Annex E, Table 1. The net weighted position is given by multiplying the net positions by the corresponding weights for the requirement.

The capital requirement for specific risk is the sum of the net weighted positions, without offsetting long and short positions.

Positions in respect of derivatives that react to interest and foreign exchange rates shall conventionally be assigned a weight of zero for the requirement for specific risk. In the case of derivatives with underlying debt securities, the weight for the requirement relating to specific risk corresponding to the credit quality of the underlying shall be applied.

A capital requirement equal to the entire exposure value<sup>11</sup> shall be applied to exposures in respect of securitizations that, if they had been allocated to the banking book, would have been subject to a weight of 1250%.

The capital requirements set out in the following table shall be applied to positions in respect of covered bonds in the supervisory trading book:

Issuer weight <sup>12</sup>	Maturity of 6 months or less	Maturity greater than 6 and up to 24 months	Maturity greater than 24 months	
Between 20% and 100 %	Between 20% and 0.25% 100 %		1.6%	
150%		8%		

A risk weight of zero shall be applied to debt securities issued or guaranteed by central governments, central banks, local governments and supervised institutions denominated and funded in the domestic currency.

<sup>&</sup>lt;sup>11</sup> In practice, this treatment corresponds to the application of a weight of 1250% under the standardized method.

<sup>&</sup>lt;sup>12</sup> The weight refers to those envisaged in the rules governing credit risk (see Chapter 1) for unsecured senior issues.

# 2.2.2 Calculation of the capital requirement for positions hedged by credit derivatives

Banks may use credit derivatives to reduce specific risk. For the purposes of calculating the specific risk capital requirement, a distinction shall be made between: 1) transactions for which a full allowance is recognized; 2) transactions for which an 80% allowance is recognized; 3) transactions for which a partial allowance is recognized; 4) transactions for which no allowance is recognized.

# Transactions for which a full allowance is recognized

Full allowance for the hedging transaction will be recognized for supervisory capital purposes where the values of the long position and the short position always move in opposite directions and to the same extent.

In addition to the case of two derivatives with identical contractual terms and conditions, this situation occurs in the case of a long cash position hedged by a total rate of return swap (or vice versa) where there is an exact match between the reference asset and the hedged position.<sup>13</sup>

In such cases, no specific risk capital requirements shall apply to both sides of the position.

# Transactions for which an 80% allowance is recognized

An offset of 80% may be recognized where the values of the two positions (long and short) always move in opposite directions and there is an exact match between:

- the reference asset and the cash position;
- the maturity of the reference asset and the maturity of the credit derivative;
- the currency of the reference asset and the currency of the cash position.

In addition, the key features of the credit derivative (e.g. credit event definition, settlement mechanisms) shall not cause price movements of the derivative to deviate from those of the cash position.

This situation occurs, for example, in the case of cash positions hedged by a credit default swap or by a credit-linked note (or vice versa) where the above conditions are met.

In these cases, a reduction of 80% shall be applied to the position with the highest capital requirement, while the specific risk capital requirement for the other position will be zero.

## Transactions for which a partial allowance is recognized.

A partial allowance may be recognized where the values of the two positions (long and short) usually move in opposite directions, for example:

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<sup>&</sup>lt;sup>13</sup> The maturity of the swap in the TROR may differ from that of the cash position.

- 1) in the case of a long cash position hedged by a total rate of return swap (or vice versa) where there is a mismatch between the reference asset and the hedged position but the following conditions are met:
  - i) the reference asset ranks pari passu with or is junior to the hedged obligation;
  - the underlying asset and hedged obligation were issued by the same issuer and contain legally enforceable cross-default or cross-acceleration clauses;
- in the case of a long cash position hedged by a credit derivative (or vice versa) on the same asset where there is a currency or maturity mismatch<sup>14</sup> between the underlying asset and the hedged position;
- 3) in the case of a long cash position hedged by a credit derivative (or vice versa) on another underlying asset where the hedged position is included in the obligations deliverable under the derivative documentation.

For each of the above cases, banks shall take account of only the greater of the specific risk capital requirements relating to the credit derivative and to the hedged position.

# Transactions for which no allowance is recognized

For cases that do not meet the conditions established in the preceding points, the specific risk capital requirement shall be calculated for both the credit derivative and the hedged position.

## 2.3 Credit derivatives

## 2.3.1 General rules

For the purposes of calculating the capital requirement for position risk, the notional amount of the credit derivative shall be used unless otherwise specified.

With regard to the calculation of the capital requirement for the specific risk on derivatives other than total rate of return swaps, banks shall use the residual maturity of the derivatives contract in place of the residual maturity of the obligation.

# 2.3.2 Treatment of positions in respect of protection sales

The positions shall be calculated as follows:

i) for the purpose of general risk, a total rate of return swap gives rise to a long position in the reference obligation and a short position in a

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<sup>&</sup>lt;sup>14</sup> Currency mismatches are subject to the foreign exchange risk requirement.

government security with a maturity equal to term remaining until the next interest fixing date.<sup>15</sup> The same breakdown shall also apply for specific risk purposes;

- for the purpose of specific risk, a credit default swap (CDS) gives rise to a long position in the reference entity. Where the derivative has an external rating and meets the conditions for a qualifying debt item, the bank may recognize a long position in the derivative. If premium or interest payments are due under the CDS, these cash flows must be represented as notional positions in government bonds;
- iii) for the purpose of general risk, a single-name credit linked note (CLN) gives rise to a long position in the CLN itself. For the purpose of specific risk, the bank shall recognize a long position in respect of the reference entity as well as another long position in respect of the issuer of the CLN. Where the CLN has an external rating and meets the requirements for a qualifying debt item, a single long position in the CLN shall be recognized;
- iv) for the purpose of general risk, a multiple-name credit linked note providing proportional protection gives rise to a long position in the CLN itself. For the purpose of specific risk, it gives rise to a long position in each reference entity, each in an amount equal to the proportion of the notional amount of the CLN represented by each reference entity. For each reference entity the risk weight for specific risk shall be that in respect of the obligation with the highest risk weighting among those that can be selected. Where the CLN has an external rating and meets the requirements for a qualifying debt item, a single long position in the CLN shall be recognized;
- v) a first-to-default credit derivative gives rise to a long position in an obligation of each reference entity, each in an amount equal to the notional amount. In any case, the capital requirement shall not be greater than the amount of the maximum credit event payment.

An n<sup>th</sup>-to-default credit derivative gives rise to a long position in an obligation of each reference entity except for the n-1 with the lowest specific risk capital requirement, each in an amount equal to the notional amount. In any case, the capital requirement shall be greater than the amount of the maximum credit event payment.

Where such a derivative has an external rating and satisfies the requirements for a qualifying debt item, a single long position for the derivative shall be recognized;

vi) a CDS index shall be broken down into as many CDSs as there are index components, each treated in accordance with the provisions for single-name CDSs;

<sup>&</sup>lt;sup>15</sup> The short position in the government security has a risk weight of zero, in compliance with the rules governing specific risk.

- vii) single-name credit spread derivatives shall be treated as CDSs. In the case of options, the amount shall be calculated as the delta equivalent value of the notional;
- viii) derivatives on CDS indices give rise to a position in the underlying CDS index. The rules set out in point vi) above shall apply to such positions. In the case of options, the amount shall be calculated as the delta equivalent value of the notional.

## 2.3.3 Treatment of positions in respect of protection purchases

For protection buyers, positions shall be determined as the mirror image of the protection seller, with the exception of an issued credit linked note, which only gives rise to a short position in the reference entity.

If there are call options on the security,<sup>16</sup> the maturity of the short position shall be equal to the maturity of the option.

In the case of n<sup>th</sup>-to-default credit derivatives, protection buyers may offset specific risk for all underlying assets excluding the riskiest n-1 for specific risk purposes.

# 3. Position risk in respect of equity securities

# 3.1 Calculation of the capital requirement

The capital requirement for the position risk relating to equity securities shall be the sum of the following capital requirements:

- a) for general risk on equity securities: 8% of the overall net position;
- b) for specific risk on equity securities: 4% of the overall gross position. A capital requirement of 2% shall be applied to qualifying securities where:
  - individual positions relating to the same issuer do not represent more than 5% of the value of the equity portion of the supervisory trading book; or
  - the individual positions relating to the same issuer represent between 5% and 10% of the total and the total of these positions does not exceed 50% of the equity portion of the supervisory trading book.

An equity security shall be considered qualifying if it satisfies the following conditions:

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<sup>&</sup>lt;sup>16</sup> Normally combined with a step-up clause.

- i. it is issued by a person that has issued at least one traded debt security for which Annex E provides a specific risk weight of less than 8%. Securities that attract a weight of less than 8% only by applying CRM techniques shall be excluded (see Chapter 2);
- ii. is considered a highly liquid instrument based on the criteria set out in Annex C.

For the purpose of calculating equity position risk, account shall be taken of all positions in the supervisory trading book in respect of shares and similar instruments, such as, for example, derivatives on equity indices.<sup>17</sup>

The overall gross position shall be the sum, in absolute value, of all net long and short positions. The difference, in absolute value, between all net long positions and all net short positions, calculated market-by-market (i.e. separately for each country in which the individual securities held by the banks are traded) shall constitute the overall net position in securities traded on regulated markets.

In order to compute the overall gross and net positions, stock index derivatives<sup>18</sup> may be treated as separate securities or broken down into as many positions as there are equity securities that contribute to the calculation of the index. In this case, the individual positions resulting from the breakdown of the index may be offset against opposite positions in the same equity securities relating to other transactions. If the matching of the positions is part of a deliberate arbitrage strategy and the positions are subject to separate control, a capital requirement of 1% of both of the offset positions to cover divergence and execution risk shall be required.

Offsetting shall be permitted even where the set of positions in equity securities that are offset does not fully reflect the composition of the index under the contract, provided that the total value of these positions represents at least 90% of the market value of the index.

The portion of stock-index derivatives that is not offset shall be treated as a long or short position.

# 3.2 Derivative contracts on well-diversified stock indices traded on a regulated market

Banks that do not break down derivative contracts on well-diversified stock indices traded on a regulated market may elect not to apply a specific risk capital requirement for such derivatives, provided that the following conditions are met:

 the index shall reflect the stock market generally (sectoral indices are therefore excluded) and regard a regulated market with at least 200 listed equities;

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<sup>&</sup>lt;sup>17</sup> Banks shall not take account of convertible bonds for the entire period prior to the expiry of the option if they are included among debt securities.

<sup>&</sup>lt;sup>18</sup> For example, futures and options on stock indices.

- the index shall be based on a basket composed of at least 30 equities;
- none of the equities that make up the basket shall have a weight of more than 10% in the calculation of the value of the index. This limit may be increased to 20% if the top 5 equities in the basket do not account for more than 60% of the entire basket.

In addition to the general risk capital requirement, banks shall apply a capital requirement of 1% to the net long or short positions in the contracts in question to cover execution risk.

# 4. Position risk in respect of units/shares of CIUs

# 4.1 General aspects

Banks may use different methods for calculating capital requirements for the general and specific risk in respect of positions in collective investment undertakings (CIUs) held in the supervisory trading book. The approaches are characterized by an increasing degree of sophistication and sensitivity to risk with regard to the information which the investor bank has regarding the effective composition of the CIU's assets.

These positions shall satisfy the specific conditions envisaged for classifying a financial instrument in the supervisory trading book.

Banks may rely on third parties to calculate the position risk capital requirement for CIU positions. Specifically, this task may be performed by the asset management company that operates the fund or the depository or sub-depository bank. Banks shall closely evaluate this choice, taking into account the size and complexity of the funds for which they are granting the engagement.

Specifically, banks that intend to rely on a third party to calculate the capital requirement shall:

- assess the ability of the person to perform the task, taking account of the characteristics of the investments in the fund;
- execute an agreement precisely defining the tasks to be performed in calculating the requirement. The agreement shall govern the methods, timetable and control processes for the information flows with which the person engaged to perform the calculation provides the bank with all information, documentation and outputs from the calculation performed;
- verify ongoing compliance with the terms of the agreement.

In addition, the agreement shall govern the revocation of and withdrawal from the engagement, taking account of the need to ensure continuity in calculating the capital requirement.

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In order to avoid disruptions in the third party's performance of its tasks, replacement of the person shall be governed by the agreement granting the engagement, establishing that, where the engagement is granted for an unspecified period of time, it may be revoked by the bank at any time, while the designated person may withdraw subject to provision of at least six months' notice. In addition, the agreement shall provide that revocation or withdrawal shall not take effect until another suitable person accepts the engagement to replace the previous person.

## 4.2 Methods for calculating the requirement

For the purposes of calculating the position risk capital requirement for CIU positions, account shall be taken of long and short positions.

Offsetting of long and short positions in the same CIU is permitted. Offsetting shall not be permitted between the financial investments in which a CIU is authorized to invest and other positions in the supervisory trading book.<sup>19</sup>

Four different methods (described in Annex F) are available for calculating the capital requirement for CIU shares: 1) full look-through; 2) simplified full look-through; 3) partial look-through; 4) residual method.

The methods under points 1), 2) and 3) shall constitute the specific methods. They may be used only for positions in funds that meet the eligibility criteria set out in sub-section 4.3. The residual method shall apply to other positions.

In all cases, the capital requirement for general and specific position risk may not exceed 32% of the fair value of the unit/share.

#### 4.3 The eligibility criteria for the specific methods

Funds issued by companies having their registered office in and subject to supervision in a Member State or Group of Ten country and that meet the following conditions shall be eligible:

- a) the prospectus or equivalent document shall include:
  - the types of assets the fund in authorized to invest in;
  - any individual investment limits and the relative methodologies for calculating them;
  - the maximum level of leverage, if allowed;

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<sup>&</sup>lt;sup>19</sup> Except where the full look-through approach is adopted.

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- a policy for limiting counterparty risk to which the fund may be exposed if it is allowed to engage in OTC derivatives transactions and repurchase/reverse repurchase and securities lending/borrowing transactions;
- b) the business of the fund shall be reported in the annual financial statements and half-yearly report to enable an assessment to be made of the assets, liabilities, income and operations of the fund over the reporting period;
- c) the units/shares of the CIU shall be redeemable in cash at the request of the holder on a daily basis;
- d) the assets of the fund shall be segregated from the assets of the CIU manager.

In addition, the investor bank shall perform an adequate risk assessment of the fund.

The use of the specific methods in calculating the capital requirement for shares of funds issued in non-EU and non-G10 countries shall be subject to the prior authorization of the Bank of Italy. For this purpose, banks that plan to trade these instruments shall show that the above-listed requirements are met.

# 4.4 Residual method

A capital requirement for general and specific position risk of 32% of the fair value of the share shall apply to funds that do not meet the eligibility criteria for use of the specific methods.

## 5. Treatment of positions in respect of placements

Positions in respect of placement transactions featuring prior subscription, underwriting or assumption of guarantees to the issuer and similar agreements shall be included in the calculation of position risk only after the placement is closed.

For the first five business days following the closing of the placement, the net positions shall be reduced by the following factors:

	first business day		90%;
	second and third business days		75%;
	fourth business day	50%;	
_	fifth business day		25%.

After the fifth day, the positions shall be calculated in full.

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# SECTION III

# SETTLEMENT RISK IN THE SUPERVISORY TRADING BOOK

# 1. Introduction

Transactions in debt securities, equity securities, derivatives, currencies and commodities that remain unsettled after the maturity date expose the bank to the risk of a loss arising from failure to settle.

As regards:

- transactions settled on a "delivery versus payment" (DVP) basis,<sup>20</sup> the loss is the difference between the agreed settlement price and the fair value of the financial instruments, the currencies or commodities to be received (delivered);
- transactions not settled on a DVP basis where cash is paid before the underlying is delivered, or the underlying is delivered before cash is paid (also called "non-DVP" or "free delivery"), the loss is the fair value of the financial instruments, currencies or commodities transferred to the counterparty for which payment is not received, or the cash paid without delivery of the underlying.

The provisions of this Section require the application of capital requirements, calculated in accordance with the methods set out in the following sub-sections, for risks in relation to all unsettled transactions in financial instruments (including derivatives), currencies and commodities.

These rules shall not apply to repurchase and reverse-repurchase agreements or securities or commodities lending or borrowing transactions.

In the event of system-wide failure of a settlement or clearing system, the Bank of Italy may temporarily waive, in part or in full, the application of capital requirements to unsettled transactions until the situation is rectified. In such circumstances, the failure of a counterparty to settle a trade shall not be deemed a default for the purposes of credit risk.

# 2. Capital requirements for DVP transactions

The capital requirement shall be calculated by multiplying the difference between the agreed settlement price and the fair value of the financial instruments, currencies or commodities to be received (delivered) - where such difference, being positive, entails a loss for the financial intermediary - by the following percentages, broken down by time-band:

 $<sup>^{20}</sup>$  "Payment versus payment" (PVP) transactions are treated as DVP transactions.

Number of business days after the settlement date	Risk weight (%)
5 to 15	8
16 to 30	50
31 to 45	75
46 or more	100

# 3. Capital requirements for non-DVP transactions

Banks that pay cash for or deliver financial instruments, currencies or commodities and does not receive the corresponding deliverable or payment due in the course of the same day or, for cross-border transactions, by the next working day, shall recognize the transferred asset as a receivable from the counterparty and apply the same calculation method for the capital requirement used for exposures not included in the supervisory trading book.

Specifically, in calculating exposure to the counterparty, banks using an IRB approach for credit risk capital requirements may:

- 1. apply a PD based on an external rating assigned by an ECAI for counterparties with which the bank has no other exposures allocated to the banking book. The PD shall comply with the specific criteria set out in the rules governing credit risk for the IRB method;
- 2. apply an LGD of 45%, in lieu of an internal estimate, as long as that value is applied to all unsettled transactions.

In alternative to points 1) and 2) above, banks may apply to exposures in respect of unsettled transactions:

- the risk weights used in the standardised approach where they have no other exposures to the counterparty in the banking book; or
- a 100% risk weight.

Regardless of the method used, where the exposure amounts in respect of unsettled DVP transactions are not material, banks may apply a 100% risk weight.

Banks that have made payment or delivery and have not received the deliverable or payment from the counterparty by the fourth business day after the agreed delivery date<sup>21</sup> must deduct from its supervisory capital both the amount transferred and any positive difference in its favour between the fair value of the underlying receivable and the cash transferred or between the cash receivable and the fair value of the transferred deliverable.

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 $<sup>^{21}</sup>$  The "second leg" in a non-DVP transaction.

#### SECTION IV

## CONCENTRATION RISK IN THE SUPERVISORY TRADING BOOK

## 1. Introduction

The supervisory regulations concerning concentration risk (see Title V, Chapter 1) require banks to comply with a quantitative limit (the individual exposure limit), expressed as a proportion of supervisory capital, for risk positions in respect of borrowers. The rules do not govern exposures in the bank's supervisory trading book.

The rules in this Section require compliance with a specific capital requirement for banks that, as a result of the risk positions in their supervisory trading books, have exceeded the individual exposure limit. The capital requirement shall be calculated with reference to the risk positions in the supervisory trading book that cause the bank to exceed the limit.

Banks and banking groups may exceed the individual exposure limit provided that they meet the following conditions:

- 1) exposures in the banking book to borrowers or groups of connected borrowers do not exceed the limits set by the rules on risk concentration,<sup>22</sup> such that the amount in excess of the limit originates entirely in the supervisory trading book;
- 2) banks comply with a further capital requirement for exceeding the limits on large exposures;
- 3) where no more than 10 days have passed since the limit was exceeded, the exposure to the borrowers or groups of connected borrowers in the supervisory trading book is not more than five times the supervisory capital of the bank;
- 4) where more than 10 days have passed since the limit was exceeded, the total excess exposure is no more than six times the supervisory capital of the bank.

With respect to the supervisory trading book, the exposure to an individual borrower or group of connected borrowers shall be the sum of the net long position calculated for each financial instrument issued by the borrower or group of connected borrowers and the exposure to settlement risk and counterparty risk in respect of the same borrower as determined in compliance with the provisions of the present Title. The risk position in respect of the supervisory trading book shall be measured by weighting the exposure in compliance with the provisions of Title V, Chapter 1.

 $<sup>^{22}</sup>$  For a definition of "connected borrowers" see Title V, Chapter 1, Section I, sub-section 3).

# 2. Calculation of the capital requirement

The capital requirement for concentration risk shall be calculated as follows:

- *a)* the total risk position shall be calculated as the sum, for each borrower, of the risk position in respect of the supervisory trading book and all other risk positions;
- *b)* for each borrower, any excess over the individual exposure limit shall be measured, the amount being the difference between the total risk position in respect of a borrower and the individual exposure limit;
- *c)* for borrowers for which an excess exposure is found, the risk positions in the supervisory trading book in respect of such borrowers shall be ordered to identify the riskiest, to which the excess exposure shall be attributed;

For this purpose, the positions in the supervisory trading book shall be ordered starting with those subject to capital requirements for specific risk and subsequently including those subject to capital requirements for settlement and counterparty risk; in each risk profile, the excess shall be allocated beginning with the component with the largest capital requirement;

- *d*) the positions thus ordered shall be summed until they reach the value of the amount in excess as determined under point *b*);
- e) where no more than 10 days have passed since the limit was exceeded, the additional capital requirement shall be equal to twice that required for specific risk, settlement risk and counterparty risk for the positions identified as in point d);
- *f*) where more than 10 days have passed since the limit was exceeded, the additional capital requirement shall be calculated by:
  - summing the positions identified as in point d) in the intervals given in Table 1, column 2, beginning with the position with the smallest capital requirement, until the upper limit of each interval is reached;
  - multiplying the capital requirements for the positions thus classified by the corresponding percentages given in Table 1, column 3;
  - summing the result of the product of capital requirements and the related percentages.

# Table 1<sup>23</sup>

<b>Total risk position</b> (% of supervisory capital)			(%	Excess (% of supervisory capital)			Percentage	
(column 1)			(column 2)			(column 3)		
from	25%	to	40%	from	0%	to	15%	200%
from	40%	to	60%	from	15%	to	35%	300%
from	60%	to	80%	from	35%	to	55%	400%
from	80%	to	100%	from	55%	to	75%	500%
from	110%	to	250%	from	75%	to	225%	600%
over 250%			over 225%			900%		

 $<sup>^{23}</sup>$  The intervals in this table shall be considered as closed on the right.

#### SECTION V

## FOREIGN EXCHANGE RISK

Foreign exchange risk is the risk of incurring losses as a result of adverse changes in foreign exchange rates on all positions held by the bank regardless of the portfolio to which they are allocated.

Banks shall comply with a capital requirement of 8% of their net open position in foreign currency.

The present regulations shall not apply to banks whose net open position in foreign currency does not exceed 2% of supervisory capital.

The net open position in foreign currency shall be measured by:

- 1) calculating the net open position in each currency and in gold;
- converting the net positions into euros on the basis of the exchange rate or the price of gold;
- 3) separately summing all net long and net short positions.

The greater of the total net long and total net short positions shall be the bank's net open foreign currency position. The net open foreign currency position shall not include:

- a) forward operations for the purchase or sale of securities in foreign currencies with settlement in the currency in which the security is denominated;
- b) assets that constitute negative elements of supervisory capital;
- c) equity investments and tangible assets.

The exemptions allowed under points b) and c) shall not apply where the assets are generally or specifically hedged on the spot or forward market.

Assets and liabilities indexed to the exchange rate of composite currencies shall be broken down into the component currencies in proportion to the weight of each currency in the basket.

Positions in foreign currencies in respect of CIUs shall be included in the calculation of the bank's net overall foreign currency position.

A distinction shall be made between: a) positions in CIUs whose current underlying positions in foreign currencies are known to the bank; b) other CIU positions.

For CIUs referred to in point a), the book value shall be attributed to the foreign-currency assets that make up the CIU in proportion to the relative weight of each asset in the total investments of the CIU. The resulting foreign currency positions shall be included in the calculation of the net foreign currency position.

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As regards other CIU positions, it shall be assumed that the CIU is invested up to the maximum extent allowed under the CIU's mandate in foreign exchange. For CIUs allocated to the supervisory trading book and whose rules allow borrowing (the "leverage effect"), the bank shall take account of the maximum indirect exposure that the CIU could achieve by taking leveraged positions. For this purpose, the book value of the CIU shall be proportionally increased up to the maximum exposure to the underlying investment items resulting from the investment mandate.<sup>24</sup>

Foreign currency positions in respect of other CIU positions as determined above shall be treated as separate currencies. Where, however, the bank is aware of the direction (asset or liability) of the underlying foreign currency positions, the long and short positions may be added to the totals of the other long and short foreign currency positions respectively ("other CIU positions – non-separate currencies"). No netting between long and short positions in the same CIU or different CIUs shall be allowed.

In this case, the net open foreign currency position shall be the sum of:

- the greater of: a) the sum of net long positions plus long positions in "other CIU positions non-separate currencies" plus the position in gold, if the latter is a net long position, and; b) the sum of net short positions plus short positions in "other CIU positions non-separate currencies" plus the position in gold, if the latter is a net short position;
- positions in "other CIU positions separate currencies".

In all cases, the overall capital requirement for position and foreign exchange risk for positions in CIUs shall not be greater than 40%.

In the calculation of the net foreign currency position, the currencies for which the sum of all assets and liabilities does not exceed 2% of the total value of assets and liabilities shall be aggregated and treated as a single currency. Gold shall always be treated separately from currencies.

 $<sup>^{24}</sup>$  In the case of a given CIU "X" whose rules allow investments of 100 that can be increased by recourse to leverage up to 110, the book value of the position in "X" shall be increased by 10%.

#### SECTION VI

## COMMODITIES RISK

# 1. Introduction

Banks shall hold a specific capital requirement against the risk of losses on positions in commodities.

The calculation of the capital requirement on commodity positions shall encompass all on- and off-balance sheet assets and liabilities in commodities. Commodity positions held solely for the purposes of stock financing may be excluded.

Bank may use the simplified approach, the maturity ladder approach method or the extended maturity ladder approach to calculate the capital requirement.

## 2. Simplified approach

Banks that use the simplified approach shall hold a capital requirement for each commodity that is the sum of the following elements:

- 1) 15% of the net position, long or short, multiplied by the spot price for the commodity;
- 2) 3% of the gross position, long plus short, multiplied by the spot price for the commodity.

The overall capital requirement for commodities risk shall be calculated as the sum of the capital requirements calculated for each commodity.

# 3. Maturity ladder approach

Banks that opt to use the maturity ladder approach to calculate their capital requirements shall notify the Bank of Italy. In all cases, banks shall apply the method selected on an ongoing basis.

The bank shall use a separate maturity ladder<sup>25</sup> for each commodity. Positions held in the same commodity shall be assigned to the appropriate maturity bands; stocks shall be assigned to the first maturity band.

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<sup>&</sup>lt;sup>25</sup> The maturity bands are: 1 month or less; over 1 month, not exceeding 3 months; over 3 months, not exceeding 6 months; over 6 months, not exceeding 12 months; over 1 year, not exceeding 2 years; over 2 years, not exceeding 3 years; over 3 years.

Positions in the same commodity may be offset and assigned to the appropriate maturity bands on a net basis for positions in contracts maturing on the same date and for positions in contracts maturing within 10 days of each other if the contracts are traded on markets which have daily delivery dates.

The bank's capital requirement for each commodity shall be calculated on the basis of the relevant maturity ladder as the sum of the following:<sup>26</sup>

- 1) twice the matched position in the same maturity band for each band multiplied by 1.50% and by the spot price of the commodity;
- 2) the unmatched position in the same maturity band multiplied by 0.6 % (carry rate), the number of maturity bands into which it is carried forward,<sup>27</sup> and the spot price for the commodity;
- 3) twice the matched position in the same maturity band for each band multiplied by 1.50% and the spot price of the commodity;
- 4) the residual unmatched position, multiplied by 15 % (outright rate) and by the spot price for the commodity.

The bank's overall capital requirement for commodities risk shall be the sum of the capital requirements calculated for each commodity as above.

## 4. Extended maturity ladder approach

The extended maturity ladder approach may be used by banks that 1) undertake significant commodities business; 2) have a diversified commodities portfolio; and 3) are not yet in a position to use internal models for the purpose of calculating the capital requirement for commodities risk.

Banks that opt to use the extended maturity ladder approach to calculate their capital requirements shall notify the Bank of Italy and shall apply the approach on an ongoing basis.

 $<sup>^{26}</sup>$  For the purposes of calculating capital requirements, the following definitions shall apply:

<sup>— &</sup>quot;matched position in same maturity band" shall mean a commodity position in a given maturity band offset by a matching position for the same amount in the same band;

 <sup>&</sup>quot;unmatched position in same maturity band" shall mean a residual long or short position in a given maturity band;

 <sup>&</sup>quot;matched position between two maturity bands" shall mean a commodity position unmatched in the same maturity band but offset by an unmatched position in a subsequent maturity band;

<sup>— &</sup>quot;unmatched position" shall mean a position that is unmatched in the same maturity band and cannot be offset by an unmatched position of the opposite sign in a subsequent band;

<sup>— &</sup>quot;net position in each commodity" shall mean the difference between the bank's long and short position in the same commodities and in derivatives (futures, swaps, options or warrants) in the same commodity.

<sup>&</sup>lt;sup>27</sup> In practice, if the unmatched position refers to two successive bands, then the product will be equal to 0.6% because the interval between the two bands is 1. If the bands are not contiguous (for example, "over 1 month, not exceeding 3 months" and "over 6 months, not exceeding 12 months") then the product will be 0.6% multiplied by the interval between the two bands, which in our example would be  $0.6\%^{2}2=1.2\%$ .

	Precious metals (except gold)	Base metals	Agricultural products	Other, including energy products
Spread rate %	1.0	1.2	1.5	1.5
Carry rate %	0.3	0.5	0.6	0.6
Outright rate %	8	10	12	15

Banks shall use the spread rates, carry rates and outright rates given in the following table:

The method for calculating capital requirements is identical to that used in the maturity ladder approach.

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### SECTION VII

# TREATMENT OF OPTIONS

# 1. Introduction

For the purpose of calculating capital requirements for market risks, special treatment shall be reserved for options. Options are derivative products whose price risk is difficult to measure in view of the potential for errors in applying linear instruments to them.

Banks may use one of the following alternative methods in the treatment of options:

- 1) the simplified approach;
- 2) the delta-plus method;
- 3) the scenario approach.

# 2. Simplified approach

Banks that use a limited range of purchased options may adopt the simplified approach.

Under the simplified approach, positions in options and the associated underlying, both cash or forward, shall be subject to separately calculated capital requirements that incorporate both general risk and specific risk.

The capital requirement calculated under this approach is as follows:

- for long positions in the underlying (cash and forward) associated with purchased put options or short positions in the underlying (cash and forward) associated with purchased call options, the capital requirement shall be equal to the market value of the underlying multiplied by the sum of the specific and general risk weights for that instrument, less any positive intrinsic value of the option;
- for purchased call options or purchased put options, the capital requirement shall be equal to the lesser of:
  - 1) the market value of the underlying multiplied by the sum of the specific and general risk weights for the underlying;
  - 2) the market value of the option. $^{28}$

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<sup>&</sup>lt;sup>28</sup> In the case of options on currencies and commodities not held in the supervisory trading book, the book value can be used in place of market value.

## 3. Delta-plus method

## 3.1 General aspects

The delta-plus method uses the sensitivity parameters associated with options. Banks that adopt this method shall recognize options as positions equal to the market value of the underlying multiplied by the delta (the delta-weighted position) in measurement systems for position risk in the supervisory trading book, foreign exchange risk and commodities risk.

However, since delta does not sufficiently cover the risks associated with options positions, banks shall also calculate capital requirements for gamma (the rate of change of delta) and vega (the sensitivity of the value of an option to a change in price volatility) in order to calculate the total capital requirement. These sensitivities shall be calculated in accordance with a standard market model or with the bank's proprietary model, previously notified to the Bank of Italy.

The capital requirements for specific risk shall be calculated separately by multiplying the delta equivalent value of each option by the risk weights set out in Section II.

## 3.2 Calculation of the capital requirement for general delta risk

Delta-weighted positions for options with debt securities as the underlying shall be incorporated in the calculation of the capital requirement in accordance with one of the procedures in Section II, sub-section 2 after having slotted the positions into the time-bands set out in Annex B.

The capital requirement for options on CIUs shall be calculated with respect to the delta-weighted positions in accordance with the calculation method for which the CIU qualifies on the basis of the provisions of Section II, sub-section 4.

The capital requirement for options with equities as the underlying shall be calculated on the basis of the delta-weighted positions in accordance with the provisions of Section II, sub-section 3.

The capital requirement for delta-weighted positions in respect of options on foreign currency shall be calculated on the basis of the method set out in Section V, while that for delta-weighted positions in respect of options on commodities shall be calculated on the basis of one of the methods set out in Section VI.

For other derivatives, banks shall adopt a two-legged approach, with one entry at the time the underlying contract takes effect and another at the time the underlying contract matures.<sup>29</sup> Banks shall treat floating-rate instruments with caps

 $<sup>^{29}</sup>$  For example, a purchased call option on a June three-month interest-rate future will in April be considered, on the basis of its delta-equivalent value, to be a long position with a maturity of five months and a short position with -35 —

or floors as a combination of floating rate securities and a series of European-style options.<sup>30</sup>

# 3.3 Calculation of the capital requirements for general gamma and vega risk

Banks shall calculate the gamma and vega for each option position (including hedge positions) separately.

For the purpose of calculating the capital requirement for gamma, a "gamma impact" shall be calculated for each option on the same underlying using a Taylor series expansion:

gamma impact =  $\frac{1}{2}$  \* gamma \*  $VU^2$ 

where VU, which is the variation of the underlying,<sup>31</sup> is calculated as follows:

- for interest-rate options if the underlying is a bond, the market value of the underlying shall be multiplied by the risk weights set out in Annex B, Table
   An equivalent calculation shall be carried out where the underlying is an interest rate, again based on the assumed changes in the corresponding yield in Annex B, Table 1;
- 2. for options on equities and equity indices and for foreign-exchange and gold options, the market value of the underlying shall be multiplied by 0.08;
- 3. for options on commodities, the market value of the underlying shall be multiplied by 0.15;<sup>32</sup>
- 4. for options on CIU positions, the market value of the underlying shall be multiplied by 0.32 where the residual method is used to calculate the capital requirement for position risk in CIUs;<sup>33</sup>
- 5. in the case of financial instruments sensitive to more than one risk factor,<sup>34</sup> in calculating the gamma impact for each risk factor the market value of the

a maturity of two months. An equivalent written option will be considered to be a long position with a maturity of two months and a short position with a maturity of five months.

<sup>&</sup>lt;sup>30</sup> European-style options are options that the holder may exercise only on the expiry date. The date is set by the parties if the transaction involves an over-the-counter option and by market practice if it involves an exchange-traded option. American-style options can be exercised on any business day as from the effective date of the contract up to and including the expiry date.

<sup>&</sup>lt;sup>31</sup> For options on interest rates, underlyings in the same time-bands referred to in Annex B, Table 1, shall be considered the same underlying. For options on equities and equity indices, underlyings in the same national market shall be considered the same. For options on foreign exchange and gold, each currency pair and gold shall be considered the same.

<sup>&</sup>lt;sup>32</sup> For options on commodities, underlyings in the same commodity shall be considered to be the same (see Part 2, Section VI for a definition of "position in the same commodity").

<sup>&</sup>lt;sup>33</sup> Where one of the specific methods is adopted, the gamma impact shall be calculated on the basis of the variation in the value of the underlying investments.

<sup>&</sup>lt;sup>34</sup> Where the bank has opted for the second type of representation (sensitivity positions) referred to in Section III.

underlying shall be multiplied by the corresponding coefficient referred to in the previous points.

The individual gamma impacts for each option on the same underlying shall be summed to obtain a net positive or negative gamma impact for each class of underlying.

The total gamma capital requirement shall be the sum of the absolute value of the net negative gamma impacts.

Banks shall calculate the capital requirements for volatility risk by multiplying the sum of the vegas for all options on the same underlying by a proportional shift in volatility of  $\pm 25\%$ . The total capital requirement for vega risk shall be the sum of the absolute value of the individual capital requirements for each underlying

## 4. Scenario approach

## 4.1 General aspects

The scenario approach uses simulation techniques to calculate variations in the value of an options portfolio and the associated hedging positions as a result of hypothetical changes in the level and volatility of the prices of underlyings. Under this approach, the capital requirement for general risk is determined by the scenario (i.e. the combination of price and volatility changes) that produces the greatest loss.

Banks that intend to adopt the scenario approach for options shall follow the procedures set out in Part 3 for the purposes of recognizing internal models for calculating capital requirements for market risk.

## 4.2 Calculating the capital requirements

For the purpose of calculating the capital requirement for general risk, banks shall construct a series of matrices in which they record changes in the value of the option portfolio for simultaneous changes in the option's underlying rate or price and in the volatility of that rate or price. A different matrix shall be constructed for each individual underlying.

The options and related hedging positions shall be evaluated over a specified range above and below the current value of the underlying.

The range for interest rates shall be consistent with the assumed changes in yield set out in Annex B, Table 3.

The other ranges are  $\pm 8\%$  for equities,  $\pm 8\%$  for foreign exchange and gold, and  $\pm 15\%$  for commodities. In the case of financial instruments sensitive to

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more than one risk factor,<sup>35</sup> the intervals shall be those associated with the material risk factors.

For all risk categories, at least seven observations (including the current observation) shall be used to divide the range into equally spaced intervals.

For the second dimension of the matrix – regarding the change in the volatility of the underlying rate or price – a shift of  $\pm 25\%$  shall be adopted. The Bank of Italy may require individual banks to use different changes in volatility.

After calculating the matrix, each cell contains the net profit or loss of the option and the underlying hedge instrument. The capital requirement shall then be calculated as the largest loss contained in the matrix.

The capital requirements for specific risk shall be calculated separately by multiplying the delta equivalent value of each option by the risk weights set out in Section II, sub-sections 2.2, 3 and 4.

\* \* \*

Banks with significant options business shall monitor the other risks associated with such operations, for which no capital requirements have been established. Specifically, these include rho, which is the rate of change in the value of the option with respect to the interest rate, and theta, which is the rate of change in the value of the option with respect to time.

 $<sup>^{35}</sup>$  Where the bank has opted for the representation based on sensitivities referred to in Section III.

#### SECTION VIII

# COMMON PROVISIONS

For the purpose of calculating capital requirements for market risks except foreign exchange risk, positions shall be measured at fair value at the close of each business day.

In the case of off-balance-sheet transactions without a reference instrument,<sup>36</sup> the notional principal amount shall be used, except where one of the present value or sensitivity methods set out in Section II is adopted.

For off-balance-sheet transactions involving options and for warrants, one of the methods set out in Section VII shall be adopted.

Foreign exchange transactions shall be converted into euros at the spot exchange rate at the close of each business day. Non-hedge off-balance-sheet transactions other than unsettled spot transactions may be converted into euros at the current forward exchange rate for maturities equal to the residual life of the transaction.

<sup>&</sup>lt;sup>36</sup> For example, interest rate swaps or forward rate agreements.

PART 3

## **INTERNAL MODEL METHOD**

#### SECTION I

# GENERAL PROVISIONS

Banks may calculate the capital requirements for position risk in respect of securities in the supervisory trading book, commodities risk and foreign exchange risk for the entire portfolio using their own internal model in place of the standardized method, provided that they satisfy a number of organizational and quantitative requirements and are authorized by the Bank of Italy.

Internal models for calculating the market risk capital requirements shall be based on the daily control of risk exposure, calculated using an approach based on statistical value-at-risk procedures (VaR). The VaR method shall be supplemented with other forms of risk measurement and control (for example, sensitivity analysis, parametric limits based on estimates of the impact of changes in market prices on the value of positions, etc.) and the bank's supervisory body shall be aware of the main assumptions and implicit limitations of the model.

Banks that intend to use an internal model for calculating market risk capital requirements shall have a risk management system that is conceptually sound and consistent and implemented with integrity.

#### SECTION II

## ORGANIZATIONAL REQUIREMENTS

## 1. Corporate governance

The governing bodies play a key role in achieving an effective and efficient market risk management and control system. The supervisory, management and control bodies, each within the scope of its respective tasks and duties, shall establish the general policies of the system, shall be responsible for its implementation, shall oversee its actual operation, and shall verify its overall functionality and compliance with regulatory requirements. Special emphasis shall be placed on the processes, functions, and other factors relevant for the purposes of calculating the capital requirement. Banks shall refer to the provisions of Title I, Chapter I, Part 4, for the detailed specification of the tasks and duties of each governing body.

## 2. Organization and control systems

## 2.1 Line controls

Line controls shall be carried out by front-office and back-office units. The controls may be automated or governed by appropriate operating protocols, for example hierarchical controls.

In any event, the line controls system shall be suitably documented and understood by the managers of the individual operating units.

The controls shall be designed to verify the accuracy, completeness and internal consistency of the information on transactions and compliance with operating limits (for example, those expressed in terms of sensitivity, notional value, etc.) established for the various operating units.

# 2.2 Second-level controls: the risk control unit

The bank shall have a risk control unit that is independent from business trading units and that reports directly to the management body.

The unit shall be responsible for designing and implementing the bank's risk management system and shall product and analyse daily reports on the output of the risk measurement model.

Specifically, the daily report produced by the risk control unit shall be reviewed by a level of management with sufficient authority to enforce reductions

of positions taken by individual traders as well as in the bank's overall risk exposure.

The bank shall establish procedures for monitoring and ensuring compliance with a specified set of internal policies and controls concerning the overall operation of the risk measurement system.

This system shall be well documented, for example by means of a risk management manual describing its fundamental principles and explaining the techniques used to measure market risk.

The model shall be closely integrated into the daily risk-management process and shall be capable of providing information on the bank's risk exposure to the governing bodies.

Specifically, it is necessary that:

- 1) the calculation of the capital requirements be based on the model used for internal management purposes and not on specific procedures used exclusively for calculating the capital requirements;
- 2) the model be used in conjunction with operating limits, and the relationship between the limits and the model is consistent over time and well understood by traders and the governing bodies;
- 3) the model's output is an integral part of the bank's process for monitoring and controlling its risk profile.

In addition, the bank shall frequently conduct a rigorous programme of stress testing. The outputs shall be used in the internal assessment of capital adequacy and shall be reviewed by the governing bodies and be reflected in the policies and limits they set.

## 2.3 Validation of the model

The validation process shall consist of a set of activities and procedures for ensuring that the design of the model is conceptually sound and consistent and that it adequately captures all material risks.

The validation process shall be conducted when the model is initially developed and when any significant changes are made. The validation shall also be conducted on an ongoing basis.

The validation shall be carried out by qualified persons independent of the model development process, even if they are functionally connected with the risk management unit. In all cases, validation shall be carried out by persons who are not involved in the internal audit function.

Where the treatment of specific risk is incorporated in the model, the internal validation process shall also address compliance with the additional regulatory requirements for handling specific risks.

The internal validation of the model shall at a minimum include:
- a) tests to demonstrate that any assumptions made within the internal model are appropriate and do not underestimate the risk. For example, assumptions subject to verification may include assumptions about the normalcy of the distribution, the use of square root of time for switching from a time horizon of one day to ten days, the use of interpolation or extrapolation techniques in constructing curves and/or time series, and the robustness of the pricing models;
- b) in addition to regulatory backtesting programmes, analysis conducted using additional tests that may include, for example:
  - tests conducted using hypothetical changes in the value of the portfolio (that would be realized if the end-of-day positions were to remain unchanged);
  - tests based on longer observation periods than those required for regulatory backtesting programmes (for example, 3 years);
  - tests conducted using confidence intervals other than that (99%) required by the quantitative standards;
  - backtesting based on lower-level portfolios compared with the bank's entire supervisory trading book.

The results of the validation process shall be appropriately documented and submitted for review to the internal control function and the governing bodies. The report shall specifically address any problem areas.

# 2.4 Internal review

The internal audit function shall review the entire risk management process at least once a year. The review shall consider:

- the adequacy of the regulatory compliance of the risk management system, including the relevant documentation, and of the organization of the risk control unit;
- the integration of the internal model outputs into daily risk management;
- the overall reliability of the information system;
- the risk measurement models and the pricing systems that are used by frontand back-office personnel;
- the accuracy and completeness of the data, and the accuracy and appropriateness of volatility and correlation assumptions;
- the verification process that the bank employs for assessing the consistency, timeliness and reliability of the data sources used to run internal models, included the independence of such sources;
- the verification process that the bank employs to assess backtesting;
- the risk measurement model validation process.

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The bank shall also perform periodic reviews of the risk measurement system, of the activities carried out by the control unit and of compliance with the risk management procedures by trading units.

In order to ensure its independence, the internal audit function shall not be directly involved in designing and developing the risk management system.

Within the scope of its ordinary reporting to the governing bodies, the internal audit function shall, at least once a year, prepare a final report describing the activities carried out and the related findings, specifically addressing problem areas and failures discovered and proposing corrective actions.

#### SECTION III

# QUANTITATIVE REQUIREMENTS

# 1. Criteria for the specification of risk factors

The internal model shall comply with a number of restrictions on the choice of risk measurement parameters. Specifically:

- with regard to interest rate risk, the model shall incorporate risk factors corresponding to interest rates in each currency in which the bank has interest rate sensitive on- or off-balance-sheet positions. The bank shall model the yield curves using one of the generally accepted approaches. For material exposures to interest rate risk in major currencies and markets, the yield curve shall be divided into a minimum of six maturity segments. The risk measurement system shall also capture the risk of less than perfectly correlated movements between the yield curves for different financial instruments;
- with regard to foreign exchange risk, the measurement system shall incorporate risk factors corresponding to gold and to the individual foreign currencies in which the bank's positions are denominated;
- with regard to equity securities risk, the measurement system shall use a separate risk factor at least for each of the equity markets in which the bank holds significant positions;
- with regard to commodities position risk, the measurement system shall employ a separate risk factor at least for each commodity in which the bank holds significant positions. The risk measurement system shall also capture the risk of less than perfectly correlated movements between similar, but not identical, commodities and the exposure to changes in forward prices arising from maturity mismatches. It shall also take account of market characteristics, notably delivery dates and the scope provided to traders to close out positions;
- the model shall accurately reflect, within each of the general risk categories, the specific risks of options.

In order to use the model to calculate the capital requirement for specific risk in respect of debt and equity securities, banks shall demonstrate that the model:

- explains the historical price variation in the portfolio; $^{37}$
- captures the concentration of the portfolio;<sup>38</sup>

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<sup>&</sup>lt;sup>37</sup> One measure that explains the historical variation in price is the R2 value of a regression. In this case, the bank's model should be able to explain at least 90% of the historical price variation or should explicitly include estimates of the residual variability not captured in the factors included in the regression.

<sup>&</sup>lt;sup>38</sup> The bank's internal model shall be sensitive to changes in portfolio composition and provide for higher capital requirements as portfolio concentration increases.

- is robust to an adverse environment;<sup>39</sup>
- adequately captures name-related basis risk;<sup>40</sup>
- adequately capture event risk;<sup>41</sup>
- be validated through back-testing aimed at assessing whether specific risk is being accurately captured.

Where the bank is exposed to the risk of low probability and high severity events (which are not reflected in the VaR calculation, which envisages a 10-day holding period and a 99% confidence interval), the bank shall ensure that such events are adequately captured using additional approaches, such as, for example, stress testing. The outputs of these approaches shall be considered for internal management purposes.

In measuring specific risk using the internal model, the bank shall conservatively assess the risk in respect of less liquid positions and of positions with limited price transparency. In identifying risk factors, proxies may be used only if the available data is insufficient and does not reflect the true risk associated with a position or portfolio and only where they are appropriately conservative.

Banks may independently establish methods for measuring the risk of individual positions and aggregation criteria for calculating portfolio risk,<sup>42</sup> notifying the Bank of Italy of the criteria for aggregating the risks in respect of the individual components of the portfolio.

#### 2. Criteria for calculating VaR

The VaR shall be calculated on a daily basis using a 99% one-tailed confidence interval and a 10-day holding period.

In addition, the historical observation period shall be at least one year previous, except where a shorter observation period is justified by a significant upsurge in price volatility. For banks that use a weighting system, the weighted average time lag of the observations shall not be less than six months.

<sup>&</sup>lt;sup>39</sup> The bank's internal model shall be able to signal rising risk in an adverse environment. This could be achieved by incorporating in the historical estimation period at least one full business cycle and ensuring that the model would have been accurate in the downward portion of the cycle. Alternatively, the result could be obtained through a simulation of historical or plausible worst-case environments.

<sup>&</sup>lt;sup>40</sup> Basis refers to the difference in value between the hedge and the instrument hedged. Specifically, as to specific risk, the basis risk is given by idiosyncratic differences between similar but not identical positions, for example, debt positions with different levels of subordination, maturity mismatches or credit derivatives with different default events.

<sup>&</sup>lt;sup>41</sup> With regard to the specific risk linked to debt securities, the model shall specifically consider migration risk (a change in rating grade). With regard to specific risk relating to equity securities, the model shall consider events that are reflected in large jumps in prices, due to, for example, mergers, break-ups and takeovers. In addition, the banks shall assess the representativeness of the samples analysed, especially taking into account possible distortions related to survivorship bias.

<sup>&</sup>lt;sup>42</sup> For example, available options include the use of covariance matrices, historical simulations and Monte Carlo simulations.

The dataset shall be updated at least every three months. Banks shall update them more frequently whenever market conditions change substantially.

In calculating VaR, banks may use empirical correlations within a risk category and across different risk categories. The Bank of Italy shall determine whether the bank's method for measuring correlations is sound and implemented with integrity.

#### SECTION IV

# CALCULATION OF THE CAPITAL REQUIREMENT FOR SECURITIES POSITION RISK, FOREIGN EXCHANGE RISK AND COMMODITIES RISK

# 1. Introduction

Banks may be authorized by the Bank of Italy to use internal models for calculating the capital requirements for general and specific position risk in respect of debt and equity securities and CIU positions (see Part 2, Section II), foreign exchange risk (see Part 2, Section V) and commodities risk (see Part 2, Section VI).

Banks may use the internal model to calculate all or some of the above capital requirements. In the latter case, the capital requirements shall be a combination of those calculated using the internal model and those calculated using the standardized method set out in Part 2 for risks not encompassed by the model.

A bank authorized to use internal models for foreign exchange risk shall be capable of computing CIU positions on the basis of their actual positions in foreign currencies. Where a bank is not aware of the effective foreign currency positions of the CIU, such positions shall be treated using the standardized method for the capital requirement for foreign exchange risk (see Part 2, Section V).

## 2. Calculating capital requirements using the internal model

Banks that use the internal model shall comply with a capital requirement corresponding to the higher of:

- 1) the previous day's VaR measure plus, where appropriate, the incremental default risk charge;
- 2) the average of the daily VaR measures on each of the preceding 60 business days, multiplied by a factor of at least 3, which may be increased based on the outcome of the backtesting (see sub-section 4) plus, where appropriate, the incremental default risk charge.

With regard to default risk, for the component of default risk not captured in the VaR calculation, the bank shall add an incremental charge calculated using the following methods:

- a) using a method analogous to that envisaged for credit risk: specifically considering a 1-year holding period and a 99.9% confidence interval;
- b) using an internally developed process that is consistent with the statistical robustness standards envisaged in the rules governing credit risk and that, in establishing the holding period and the confidence interval, takes account of

portfolio liquidity, concentration, hedging and optionality, under the assumption of a constant level of risk.<sup>43</sup> Specifically:

- where the calculation of the incremental requirement is performed separately from the VaR calculation, no multiplier is envisaged, the amount is added to the capital requirement generated by the internal model and is not subject to regulatory backtesting, without prejudice to the requirement for the bank to assess internally the adequacy of the calculation;
- where the incremental requirement is calculated as part of the procedure of computing VaR, the multiplication factor of 3 shall be applicable and it shall be subject to regulatory backtesting.

With respect to traditional or synthetic securitisation exposures that if allocated to the banking book would be risk-weighted at 1,250%, the capital requirement shall be equal to the amount of the exposure.<sup>44</sup>

As an exception to the above, banks that routinely trade such securities may apply the internal model treatment provided that:

- they are able to demonstrate the existence of a liquid two-way market<sup>45</sup> for securities or, in the case of synthetic securitisations, for their components;
- they have sufficient market data to ensure that the internal model adequately captures the dependence between default events relating to individual components.

Banks that obtained recognition of the internal model for specific risk by 31 December 2006 may continue to use this model in calculating the capital requirement until 31 December 2009.

\* \*

The following formula shall be used to calculate the capital requirement using the internal model:

$$C_{t} = \max[VaRGS_{t-1}; \beta \frac{1}{60} \sum_{i=1}^{60} VaRGS_{t-i}] + RD$$

where:

 $C_t$  is the capital requirement on day *t*;

<sup>&</sup>lt;sup>43</sup> Constant level of risk regards the scope for the bank to take account of any effects of rebalancing the portfolio over the time horizon considered in calculating the capital requirement. Specifically, the bank, in calculating the incremental requirement over a time horizon of between 10 days and one year, may drop the assumption that the portfolio remains unchanged over time and may model the effects of rebalancing assuming that the portfolio is adjusted to maintain a constant level of risk (measured, for example, by the level of VaR or by other internal measures) with a frequency compatible with the liquidity of the individual risk factors and in any case no more than every ten days.

<sup>&</sup>lt;sup>44</sup> In practice, this treatment is equivalent to applying the risk weight of 1,250% under the standardized method.

<sup>&</sup>lt;sup>45</sup> For the purposes of this sub-section, a two-way market shall exist if there are independent, bona fide offers to buy and sell, so that the price is reasonably related to the last trading price, or if the bona fide bids and offers can be determined within one day and settled at a fair price within a short period of time conforming to trade custom.

**VaRGS**<sub>t-i</sub> is the value at risk calculated using the internal model for the portfolio held on day *t-i* for general and specific risk (idiosyncratic risk, event risk and any portion of default risk captured);

 $\beta$  is the multiplication factor of 3, increased where appropriate on the basis of the results of backtesting or by the Bank of Italy to correct model deficiencies;

RD is the portion of the default risk not captured by the internal model (VaRGS).

# 3. Combination of internal models and the standardized method

Banks may use a combination of the standardized method and the internal model provided that each broad risk category<sup>46</sup> is measured using a single approach and that all market risk components are measured.

Banks that use internal models only for certain risk categories shall promptly extend the use of the model to all the market risks to which they are exposed.

Banks that have adopted one or more internal models may not revert to the standardized method for calculating the capital requirement for risks measured using such internal models.

Banks may modify the combination of the two approaches only if they intend to expand the use of the internal model.

Where a bank adopts a combination that envisages the calculation of the specific risk for securities positions using the standardized method, the capital requirement shall be calculated using the following formula:

$$C_{t} = \max[VaRG_{t-1}; \beta \frac{1}{60} \sum_{i=1}^{60} VaRG_{t-i}] + RS$$

where:

 $C_t$  is the capital requirement on day *t*;

**VaRG**<sub>t-i</sub> is the value at risk calculated using the internal model for the portfolio held on day *t-i* for general risk only;

 $\beta$  is the multiplication factor of 3, increased where appropriate on the basis of the results of backtesting or by the Bank of Italy to correct model deficiencies;

**RS** is the specific risk computed using the standardized method.

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<sup>&</sup>lt;sup>46</sup> Broad risk category refers to one of the risks for which a specific capital requirement has been established.

# 4. Results of backtesting

Backtesting shall involve comparing the VaR, calculated using the internal model, with the change in the value of the portfolio in order to verify whether the bank's 99th percentile risk measures effectively cover 99% of the trading outcomes. A model shall be considered to have passed the test if, using a sample of 250 business days, it produces at most 4 cases in which the effective trading outcomes were not covered by the risk measures (overshootings). Backtesting shall be performed on a daily basis.

The calculation of the change in the value of the portfolio shall be the most meaningful possible for comparison with the VaR. Accordingly, the most appropriate measure shall be the net actual change, i.e. excluding commissions, any intraday trading outcomes and accrued interest.<sup>47</sup> With regard to the meaningfulness of the VaR comparison, the Bank of Italy may accept other calculation methods depending on the characteristics of the model.

In addition, if requested the bank shall be capable of performing backtesting based on hypothetical changes in the value of the portfolio where end-of-day positions remain unchanged.

An overshooting occurs where the actual change in the value of the portfolio exceeds the VaR calculated using the model. Based on the number of overshootings, the bank shall apply the plus-factor set out in table 1 below.

Number of overshootings	Plus-factor
fewer than 5	0.00
5	0.40
6	0.50
7	0.65
8	0.75
9	0.85
10 or more	1.00

Table 1

The bank shall promptly notify the Bank of Italy of overshootings resulting from the backtesting programme and that would imply an increase in the plusfactor according to Table 1 of this Section.

<sup>&</sup>lt;sup>47</sup> In computing the net actual change banks shall not consider market risk boundary losses that contribute to the estimate of the capital requirement for operational risk.

The bank may ask the Bank of Italy to waive application of the plus-factor if the overshooting is due to exceptional circumstances. The Bank of Italy shall authorize to bank to exclude the plus-factor within 60 days of receipt of the request.

Where there are a large number of overshootings, the Bank of Italy may impose appropriate measures to ensure prompt improvement of the model. Where overshootings persist despite such measures, the Bank of Italy may revoke recognition of the internal model.

#### SECTION V

## STRESS TESTING

## 1. Stress testing programme

Banks that use internal models shall have in place a rigorous and comprehensive stress testing programme for identifying events or factors that could greatly impact the bank's position.

The bank's stress scenarios shall cover a broad range of factors that can create extraordinary losses and gains in trading portfolios or make the control of risk very difficult. Stress scenarios shall take specific account of the illiquidity of markets in stressed conditions, concentration risk, one-way markets, event risk, non-linear products, deep out-of-the-money positions, positions subject to gapping of prices and other risks not adequately captured by VaR models. The shocks applied shall reflect the nature of the portfolios and the time it could take to hedge or manage risks under severe market conditions.

Stress testing shall be both of a quantitative and qualitative nature, incorporating both market risk and the liquidity impact of market disturbances. Quantitative criteria shall identify plausible stress scenarios to which banks could be exposed. Qualitative criteria shall emphasize two major goals of stress testing:

- a) evaluation of the capacity of the bank's supervisory capital to absorb potential large losses;
- b) identification of steps that the bank can take to reduce its risk and conserve capital.

The results of the stress testing shall be routinely communicated to the supervisory body and the management body.

# 2. Types of scenarios

Banks shall subject their portfolios to a variety of simulated stress scenarios and shall report the results to the Bank of Italy.

A first type of scenario shall include past periods of significant disturbance, taking into account the large price movements and the sharp reduction in liquidity associated with these events.<sup>48</sup>

A second type of scenario shall measure the sensitivity of the bank's market risk exposure to changes in volatility and correlation parameters. Stress testing shall involve identifying the range of past variations in volatilities and correlations

<sup>&</sup>lt;sup>48</sup> For example, the 1987 equity market crash, the ERM crisis of 1992, the fall in bond markets in the first quarter of 1994, or the fall in southeast Asian markets in October 1997.

and assessing the bank's current positions against extreme values of the historical range.

In order to capture the specific characteristics of its own portfolio, each bank shall also identify what it considers to be the most adverse stress situations.

The results of the tests shall be reflected in the policies and exposure limits set by the competent governing bodies. In addition, if testing reveals particular vulnerability to a given set of circumstances, the bank shall adopt appropriate measures to adequately manage those risks.

Banks shall provide a description of the methods used to establish and test stress scenarios and the outcomes obtained to the Bank of Italy.

In order to enable the Bank of Italy to evaluate the maximum number of days of loss that would be covered by a given estimate of value at risk, banks shall notify the Bank of Italy of the largest losses experienced during the reporting period. These data shall be compared with the capital requirement generated by bank's internal model.

### SECTION VI

# AUTHORIZATION BY THE BANK OF ITALY

The Bank of Italy shall authorize the use of internal models for calculating the capital requirement for market risk subject to compliance with the organizational and quantitative requirements, in accordance the provisions of Title I, Chapter 1, Part 5.

The application for authorization shall be accompanied by the responses to the questionnaire set out in Annex D.

Any significant issues that should emerge during the Bank of Italy's review of the documentation will be discussed with the bank officers involved in the various aspects of the risk measurement and management process.

Even where it should recognize the model, the Bank of Italy may specify aspects that do not fully comply with the minimum requirements and may require organizational and/or capital adjustments (an increase in the plus-factor) to be implemented.

## ANNEX A

# **REQUIREMENTS FOR THE SUPERVISORY TRADING BOOK**

# Part A - Trading intent

Trading intent shall be established through compliance with the following requirements:

- a) there must be a clearly documented trading strategy for the position/instrument or portfolios, approved by the management body, which shall include the expected holding horizon;
- b) there must be clearly defined policies and procedures for the active management of the position, which shall include the following:
  - i) positions entered into on a trading desk;
  - ii) position limits are set and monitored for appropriateness;
  - iii) dealers have the autonomy to enter into/manage the position within agreed limits and according to the approved strategy;
  - iv) positions are reported to the management body as an integral part of the bank's risk management process;
  - v) positions are actively monitored with reference to market information sources and an assessment is made of the marketability or hedgeability of the position or its component risks, including the assessment of the quality and availability of market inputs to the valuation process, level of market turnover and sizes of positions traded in the market;
- c) there must be clearly defined policies and procedures to monitor the position against the bank's trading strategy including the monitoring of turnover and stale positions in the bank's supervisory trading book;

At a minimum, these policies and procedures shall establish:

- the positions the bank considers to be trading and as constituting part of the supervisory trading book for capital requirement purposes;
- the extent to which a position can be marked to market daily by reference to an active, liquid two-way market;
- for positions that are marked to model, the extent to which the bank can:

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- i) identify all material risks of the position;
- ii) hedge all material risks of the position with instruments for which an active, liquid two-way market exists;
- iii) derive reliable estimates for the key assumptions and parameters used in the model;
- iv) generate valuations for the position that can be validated externally in a consistent manner;
- v) actively risk manage the position within its trading operations;
- vi) transfer risk or positions between the banking and supervisory trading books.

Compliance with these policies and procedures shall be fully documented and subject to periodic internal audit.

# Part B – Systems and controls for the prudent valuation of positions in the supervisory trading book

Banks shall establish and maintain systems and controls sufficient to provide prudent and reliable valuation estimates.

#### B.1 Systems and controls

Systems and controls shall include at least the following elements:

- a) clearly defined responsibilities of the various areas involved in the determination of the valuation, sources of market information and review of their appropriateness, frequency of independent valuation, timing of closing prices, procedures for adjusting valuations, month end and ad hoc verification procedures;
- b) reporting lines for the unit accountable for the valuation process that are clear and independent of the front office.

The reporting line shall ultimately be to at least one member of the management body.

## B.2 Prudent valuation methods

Marking to market is the at-least-daily valuation of positions at readily available close out prices that are sourced independently. Examples include exchange prices, screen prices or quotes from several independent reputable brokers.

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When marking to market, the more prudent side of bid/offer shall be used unless the bank is a significant market maker in the particular type of financial instrument or commodity in question and it can close out at mid-market.

Where marking to market is not possible, banks shall mark to model their positions/portfolios before applying market risk capital treatment. Marking to model is defined as any valuation which has to be (i) benchmarked, (ii) extrapolated or (iii) otherwise calculated from a market input

The following requirements shall be complied with when marking to model:

- a) the management body shall be aware of the elements of the trading book which are subject to mark to model and shall understand the materiality of the uncertainty this creates in the reporting of the risk/performance of the business;
- b) market inputs shall be sourced, where possible, in line with market prices, and the appropriateness of the market inputs of the particular position being valued and the parameters of the model shall be assessed frequently;
- c) where available, valuation methodologies which are accepted market practice for particular financial instruments or commodities shall be used;
- d) where the model is developed by the bank itself, it shall be based on appropriate assumptions that have been assessed and challenged by suitably qualified parties independent of the model's development process. In particular, the model shall be developed or approved independently of the front office and shall be independently tested, including validation of the mathematics, assumptions and software implementation;
- e) there shall be formal change control procedures in place and a secure copy of the model shall be held and periodically used to check valuations;
- f) the persons responsible for risk management shall be aware of the weaknesses of the models used and how best to reflect those in the valuation output;
- g) the model shall be subject to periodic review to determine the accuracy of its performance (e.g. assessing the continued appropriateness of assumptions, analysis of profit and loss versus risk factors, comparison of actual close out values to model outputs).

In addition to daily marking to market or marking to model, independent price verification shall be performed. This is the process by which market prices or model inputs are regularly verified for accuracy and independence. While daily marking to market may be performed by dealers, verification of market prices and model inputs should be performed by a unit independent of the dealing room, at least monthly (or, depending on the nature of the market/ trading activity, more frequently).

Where independent pricing sources are not available or pricing sources are too subjective, prudent measures such as valuation adjustments may be appropriate.

## *B.3 Supervisory value adjustments*

Banks shall establish and maintain procedures for considering supervisory value adjustments.

# B.3.1 General rules

Banks shall consider the advisability of applying value adjustments in respect of the following factors: unearned credit spreads, close-out costs, early termination of positions, investing and funding costs, future administrative costs and, where appropriate, model risk.

### B.3.2 Rules for less liquid positions

Less liquid positions could arise from both market events and bank-related situations, for example concentrated positions and/or stale positions.

Banks shall consider the need for making value adjustments for less liquid positions and review their continued suitability on an ongoing basis;

Banks shall consider several factors when determining whether a value adjustment is necessary for less liquid positions. These factors include the amount of time it would take to hedge the position/risks within the position, the volatility and average of bid/offer spreads, the availability of market quotes and the volatility and average of trading volumes, market concentrations, the aging of positions, the extent to which valuation relies on marking to model, and the impact of other model risks.

When marking to model or, in the case of the valuation of units or shares in a CIU, using third party valuations, banks shall consider whether to apply a supervisory valuation adjustment.

Where value adjustments give rise to material losses in the capital requirement calculation period, these shall be deducted from Tier 1 capital (Title I, Chapter 2).

### ANNEX B

# INSTRUCTIONS FOR CALCULATING THE GENERAL RISK POSITION IN DEBT SECURITIES

# 1. Maturity method

The procedure for calculating capital requirements against the position risk for debt securities is composed of the following ten steps.

### **STEP I**: Calculation of the net position in each issue

Banks could have the following on-balance-sheet or off-balance-sheet positions in respect of each issue:

# I.1 On-balance-sheet positions

long positions

short positions

# I.2 Off-balance-sheet positions

*I.2.1* Derivatives with underlying security:

long positions

short positions

*I.2.2* Derivatives without underlying security:

long positions

short positions

*I.2.3* Other off-balance-sheet transactions:

long positions

short positions

## I.3 Total supervisory trading book

long positions

short positions

In order to calculate the net position in each issue, the following criteria shall be adopted:

- a) first, positions in the same category of transactions with the opposite sign shall be offset;
- b) where, after offsetting pursuant to point a), category 2) (off-balance-sheet positions) contains positions with the opposite sign, these shall be offset and the residual unmatched amount allocated to the type with the largest absolute value;
- c) where, after offsetting pursuant to point b), category 1) (on-balance-sheet positions) and category 2) (off-balance-sheet positions) contain positions with the opposite sign, these shall be offset and the residual unmatched amount allocated to the type with the highest absolute value.
- *STEP II:* Assignment of net positions in each issue to the appropriate maturity bands and weighting the positions
- II.1 On the basis of the residual maturity, each net position<sup>49</sup> shall be assigned to one of the maturity bands specified below.

There are *thirteen maturity bands* for debt securities with a coupon of 3% or more and *fifteen maturity bands* for debt securities with a coupon of less than 3%.

- II.2 Within each maturity band, the net long positions and net short positions shall be summed to obtain a net long position and net short position for the maturity band.
- II.3 The long and short positions of each maturity band shall be multiplied by the appropriate risk weight.

<sup>&</sup>lt;sup>49</sup> This is calculated for each issue.

	Maturity bands										Risk weights		
Zones		Соц	pon of 3%	6 or n	iore	2	Coupon of less than 3%						
			up to 1 m	onth			up to 1 month					0%	
	over	1	month	to	3	month s	over	1	month	to	3	months	0.20%
Zone 1	over	3	months	to	6	month s	over	3	months	to	6	months	0.40%
	over	6	months	to	1	year	over	6	months	to	1	year	0.70%
	over	1	year	to	2	years	over	1	year	to	1.9	years	1.25%
Zone 2	over	2	years	to	3	years	over	1.9	years	to	2.8	years	1.75%
	over	3	years	to	4	years	over	2,8	years	to	3.6	years	2.25%
	over	4	years	to	5	years	over	3.6	years	to	4.3	years	2.75%
	over	5	years	to	7	years	over	4.3	years	to	5.7	years	3.25%
	over	7	years	to	10	years	over	5.7	years	to	7.3	years	3.75%
	over	10	years	to	15	years	over	7.3	years	to	9.3	years	4.50%
Zone 3	over	15	years	to	20	years	over	9.3	years	to	10.6	years	5.25%
			over 20 y	ears			over	10.6	years	to	12	years	6.00%
							over	12	years	to	20	years	8.00%
	over 20 years										12.50%		

### Table 1

### **STEP III:** Offsetting within maturity bands

The weighted long position shall be offset against the weighted short position in each maturity band.

The smallest weighted long or short position shall be the matched weighted position for the maturity band.

The difference between the two positions shall be the unmatched weighted long (short) position for the maturity band.

# *STEP IV:* Calculation of the capital requirement for matched positions within a maturity band

The first capital requirement is calculated by multiplying the sum of the matched weighted positions for each band by a vertical disallowance factor of 10%.<sup>50</sup>

 $<sup>^{50}</sup>$  For example, if the sum of the weighted long positions in a maturity band is 100 million and the sum of the weighted short positions is 90 million, the vertical disallowance will be equal to 10% of 90 million, or 9 million.

#### **STEP V:** Offsetting within a zone

For each zone the unmatched weighted positions with the same sign in the maturity bands in the zone shall be summed in order to calculate the overall weighted long position and the overall weighted short position for each zone.

The smaller of the two shall be the matched weighted position for the zone.

The difference between the two shall be the unmatched long (short) position for the zone.

# *STEP VI:* Calculation of the capital requirement for matched positions within a zone

The second capital requirement shall be calculated by multiplying the matched weighted positions for each zone by the disallowance factors specified in Table 2 of this Annex and then summing the three amounts obtained.

#### STEP VII: Offsetting between zones

The unmatched weighted positions in the three zones shall be offset by matching the position in zone 1 with that in zone 2 and matching the resulting position with that in zone 3.

Specifically the comparison of zone 1 and 2 can generate two possible outcomes:

- the unmatched weighted positions of zones 1 and 2 have the opposite sign;
- the unmatched weighted positions of zones 1 and 2 have the same sign.
- VII.1 In the first case, the unmatched weighted positions of zone 1 and 2 shall be offset.

The smaller of the unmatched weighted positions shall be the matched weighted position between zone 1 and zone 2.

The difference between the unmatched weighted positions of zone 1 and zone 2 shall be assigned to either zone 1 or zone 2 depending on which has the unmatched weighted position with the largest absolute value.

Where this latter difference and the position of zone 3:

- have the same sign, their sum shall be the "final unmatched weighted position";
- have the opposite sign, the smaller of those values shall be the matched weighted position between zone 1 and zone 3 or the matched -63 -

weighted position between zone 2 and zone 3 depending on whether the unmatched weighted position between zone 1 and zone 2 was assigned to zone 1 or zone 2, respectively. The difference between the two positions shall be the final unmatched weighted position.

VII.2 In the second case, two further cases shall be distinguished:

- where the unmatched weighted position of zone 3 has the same sign, the sum of the unmatched weighted positions shall be the final unmatched weighted position;
- where the unmatched weighted position of zone 3 has the opposite sign of that of zones 1 and 2, the unmatched weighted positions of zone 2 and 3 shall be offset.

The smaller unmatched position shall be the matched weighted position between zones 2 and 3.

The difference between the two positions, representing the unmatched weighted position between zones 2 and 3, shall be assigned to the zone with the unmatched weighted position with the largest absolute value. Where the latter position:

- a) is assigned to zone 3 and therefore has the opposite sign of that for zone 1, the smaller of these amounts shall be the matched weighted position between zones 1 and 3. The difference between the two positions shall be the final unmatched weighted position;
- b) is assigned to zone 2 and therefore has the same sign as zone 1, the sum of the two unmatched weighted positions shall be the final unmatched weighted position.

# *STEP VIII:* Calculation of the capital requirement for matched positions between zones

The third capital requirement shall be calculated by multiplying the matched weighted positions between the three zones by the disallowance factors specified in Table 2 of this Annex and then summing the three amounts obtained.

# *STEP IX:* Calculation of the capital requirement for residual unmatched positions

The fourth and final capital requirement calls for a 100% weighting of the final unmatched weighted position calculated as specified above.

### 

# **STEP X**: Calculation of the total capital requirement

The total capital requirement shall be the sum of the four requirements specified in steps IV, VI, VIII and IX.

Zones <sup>51</sup>	Maturity band			Maturity band Within the zone Betw		Between adjacent zones	Between zones 1 and 3	
Zone 1	from from from from	0 1 3 6	to to to	1 3 6 12	month months months months	40%	40%	
Zone 2	from from from	1 2 3	to to to	2 3 4	years years years	30%	40%	150%
Zone 3	from from from from from	4 5 7 10 15 0	to to to to to ver 2	5 7 10 15 20 0 yea	years years years years years ars	30%		

# Horizontal disallowance factors

#### Table 2

#### 2. Duration method

In order to calculate the capital requirement for general risk on debt securities with the duration method, the following procedure shall be adopted:

- 1) calculate the modified duration of each debt instrument and then allocate them to the 15 time-bands of the ladder specified in Table 3 of this Annex;
- 2) multiply the amount by the specific weights (between 0.6% and 1%) expressing the assumed change in yield for instruments with the same modified duration;
- apply a vertical disallowance of 5% (4% for banks belonging to a banking group) to the weighted long and short positions in each time-band in order to capture basis risk;
- 4) carry forward the net positions in each time-band for horizontal offsetting, applying the disallowances specified in Table 2 of this Annex

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<sup>51</sup> The zones for securities with a coupon of less than 3% are from 0 to 12 months, from 1 to 3.6 years and over 3.6 years.

and proceeding in accordance with steps V to IX in section 1 of this Annex;

5) calculate the total capital requirement as the sum of the three requirements specified in steps VI, VIII and IX and the requirement specified in point 3) above.

Zones		Assumed change in yield %				
		1.00				
	from	1	to	3	months	1.00
Zone 1	from	3	to	6	months	1.00
	from	6	to	12	months	1.00
	from	1.0	to	1.9	years	0.90
Zone 2	from	1.9	to	2.8	years	0.80
	from	2.8	to	3.6	years	0.75
	from	3.6	to	4.3	years	0.75
	from	4.3	to	5.7	years	0.70
	from	5.7	to	7.3	years	0.65
	from	7.3	to	9.3	years	0.60
Zone 3	from	9.3	to	10.6	years	0.60
	from	10.6	to	12	years	0.60
	from	12	to	20	years	0.60
		ove	r 20 y	ears		0.60

# Duration method: time-bands and assumed change in yield Table 3

### ANNEX C

## HIGHLY LIQUID EQUITY SECURITIES

Pursuant to the regulations governing specific risk in respect of equity securities traded on a recognized regulated market, qualifying items may include highly liquid securities.

Highly liquid securities shall be those meeting at least one of the following criteria:

- a) for securities traded in Italy, those that form part of the reference basket of the S&P/MIB index or the MIDEX index;
- b) for securities traded on a regulated foreign market:
  - where the securities are traded in an EU Member State or Group of Ten country, those adjudged to be highly liquid by the competent authorities of those countries;
  - where the securities are traded in a country other than those specified in the previous indent, those with a turnover rate of at least 7.5%. The turnover rate shall be the ratio between the value of volumes traded in the last six months and the average market capitalization over the same period. For the purpose of identifying qualifying equity securities, the turnover rate shall be recalculated at least every six months. The bank shall maintain a record of the data used to calculate the rate for the same period.

# ANNEX D

# **QUESTIONNAIRE ON INTERNAL MODELS**

# 1. Introduction

The questionnaire contained in this Annex is intended to provide the Bank of Italy with information to be used in assessing the compliance of the internal structures of the bank with the organizational requirements set out in Part 3, Section II, and the compliance of the model with the quantitative criteria set out in Part 3, Section III.

The responses to the questionnaire will enable the Bank of Italy to obtain the minimum information needed to initiate the procedure for the recognition of the internal model. Where necessary, additional information may be requested to clarify specific issues concerning the organization of the bank and/or the technical features of the model.

# 2. Organizational aspects

# I. Structures

# A. Governing bodies

- 1) Describe the general guidelines on the types of activity (products, markets, functions) performed and the related risk control policies. Describe the procedures for communicating this information within the bank. Where such guidelines are contained in a formal document, please attach a copy.
- 2) Describe the system for delegating responsibility for assuming and managing risks in respect of the supervisory trading book.
- 3) Specify the governing bodies that participate in decisions to enter new markets or develop new products.
- 4) Specify the type of information provided to the supervisory body, the management body and the other corporate structures and functions involved and the frequency of reports from trading units and control units. Please attach a copy of the reports.

5) Specify whether the supervisory body and the management body examine the results of the simulations of movements in main market variables.

# B. Risk control unit

- 1) Specify the position of the risk control unit in the organizational hierarchy and the managers to which it reports.
- 2) Describe the professional staff of the unit.
- 3) Specify which of the following activities are carried out by the risk control unit, indicating the level of responsibility and the frequency with which the activities are performed:
  - a) design of the risk control process;
  - b) design of the model;
  - c) monitoring of and reporting on the risk profile;
  - d) verification of compliance with operating limits and any related intervention;
  - e) assessment of the formulas used in calculating more complex financial products;
  - f) maintenance and upgrading of the information systems used for the model;
  - g) assessment of the risks associated with new business;
  - h) backtesting;
  - i) stress testing.
- 4) Describe the analytical and information tools available to the unit.
- 5) Specify whether a manual of risk control procedures has been prepared. If such a manual has been prepared, please attach a copy.

# C. Internal audit

- 1) Specify the position of the function in the organizational hierarchy and the managers to which it reports.
- 2) Describe the tasks assigned to internal audit with regard to verifications of the risk control system.
- 3) Describe the professional staff of the internal audit function.
- 4) Describe the analytical and information tools available to the function.
- 5) Describe the controls carried out during the development of the model and upon initial implementation.

- 6) Specify whether the external auditing firm was asked to prepare reports on the soundness and operation of the model. If such reports were prepared, please attach a copy.
- 7) Describe the type of checks performed for foreign branches that assume risk positions in their trading book.

## **D.** Dealing rooms

- 1) Describe the organization of the dealing rooms.
- 2) Describe the main activities performed by the trading desks by instrument and market.
- 3) Describe procedures for coordinating trading desks.
- 4) Specify the information available to traders on the risk position calculated using the model. Specify the frequency with which such information is updated.
- 5) Provide a list of the main software used by the trading desks.
- II. Control process

# A. Delegation of powers and operating limits

- 1) Describe the structure of delegated powers within the bank with regard to managing risks in respect of the trading portfolio.
- 2) Describe the procedures for setting and formalizing operating limits, specifying the frequency with which compliance is verified and the frequency with which the limits are reviewed.
- 3) Describe the procedures for setting and assigning limits among the trading desks on the basis of the model outputs. Specifically, describe how account is taken of correlations among the risks assumed by the individual trading desks in allocating capital-at-risk.
- 4) Specify whether intraday trading limits are used.
- 5) Provide documentation on the limits assigned to the individual traders.
- 6) Describe the procedure used and actions envisaged in the event limits are exceeded. Specify whether an ex post reconstruction of breaches of the limits is possible.
- 7) Describe the procedures for communicating the structure of delegated powers within the bank.
- 8) Describe the control mechanisms for verifying compliance with delegated powers.

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# **B.** Stress testing

- 1) Describe the stress testing programme.
- 2) Describe the stress scenarios developed by the bank on the basis of the characteristics of its portfolio.
- 3) Specify the frequency with which the scenarios are reviewed.
- 4) Specify the persons to which the outcomes of the stress tests are reported.
- 5) Indicate whether specific measures are envisaged in the event the bank is found to be vulnerable to stressed situations.

## III. Information systems

## A. Security measures

- 1) Describe access protection measures.
- 2) Specify whether recovery procedures have been put in place.
- 3) Specify whether such procedures have been tested and provide the results of the tests.

# B. System reliability

- 1) Describe the architecture of the information systems used for the model.
- 2) Describe the data sources used, distinguishing between internal sources and external sources (Reuters, Telerate, etc.), and between statistical sources and those recording positions.
- 3) Describe the frequency with which model parameters are updated.
- 4) Where multiple data sources are used, describe the procedures for integrating the information.
- 5) Specify whether data quality control systems are in place.
- 6) Specify whether data acquisition is carried out for all Italian and foreign units. Describe the procedures and frequency of updates of foreign data.
- 7) Describe the procedures used to extract data from the databases.
- 8) Specify whether data is inputted manually in such procedures and describe the process.

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- 9) Describe the controls performed to assess the appropriateness of the information system for the adoption of the model.
- 10) Specify whether the procedures used and the results of the tests performed are documented.
- 11) Specify the unit responsible for managing the model databases.
- 12) Specify the nature and timing of any planned changes or additions to information systems.

# 3. Quantitative aspects

*I.* Information on model performance

## A. General information on VaR

Please provide the following information:

- 1) minimum, maximum and average daily VaR for a period of at least six months, breaking down the overall result by risk category or portfolio;
- 2) developments in the daily series of gains and losses for a period of three months in the trading portfolio and daily VaR calculated by the model;
- 3) number of overshootings between actual trading outcomes and value at risk;
- 4) any adjustments implemented on the basis of backtesting outcomes. Where the criteria adopted required the portfolio to possess an adequate degree of liquidity and/or diversification, provide a breakdown of the positions exposed to specific risk (in the two segments) between "liquid and diversified" and "other" and describe the procedures for treating the latter.

# **B.** Stress testing

- 1) Describe the stress scenarios developed by the bank;
- 2) specify the frequency of stress tests and the persons to whom the outcomes are reported;
- 3) provide the outcomes of the stress tests conducted by the bank;
- 4) describe any changes made in risk positions following unsatisfactory stress test outcomes.

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## II. Treatment of risk factors

# A. Interest rate risk

- 1) Specify the representation of fixed-rate and floating-rate positions along the yield curve, above and below the line (for example, discounted cash flow method, duration method);
- 2) describe the procedures for aggregating positions (for example, clumping constraints);
- 3) specify the number of points into which the model divides the yield curve;
- 4) describe how the risk of a change in the spread between different financial instruments is accounted for;
- 5) specify the number of currencies considered;
- 6) specify whether any currencies are excluded from the VaR calculation because the exposure is considered not material. How is residual risk quantified in this case?
- 7) describe the procedures for aggregating positions in different currencies.

# **B.** Foreign-exchange risk

- 1) Describe the method adopted for calculating the cash and forward risk positions in each currency;
- 2) specify whether any currencies are excluded from the VaR calculation because the exposure is considered not material. How is residual risk quantified in this case?

## C. Equity risk

1) Describe the procedures for calculating positions in the various markets (use of market volatility and betas associated with the market index, use of sectoral betas, use of individual stock volatilities); describe the procedures for aggregating positions in different markets.

# **D.** Commodities risk

1) Describe the method for calculating the cash and forward risk positions in each commodity.

# E. Non-linear risks and option volatility

Please describe the following aspects:

- 1) the pricing models used for the main types of options;
- 2) the methodologies used for calculating risks;
- 3) the procedures used for aggregating option positions (for example, maturity and volatility ladders);
- 4) the procedures used for aggregating option positions with the other positions in the portfolio;
- 5) the use of parametric approaches or scenario analysis;
- 6) the treatment of exotic options (unless their value is not material).

## F. Specific risk

1) Describe the methodology for calculating specific risk in the two segments.

# III. Model estimation methodology and risk aggregation criteria

Please provide information on the following aspects:

- 1) the type of model adopted (for example, variance-covariance, historical simulations, Monte Carlo simulations);
- 2) the holding period and confidence interval used by the model;
- 3) the assumptions concerning the risk factor distributions (normality, fat tails, etc.);
- 4) the length of the observation period;
- 5) the procedure for weighting observations (simple average, exponential smoothing, conditional volatility, etc.);
- 6) the availability of any calculations based on more than one time period;
- 7) the methodology for aggregating exposures within and between risk factors (correlations);
- 8) the availability of any tests of the stability of the volatility and correlations adopted;
- 9) the frequency with which the parameters used are updated.

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# ANNEX E

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# CAPITAL REQUIREMENT FOR THE SPECIFIC RISK ON DEBT SECURITIES

## Table 1

	Categories <sup>52</sup>	Specific risk capital requirement
a)	Debt securities issued or guaranteed by central governments, issued by central banks, international organizations, multilateral development banks or Member States' regional government or local authorities which would receive a 0 % risk weight under the rules for the risk weighting of exposures under credit risk regulations.	0%
b)	Debt securities issued or guaranteed by central governments, issued by central banks, international organizations, multilateral development banks or Member States' regional government or local authorities which would receive a risk weight of 20% or 50% under the rules for the risk weighting of exposures under credit risk regulations.	0.25% (residual maturity 6 months or less) 1.00% (residual maturity greater than 6 and up to and including 24 months)
c)	Debt securities issued or guaranteed by supervised institutions which would qualify for credit quality step 1 or 2 of the standardized approach under credit risk regulations.	1.60% (residual maturity exceeding 24 months)
d)	Debt securities issued or guaranteed by supervised institutions which, regardless of their original maturity, would qualify for credit quality step 3 of the standardized approach under credit risk regulations that have an original maturity of three months or less.	
e)	Debt securities issued or guaranteed by corporates which would receive a risk weight of 20% or 50% under credit risk regulations.	
f)	Other qualifying items in accordance with the definition following this table.	

<sup>52</sup> For banks adopting the internal ratings approach for calculating the capital requirement for credit risk, positions shall be assigned to a given credit quality step by associating the PDs assigned in the IRB with the corresponding credit quality steps in the standardized method.

g)	Debt securities issued or guaranteed by central governments, issued by central banks, international organizations, multilateral development banks or Member States' regional government or local authorities which would receive a 100% risk weight under credit risk regulations.	8%
h)	Debt securities issued or guaranteed by supervised institutions which would receive a 100% risk weight under credit risk regulations. <sup>53</sup>	
i)	Debt securities issued or guaranteed by corporates which would receive a risk weight of 100% under credit risk regulations.	
j)	Debt securities by persons for which a credit assessment by a nominated ECAI is not available.	
k)	Debt securities issued or guaranteed by central governments, issued by central banks, international organizations, multilateral development banks or Member States' regional government or local authorities which would receive a 150% risk weight under credit risk regulations.	12%
1)	Debt securities issued or guaranteed by supervised institutions which would receive a 150% risk weight under credit risk regulations.	
m)	Debt securities issued or guaranteed by corporates which would receive a risk weight of 150% under credit risk regulations.	

For the purposes of Table 1, "other qualifying items" shall include:

- a) long and short positions in assets qualifying for a credit quality step corresponding to investment grade within the framework of the standardized approach under credit risk regulations;
- b) long and short positions in assets qualifying for a credit quality step corresponding to investment grade within the framework of the internal ratings based approach under credit risk regulations:
- c) long and short positions in assets for which a credit assessment by a nominated ECAI is not available and which meet the following conditions:
  - i) they are considered by the banks concerned to be sufficiently liquid;
  - ii) they are considered by the banks concerned to be investment grade;

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 $<sup>\</sup>overline{}^{53}$  This applies to securities which would qualify for credit quality step 3, 4 or 5.

- iii) they are listed on at least one regulated market in a Member State or on a stock exchange in a third country provided that the exchange is recognized by the competent authorities of the relevant Member State;
- d) long and short positions in assets issued by supervised institutions subject to capital adequacy requirements equivalent to those established under Community law:
  - i) that are considered by the banks concerned to be sufficiently liquid;
  - ii) that are considered by the banks concerned to be investment grade;
- e) long and short positions in assets issued by supervised institutions which receive a risk weight of 50% within the framework of the standardized method under credit risk regulations; such institutions shall be subject to supervisory and regulatory arrangements comparable to those under the applicable Community law.

#### ANNEX F

# SPECIFIC METHODS FOR CALCULATING THE CAPITAL REQUIREMENT FOR CIU POSITIONS

The specific methods can be used to calculate the capital requirement for position risk in respect of CIU units/shares where the bank is aware of the composition of the underlying investments the CIU is authorized to make under the terms of its mandate.

#### F.1 Full look-through method

Under the full look-through method, the bank shall be aware of the investments of the CIU on a daily basis. The capital requirements for general and specific risk shall be calculated by treating the positions in CIUs as positions in the underlying investments.

Accordingly, netting is permitted between positions in the financial instruments in which the CIU invests and other positions held by the bank, provided that the bank holds a sufficient quantity of units to permit redemption or delivery of the underlying investments.

## F.2 Simplified look-through method

The simplified look-through method shall be used for CIUs that replicate the composition and performance of indices or baskets of debt or equity securities, provided that: a) the purpose of the fund is to replicate the composition and performance of indices or baskets of debt or equity securities; and b) a minimum correlation<sup>54</sup> of 0.9 between daily price movements of the CIU and the index or basket of equities or debt securities it tracks can be clearly established over a minimum period of six months.

The capital requirements for general and specific risk shall be calculated for assumed positions representing those necessary to replicate the composition of the index or the basket.

<sup>&</sup>lt;sup>54</sup> 'Correlation' in this context means the correlation coefficient between daily returns on the CIU and the index or basket of equities or debt securities it tracks.
# F.3. Partial look-through method

This method shall be used where the bank is not aware of the underlying investments of the CIU on a daily basis but the fund's mandate specifies how its capital is to be allocated to the different asset categories.

The capital requirements for general and specific risk shall be calculated as follows:

- a) it is assumed that the CIU first invests to the maximum extent allowed under its mandate in the asset classes attracting the highest capital requirement for position risk (general and specific), and then continues making investments in descending order of riskiness until the maximum total investment limit is reached. The position in the CIU will be treated as a direct holding in the assumed position;
- b) where the mandate of the CIU permits the use of leverage, banks shall take account of the exposure that they could achieve by taking leveraged positions through the CIU when calculating their capital requirement for position risk by proportionally increasing the position in the CIU.

The capital requirement for general and specific position risk obtained using this method shall not exceed 32% of the fair value of the unit/share.

# TITLE II

Chapter 5

# **OPERATIONAL RISK**

TITLE II - Chapter 5

# **OPERATIONAL RISK**



## **GENERAL PROVISIONS**

## SECTION I

# GENERAL PROVISIONS

## 1. Introduction

This chapter governs the methods used for calculating the capital requirement for operational risk and the related organizational and control arrangements.

The need for specific regulations reflects the growing exposure of banks to this form of risk owing, inter alia, to their increasing size, the greater complexity of their organizational and distribution structures, financial innovation, and use of complex legal arrangements in operations.

Operational risk means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Such risk includes losses resulting from fraud, human error, business disruption, system unavailability, breach of contract and natural disasters. Operational risk includes legal risk but not strategic or reputational risk.

Banks shall assess links between the various types of risk, identifying their possible impact in terms of operational risk. Ensuring full compliance with the regulations also plays an important role in preventing and containing operational risk.

There are three methods for calculating the capital requirement, featuring increasing levels of complexity in the measurement of the exposure and more stringent organizational arrangements in terms of corporate governance mechanisms and processes for identifying, managing and controlling risk:

- Basic Indicator Approach (BIA);
- Standardized Approach;
- Advanced Measurement Approaches (AMA).

In the cases and under the conditions set out these regulations, banks may use a combination of the three methods at the individual and the consolidated levels.

Under the BIA, the capital requirement is calculated by multiplying an indicator of a bank's volume of business, gross income, by a specified regulatory percentage.

Under the Standardized Approach, the capital requirement is calculated by multiplying gross income by separate regulatory percentages for each of the business lines into which banks' activities are divided.

Under the AMA, the capital requirement is measured by banks using calculation models based on operational loss data and other information collected and processed by the bank.

Banks and banking groups shall adopt the method that is most appropriate to their characteristics, management capabilities, size and operational complexity.

Eligibility thresholds have been established for the use of approaches other than the BIA for supervisory capital purposes. Specifically, use of these approaches shall be reserved to larger banks, in view of the fact that their activities are normally significantly diversified and they have the resources to implement the organizational measures needed to comply with regulatory requirements. Access may also be granted to smaller banks that engage in specialised business lines that are more highly exposed to operational risk where they could benefit from adopting such approaches, especially in terms of risk prevention and containment.

In addition to the governance and operational risk management standards with which all banks shall comply regardless of the calculation approach chosen, specific qualifying criteria are envisaged for banks wishing to use the Standardized and Advanced Measurement Approaches.

Specifically, banks that adopt the Standardized Approach shall have a operational risk management system and a self-assessment process to verify the soundness of the system and its compliance with regulatory requirements.

Under Advanced Measurement Approaches, operational risk management and control mechanisms are strengthened further. In addition to requirements governing the risk management system, specific requirements are envisaged for measuring operational risks, with a special focus on the nature of the data, the process of collecting and processing such data and the model for calculating the capital requirement. Banks that use the Advanced Measurement Approaches shall also have an operational risk management function responsible, inter alia, for designing, developing and maintaining the operational risk management and measurement systems and for calculating the capital requirement. An internal validation process shall verify the overall quality of these systems and their continued compliance with regulatory requirements, business

needs and developments in the relevant market. In addition, the measurement system shall be closely integrated into decision-making and risk management processes.

Although Advanced Measurement Approaches are more burdensome to use, they offer the advantage of more precise measurement of exposure to operational risk and permit the recognition of techniques for transferring operational risk for supervisory capital purposes.

Banks shall obtain the authorization of the Bank of Italy to use Advanced Measurement Approaches in calculating the capital requirement for operational risks. The authorization process shall be exclusively prudential in nature and shall not represent a more general assessment of banks' ability to comply with and correctly apply the legislative and regulatory provisions regarding their activities, including those involving their customers.

The availability of a number of methodologies is intended to ensure proportionality between the precision of the approach selected and the risk exposure level of each bank, to limit the regulatory burden, especially for smaller banks, and to reflect improvements in operational risk management practices in supervisory provisions.

Finally, banks shall be required to publish information on operational risks in compliance with disclosure requirements. Specifically, compliance with the disclosure on qualifying requirements referred to in Title IV, Chapter 1, Section II, sub-section 3) shall be a condition for recognition of Advanced Measurement Approaches for supervisory capital purposes.

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, letters a), b) and d) which gives the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:

- a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraph 1, letters a), b) and d) and paragraphs 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy, the limitation of risk in its various forms, and administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that permit the use by banking groups of:

- a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a

consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

 the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee of 27 December 2006.

Another relevant source is:

— the international agreement International Convergence of Capital Measurement and Capital Standards. A Revised Framework, published by the Basel Committee for Banking Supervision in June 2006.

# 3. Definitions

For the purposes of these regulations:

- "relevant indicator" shall mean gross income as defined in Bank of Italy Circular "Il bilancio bancario: schemi e regole di compilazione";<sup>1</sup>
- "business lines" shall mean the lines of business into which a bank's activities shall be divided in accordance with the criteria set out in Part 2, Section II, sub-section 2.2;
- *"operational loss"* shall mean the adverse financial effects generated by operational events that have been recognized in the bank's accounts and that have or may have an impact on the bank's income statement;
- *"legal risk"* shall mean the risk of losses resulting from violations of law or regulations, from contractual or constructive liability or from other disputes;

<sup>&</sup>lt;sup>1</sup> See Circular 262 of 22 December 2005: item 120 on an individual basis (page A.2.1.) and item 120 on a consolidated basis (page B.2.1.) with reference to the components "pertaining to the banking group" (sub-section 5.5, page 1.5.2).

- *"operational risk"* shall mean the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk;
- "operating segment" shall mean any area of activity such as a business line, an organizational unit, a legal entity or a geographical area;
- *"combined use at the individual level"* shall mean the combined use, within a bank, of more than one approach to calculating the capital requirement for operational risks, applied to different operating segments;
- "combined use at the consolidated level" shall mean the combined use, within a banking group, of more than one approach to calculating the capital requirement for operational risks, applied to different operating segments.

With regard to Advanced Measurement Approaches:

- "operational risk class" shall mean a category of operational risk that is homogeneous in terms of its nature, characteristics or the manner in which it manifests itself. For example, operational risk classes may include risks relating to a type of event, a business line, a legal entity, a geographical area or a combination of the above categories;
- *"correlation"* shall mean any form of dependence (linear, non-linear, associated with all losses or a portion thereof) between two or more operational risk classes caused by factors internal or external to the bank;
- *"calculation data set"* shall mean the subset of estimated or actual data on operational risk, from sources internal and external to the bank, used in calculating the capital requirement for operational risks;
- "*operational risk distribution*" shall mean the statistical distribution of operational risk losses for a class or the entire bank;
- *"rapidly recovered loss event"* shall mean an operational risk event that generates a loss that is completely or partially recovered within five days of the occurrence of the event;
- "*operational risk gain event*" shall mean an operational risk event that generates a gain;
- *"operational risk measure"* shall mean a statistic or parameter extracted from the operational risk distribution. Examples of measures include expected loss, value at risk, expected shortfall and median shortfall;
- "*expected loss*" shall mean the operational loss amount for a class or the entire bank recorded on average over a holding period of one year;

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- *"unexpected loss"* shall mean the loss exceeding the expected loss, for a class or the entire bank, calculated in respect of the risk distribution at a confidence level of 99.9% over a holding period of one year;
- "multiple-effect losses" shall mean the set of losses generated by a single event affecting multiple operating segments. For example, the losses generated by events occurring within central functions that provide support to multiple business lines (such as the information systems function) or those connected with severe external events (for example, natural disasters);
- "credit risk boundary losses" and "market risk boundary losses" shall mean credit risk losses and market risk losses, respectively, generated by operational risk events. For example, credit risk boundary losses include losses generated by errors or fraud in the loan granting and management process, while market risk boundary losses include losses generated by errors in inputting prices or quantities in securities trading applications or by violations of operating limits;
- "multiple-time losses" shall mean the set of losses generated by a single event that occur subsequent to the occurrence of the event itself. For example, these include losses generated by transactions performed subsequently on the basis of erroneous data in a database or a series of fraudulent events carried out as part of a single scheme;
- "*near miss event*" shall mean an operational risk event that does not generate a loss.

# 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part

- 2:
- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

# 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Chapter:

- authorization to revert from the Standardized Approach to the Basic Indicator Approach or from the Advanced Measurement Approaches to the Standardized Approach or the Basic Indicator Approach for determining the capital requirement for operational risk (Part 1, Section II and Part 3, Section V): Banking Supervision Department;
- authorization to adopt the Advanced Measurement Approaches for determining the capital requirement for operational risk (Part 3, Section V): Banking Supervision Department;
- authorization for the combined use of approaches for determining the capital requirement for operational risk (Part 4, Section I): Banking Supervision Department.

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#### SECTION II

#### GOVERNANCE AND MANAGEMENT OF OPERATIONAL RISKS

The governing bodies play a key role in establishing an effective and efficient operational risk management and control system. The supervisory, management and control bodies, each within the scope of its respective duties and responsibilities, shall establish the general framework of the system, shall be responsible for its implementation, shall supervise its operation and shall verify its overall functionality and compliance with regulatory requirements. Specific attention shall be paid to the processes, functions and other aspects involved in the calculation of the capital requirement. Banks shall refer to the provisions of Title I, Chapter 1, Part 4, in determining the specific tasks and responsibilities assigned to each governing body.

Banks shall take specific account of infrequent yet severe loss events, and shall identify the various forms and manners in which operational risks may materialize, having regard to their specific organizational and operational characteristics. Banks shall assess the operational risks associated with the introduction of new products, activities, processes and systems.

Banks shall adopt contingency and business continuity plans that ensure their ability to operate on an ongoing basis and limit losses in the event of severe business disruptions.

Banks that adopt the Standardized Approach shall not revert to the Basic Indicator Approach and those that adopt Advanced Measurement Approaches shall not revert to either the Standardized or Basic Indicator Approaches except for demonstrated good cause and subject to the authorization of the Bank of Italy. PART 2

# **BASIC INDICATOR AND STANDARDIZED APPROACHES**

## SECTION I

## BASIC INDICATOR APPROACH

## 1. Method for calculating the capital requirement

Under the Basic Indicator Approach, the capital requirement shall be equal to 15% of the average of the last three twelve-monthly observations of the relevant indicator.<sup>2</sup>

If, for any given observation, the value of the relevant indicator is negative or equal to zero, this figure shall not be taken into account in calculating the total capital requirement. The requirement shall be calculated as the average for the positive observations only.

Where data on the relevant indicator is not available for certain observations during the applicable three-year period, the calculation of the requirement shall be based on the average of the available observations only.<sup>3</sup>

The sale or acquisition of operating segments shall affect the calculation of the capital requirement only as of the date of the sale or acquisition and shall therefore not produce any retroactive change in the relevant indicator.

Annex A provides a number of examples of calculations of the capital requirement using the Basic Indicator Approach.

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<sup>&</sup>lt;sup>2</sup> For the purposes of calculating the capital requirement for interim periods, each observation shall be based on the values of the relevant indicator relating to the previous twelve months. For example, the requirement at March 31 of year T shall be calculated as the average of the values of the relevant indicator for the periods from April 1 T-3 to March 31 T-2, from April 1 T-2 to March 31 T-1, and from April 1 T-1 to March 31 T.

<sup>&</sup>lt;sup>3</sup> Only values for the relevant indicator determined on the basis of the International Accounting Standards shall be used in calculating the capital requirement.

#### SECTION II

## STANDARDIZED APPROACH

#### 1. Eligibility thresholds

In order to use the Standardized Approach, individual banks and banking groups shall comply with at least one of the following thresholds:<sup>4</sup>

- supervisory capital equal to or greater than €200 million ("size threshold");
- supervisory capital equal to or greater than €25 million and the total value of the relevant indicator for business lines other than retail banking and commercial banking equal to at least 60% of the total relevant indicator ("specialist threshold").

# 2. Qualifying criteria for the Standardized Approach

In order to use the Standardized Approach, banks shall have adequate internal control procedures (sub-section 2.1) and an effective operational risk management system (sub-section 2.2), in addition to the corporate governance mechanisms specified in Title I, Chapter I, Part 3.

# 2.1 Internal controls

#### a) The self-assessment process

The self-assessment process shall consist of a formalized set of procedures and activities to assess the quality of the operational risk management system, as well as its continuing compliance with regulatory requirements and appropriateness to operational needs and market developments.

The procedures for conducting the self-assessment and the related findings shall be adequately documented and shall be periodically reported to the internal audit function, any other units or functions involved and the governing bodies. The report shall place specific emphasis on any aspects of the operational risk management system that

<sup>&</sup>lt;sup>4</sup> These thresholds shall not apply to individual banks belonging to a banking group that uses the Standardized Approach on a consolidated basis. Use at the individual level is subject to compliance with the requirements set out in sub-section 2.

require improvement, including changes in bank structure and operations, and on the assessment of compliance with the qualifying criteria.

b) The internal audit function

The internal audit function shall carry out periodic reviews of the operational risk management system and the self-assessment process with a view to evaluating their effectiveness and compliance with the qualifying criteria.

The function shall inform the governing bodies of its activities concerning operational risk and its findings.

At least once a year, the internal audit function shall conduct an independent review of the adequacy of the operational risk management system and the self-assessment process. The results of this review shall be presented in a report, which shall also indicate the recommended corrective actions.

#### 2.2 Operational risk management system

The operational risk management system is a structured set of processes, functions and resources for identifying, assessing and controlling operational risks.

The key features of the operational risk management system are:

- the mapping of activities into regulatory business lines;
- the data collection and storage system;
- the assessment of operational risk exposure;
- the reporting system.

The operational risk management system shall be documented and responsibilities shall be clearly assigned.

a) The mapping of activities into regulatory business lines

For the purposes of calculating the capital requirement, the bank shall map its activities into eight regulatory business lines, listed in Table 1 of sub-section 3, in accordance with the following principles:

- all activities shall be mapped into the business lines in a mutually exclusive and jointly exhaustive manner;
- any activity that forms an integral or ancillary part of another shall be allocated in accordance with the mapping criteria for the main activity;
- an activity belonging to more than one business line shall be mapped to the dominant business line;

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- where an activity cannot be mapped on the basis of a dominant business line, it shall be mapped to the business line yielding the highest percentage. The same rule shall apply to any associated ancillary activity;
- a compound activity shall be divided into its significant components, which shall be mapped to the most appropriate business lines on the basis of their nature and characteristics;
- banks may use internal transfer pricing methods to allocate the relevant indicator to the various business lines;<sup>5</sup>
- the mapping of activities into business lines shall be consistent with the categories adopted for credit and market risks.

For the mapping of activities into business lines, banks shall take account of the table contained in Annex B.

The mapping criteria shall be reviewed and adjusted in line with developments in business activities and the bank's risk profiles.

The process of mapping activities into business lines shall be subject to internal review.

b) The operational risk data collection and storage system

Banks shall establish an operational risk data collection and storage system, which at a minimum shall include material losses and any related recoveries, that is capable of ensuring the effectiveness of the risk management system.

The system shall ensure on a continuing basis that the data are relevant, reliable and up to date.

For this purpose, banks shall:

- develop information systems capable of ensuring the integrity, confidentiality and availability of the data over time;
- carry out periodic reviews of the operational risk data collection and storage system.
- c) Assessment of exposure to operational risks

At least once a year banks shall conduct an assessment of their exposure to operational risks for the entire bank and for significant operating segments.

<sup>&</sup>lt;sup>5</sup> For example, the retail business line may carry out lending transactions making use of funds raised with activities typical of other business lines such as interbank funding, which is included in the trading and sales line. In this case, internal transfer prices can be used to reallocate the cost components from trading and sales to retail.

The results of the assessment shall form an integral part of the process of controlling the bank's operational risk profile and shall be reported to the governing bodies and, within the scope of their duties, to the managers of the operating segments involved.

The results of the assessment shall be used for management purposes to prevent and mitigate operational risks.

d) The reporting system

Banks shall establish a reporting system to ensure that the governing bodies and the managers of the functions involved have access to appropriate information on operational risk.

The following information shall be of particular importance:

- results of the assessment of operational risk exposure;
- material losses and related recoveries;
- description of actions taken to prevent and mitigate operational risks, with information on their effectiveness.

## 3. Calculation of the capital requirement

Under the Standardized Approach, the capital requirement shall be equal to the average of the last three twelve-monthly observations of the Standardized Approach amount.<sup>6</sup>

The Standardized Approach amount shall be calculated for each year as the sum of the relevant indicators for the business lines weighted on the basis of the percentages indicated in Table 1.

<sup>&</sup>lt;sup>6</sup> For the purposes of calculating the capital requirement for interim periods, each observation shall be based on the values of the relevant indicator relating to the previous twelve months. For example, the requirement at March 31 of year T shall be calculated as the average of the values of the relevant indicator for the periods from April 1 T-3 to March 31 T-2, from April 1 T-2 to March 31 T-1, and from April 1 T-1 to March 31 T.

Business line	Percentage
Corporate finance	18%
Trading and sales	18%
Retail banking	12%
Commercial banking	15%
Payment and settlement	18%
Agency services	15%
Asset management	12%
Retail brokerage	12%

## **Table 1: Regulatory business line percentages**

Where the weighted relevant indicator of a business line is negative, it shall be included in calculating the Standardized Approach amount. Where the Standardized Approach amount for a given year is negative, then the result for that year shall be zero and shall be included in the calculation of the three-year average.

Where data on the relevant indicator is not available for certain observations during the applicable three-year period, the calculation of the requirement shall be based on the average of the available observations only.<sup>7</sup>

Annex C provides an example of the method for calculating the capital requirement under the Standardized Approach.

The sale or acquisition of operating segments shall affect the calculation of the capital requirement only as of the date of the sale or acquisition and shall therefore not produce any retroactive change in the relevant indicator.

## 4. Notification of the Bank of Italy

Individual banks or banking groups that plan to adopt the Standardized Approach shall notify the Bank of Italy prior to such adoption.

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<sup>&</sup>lt;sup>7</sup> Only values for the relevant indicator determined on the basis of the International Accounting Standards shall be used in calculating the capital requirement.

The notification shall be accompanied by:

- organization charts that specify the tasks and responsibilities of the operational risk management and control functions;
- the minutes of the resolution of the supervisory body certifying compliance with the eligibility thresholds (paragraph 1);
- a document describing the self-assessment process and the related findings;
- the internal audit report.

On an annual basis banks shall send the Bank of Italy the supervisory body's formal certification of compliance with the qualifying criteria and the internal audit report on the adequacy of the operational risk management system.

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PART 3

# ADVANCED MEASUREMENT APPROACHES

## SECTION I

# ELIGIBILITY THRESHOLDS

In order to use an AMA, individual banks and banking groups shall comply with at least one of the following thresholds at the time the application is submitted.<sup>8</sup>

- supervisory capital equal to or greater than €200 million ("size threshold");
- supervisory capital equal to or greater than €25 million and the total value of the relevant indicator for business lines other than retail banking and commercial banking equal to at least 60% of the total relevant indicator ("specialist threshold").

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<sup>&</sup>lt;sup>8</sup> These thresholds shall not apply to individual banks belonging to a banking group that uses an AMA on a consolidated basis. Use at the individual level is subject to compliance with the requirements set out in the following sections.

#### SECTION II

## ORGANIZATIONAL REQUIREMENTS

In order to use Advanced Measurement Approaches, banks shall have adequate internal control procedures (sub-section 1) and an effective operational risk management system (sub-section 2), in addition to the corporate governance mechanisms specified in Title I, Chapter I, Part 3.

# 1. Internal controls

a) Operational risk control function

Banks shall establish an operational risk control function.

This function shall be responsible for:

- designing, developing and maintaining the operational risk management and measurement systems. These activities shall regard the data collection and storage system, the reporting system, as well as the assessment of the operational risk profile;
- the calculation of the capital requirement for operational risks.

For the purposes of performing this function effectively, banks shall establish the organizational arrangement they consider most appropriate.

Controlling operational risks may involve various bank units, provided that responsibility for coordinating and overseeing the various activities is assigned to a single entity.

In performing this function, banks shall employ personnel with adequate skills in managing and measuring operational risk and with extensive knowledge of bank processes.

The operational risk control function shall inform the governing bodies of its activities concerning operational risk and its findings.

b) Internal validation process

The internal validation process shall consist of a formalized set of procedures and activities to assess on an ongoing basis the quality of the operational risk management and measurement systems, as well as their continuing compliance with regulatory requirements and appropriateness to operational needs and market developments. The process shall include verifying the reliability of the capital requirement calculation as well as verifying that the measurement system is used in decision-making processes and in managing operational risk.

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Responsibility for the internal validation process shall be assigned to a single entity.

The internal validation process shall employ personnel with appropriate specialist skills, most of whom shall be independent of the managers of activities that generate or incur operational risk losses.

The internal validation process shall be independent of the internal audit function, which shall review the validation process and its outcomes. Where internal validation is performed by persons or units that are involved in developing the risk management and measurement systems, the review activity shall specifically assess the objectivity of the process and its outcomes.

The outcomes of the validation process shall be adequately documented and shall be periodically reported to the internal audit function, any other units or functions involved and the governing bodies. The report shall place specific emphasis on any aspects of the operational risk management system that require improvement, including changes in bank structure and operations, and on the assessment of compliance with the qualifying criteria.

# c) The internal audit function

The internal audit function shall carry out periodic reviews of the operational risk management and measurement systems in order to evaluate their effectiveness and compliance with the qualifying criteria.

This activity shall include reviews of the internal validation process – in order to verify its adequacy, completeness and objectivity and the consistency of its outcomes – and of the effective use of the operational risk measurement system for management purposes.

Special attention shall also be paid to the components of the measurement system used in calculating the capital requirement, including the quality of the data and the information systems.

The internal audit function shall inform the governing bodies of its activities concerning operational risk and its findings.

The internal audit function shall prepare an annual report describing its review of the operational risk management and measurement systems, specifically addressing any problems found and the recommended corrective actions.

#### 2. Operational risk management system

The operational risk management system is a structured set of processes, functions and resources for identifying, assessing and controlling operational risks, with specific regard to ensuring the effective prevention and mitigation of such risks.

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The key features of the operational risk management system are:

- the data collection and storage system;
- the reporting system;
- the use of the measurement system for management purposes.

The operational risk management system shall be documented and responsibilities shall be clearly assigned.

a) The data collection and storage system

Banks shall establish an operational risk data collection and storage system that ensures the effectiveness of the risk management and measurement systems.

The operational risk data shall include data for the four elements used in the measurement system (see Section III, sub-section 1) and other data used for management purposes.

The system shall ensure that the data are complete, reliable and up to date.

For this purpose, banks shall:

- develop information systems that ensure the integrity, confidentiality and availability of the data over time;<sup>9</sup>
- carry out periodic reviews of the operational risk data collection and storage system.
- b) The reporting system

Banks shall establish a reporting system to ensure that the governing bodies and the managers of the functions involved have access to timely information on operational risks.

The frequency and the content of the reporting shall be consistent with the level of risk and may vary on the basis of the intended recipient and on how the information will be used. The following information are of particular importance:

 detailed information on the four elements referred to in Section III, sub-section 1 (for example, greater losses and related recoveries; changes in factors reflecting the business environment and the internal control system that significantly alter the operational risk profile);

<sup>&</sup>lt;sup>9</sup> Highly automated data collection processes can help obtain more closely controlled, higher quality data.

- the identification of vulnerable areas, description of actions taken to prevent and mitigate operational risk and specification of their effectiveness;
- an assessment of the operational risks associated with the introduction of new products, activities, processes and systems;
- the estimated contribution of operational risks to the determination of economic capital;
- information on methods for transferring risk.
- c) The use of the measurement system for management purposes (use test)

The operational risk measurement system shall be closely integrated into risk management and decision-making processes.

The system shall not be used solely for calculating the supervisory capital requirement, but shall also be used to strengthen the operational risk management system, with a view to improving bank processes and internal control systems.

Banks shall adopt AMAs to calculate the capital requirement only on the condition that the operational risk measurement system is used for management purposes. This condition shall be met at the time the application for authorization is submitted.

#### SECTION III

## QUANTITATIVE REQUIREMENTS

#### 1. Operational risk measurement system – general requirements

The operational risk management system is a structured set of processes, functions and resources for calculating the capital requirement.

The measurement system shall use the following four elements:

- internal loss data;
- external loss data;
- scenario analysis;
- business environment and internal control factors.

Banks shall assess the accuracy and adequacy of the operational risk measurement system and its outputs, in particular with regard to its ability to capture the main operational risk drivers, especially those shaping the tail of the loss distribution, and to incorporate changes in the risk profile. Banks shall also ensure that the estimates and outputs of the model for calculating the capital requirement can be replicated.

Banks shall retain data on the four elements used in calculating the capital requirement for the last three years.

## 2. Data collection and use of the four elements

Banks shall establish criteria and procedures for collecting and storing data regarding the four elements and shall establish a quality standard for the accuracy, relevance and completeness of the data for each component. Appropriate controls shall be implemented to ensure compliance with this standard.<sup>10</sup>

Banks shall document the criteria and procedures used to conduct an ongoing assessment of the relevance of data, taking account of current and forecast operating segments, the organizational structure and the operational risk management system.

Banks shall establish formal criteria and procedures for modifying data and shall designate the persons responsible for making such changes. Any adjustments made to data shall be adequately documented, with an

<sup>&</sup>lt;sup>10</sup> Examples of steps to improve data quality include the use of decision trees in assigning losses to types of event and business lines and sample cross checking of internal operational loss data against the related accounting records.

explanation of the reasons for changes, and shall be made to provide a more accurate representation of the operational risk profile.

Banks shall document the roles involved in and responsibilities for data acquisition, management and updating and the procedures and databases used, information flows (specifying data sources and collection processes), and automated and manual controls.

The business continuity plan shall ensure that systems and databases used in measuring operational risk can be recovered in the event of a disaster. The bank shall establish a security policy to prevent unauthorized access to the data.

Banks may include qualitative metrics for certain elements where sufficient quantitative data is not available. In order to obtain reliable measures of operational risk exposure, such metrics shall be consistent with the objective of obtaining an effective, unbiased representation of the events to which they refer.

## 2.1 Internal loss data

Internal loss data are the main component in the construction of a reliable, accurate operational risk measurement system.

For the purpose of calculating the capital requirement, banks shall define appropriate minimum loss thresholds, taking account of the characteristics of the operational risk classes.

The class thresholds shall not exclude material loss data and shall not affect the reliability and accuracy of the distributions and the operational risk measures. In order to correct for the effect of the use of operational risk measurement thresholds, banks shall employ appropriate techniques to adjust for the incompleteness of class data.<sup>11</sup>

Banks shall collect all operational loss data above the minimum thresholds.

The operational risk measurement system shall be based on a minimum historical observation period of five years. When a bank first moves to an AMA, this period shall be reduced to three years.

A historical observation period of more than five years may be required for an operational risk class characterized by low-frequency events in order to ensure that a sufficient number of events are observed. Where the information collected is not sufficient to guarantee the reliability of the operational risk distributions and measures, the bank may increase the population of the class (for example, by generating data using scenario analysis or using external data for similar operating segments).

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<sup>&</sup>lt;sup>11</sup> For example, truncated distributions or appropriate parameter estimation procedures.

Banks shall define appropriate criteria for classifying internal data. In all cases, the data shall be mapped into the business lines and event types reported in Annexes B and D, respectively.

The calculation data set shall include the amount of losses gross of recoveries, any related recoveries, the date of the event occurred or, where unavailable, the date on which the event was observed or recognized. The bank shall also collect additional descriptive information about loss events.

Banks shall not include rapidly recovered losses in the calculation data set. In the event of partial recovery, the amount of the loss net of recovery shall be included in the calculation data set.

Multiple-time losses shall be included in the calculation data set as the sum of the losses occurring in the successive periods.

Multiple-effect losses shall be included in the calculation data set as the sum of the amounts of the losses occurring in the different operating segments. Where possible, a record shall be kept of the segments affected by the losses.

Banks shall document the criteria for identifying credit risk boundary losses and market risk boundary losses.

Credit risk boundary losses shall not be included in the calculation data set for operational losses if they are used to calculate the capital requirement for credit risk.

Bank shall in any case:

- record these losses within the internal operational risk databases;
- implement the consequent prevention and mitigation actions for the relevant operational risk profile.

Market risk boundary losses shall be included in the calculation data set for operational risks and shall therefore be considered in estimating the related capital requirement.

The prudential treatment of boundary losses shall ensure that all loss events are included in a risk category and shall not be used to obtain inappropriate reductions in the total capital requirement.

Data relating to rapidly recovered loss events, near miss events and operational risk gain events shall be used to increase the bank's understanding of its operational risk profile and to improve operational risk management processes. Banks are encouraged to collect such data for management purposes.

# 2.2 External loss data

The operational risk measurement system shall use external loss data, especially where there is reason to believe that the bank is exposed

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to infrequent but potentially severe loss events for which insufficient internal data are available, and in assessing new operating segments.

Banks shall take due account of their size and individual characteristics in incorporating external data into their operational risk measurement system. For this reason, banks shall establish a process for determining the situations in which external data shall be used and for assessing their accuracy and relevance. The data shall be incorporated in the measurement system using appropriate methodologies (for example, scaling procedures).

The main sources of external data shall be consortia initiatives (information provided by a pool of banks and other financial intermediaries), public sources (databases obtained from vendors) or databases developed internally using information drawn from specialised newspapers and journals.

Data collected by consortia that have a high degree of reliability represent a valuable source of information. Where other external data are used, special care shall be taken in the selection of the source.

## 2.3 Scenario analysis

The operational risk measurement system shall take account of scenario analyses, especially where there is reason to believe that the bank is exposed to infrequent but potentially severe loss events.

In order to produce data that are reliable and consistent with the bank's risk profile, the bank shall establish a structured process for generating scenario data. Subjectivity in the process and biases in the data shall be reduced to the greatest extent possible using, inter alia, the following techniques:

- the setting of criteria for selecting the operational risk classes to which the scenarios shall be applied, for identifying the sources of information used and for determining the assumptions underlying the scenario building process;
- the involvement of internal or external experts in creating the scenarios;
- where sufficient internal and external loss data are available, the comparison of these data with the results of the scenario analyses in order to assess its ability to capture the bank's actual operational risk profile.

#### 2.4 Business environment and internal control factors

The operational risk measurement system shall capture key business environment and internal control factors that can change the bank's risk profile.

The key business environment and internal control factors shall primarily be used to make capital requirement assessments more forwardlooking, immediately reflecting improvement or deterioration in the bank's risk profile as a result of changes in operating segments, in human, technological and organizational resources and in internal control systems.

The choice of each factor shall be justified by its ability to predict exposure to operational risk.

Bank shall ensure that the key business environment and internal control factors remain sufficiently representative of the risk exposure.<sup>12</sup>

#### 3. Characteristics of the calculation model

Banks shall document the methodologies used for the calculation model, tracking any changes made over time, and shall specify the roles and responsibilities of the persons involved in developing and implementing the model.

The calculation model shall adequately capture the bank's operational risk profile and shall ensure a sufficient degree of stability in outputs.

Bank shall establish the methods and processes through which the four elements (see sub-sections 1 and 2) are processed, combined and weighted in calculating the capital requirement.

Specifically, care shall be take to avoid the double counting of elements that reduce the capital requirement. The appropriateness of the combinations and the weightings used in the calculations shall be assessed periodically.

In view of the fact that operational risks tend to have multiple causes and generate a variety of effects, the model shall be sufficiently granular to capture the characteristics of the bank's overall operational risk profile. The granularity of the model shall be reflected by the number of operational risk classes.

In addition to being homogeneous, the data in the classes shall be, to the greatest extent possible, independent and identically distributed.<sup>13</sup>

Banks shall identify relevant distributions or operational risk measures for each class using a process that shall involved at least the following steps:

<sup>&</sup>lt;sup>12</sup> For example, using correlation or regression analysis with internal and external loss data.

<sup>&</sup>lt;sup>13</sup> The following techniques can be used to achieve independent and identically distributed classes: time plots or appropriate statistical functions for ensuring data independence and stationarity in terms of frequency and impact; statistical functions to take account of data clustering, seasonality and inflation.

- preliminary identification of a set of distributions to be used in estimating the frequency and severity of events;
- the use of techniques for determining the probability structure of outliers in order to mitigate their influence on the overall requirement (for example, constrained maximum likelihood estimation techniques; tail smoothing functions);
- the use of appropriate methods for estimating distribution parameters or for identifying scenario value classes;
- the use of appropriate tests for assessing the selection of distributions or measures.

Where certain operational risk classes are similar in terms of frequency and severity distributions, the bank may combine them, using appropriate techniques for incorporating any forms of data dependence in the combined class (see Section IV, sub-section 1. 2).

The model shall calculate the capital requirement for operational risk for a confidence interval equal or comparable to 99.9% over a one-year holding period.

Where there is a significant decree of bias and volatility in the requirement estimated directly at that confidence interval, the bank may estimate an initial measure at a confidence level of at least 90% and then scale it up to the 99.9% confidence level using appropriate methods.

In this case, the bank shall demonstrate that the scaling method is robust and accurate and generates reliable outputs.<sup>14</sup>

In addition to the point value of the requirement, the model shall produce a reliable estimate of its potential variability.

<sup>&</sup>lt;sup>14</sup> The following techniques can be used in scaling the supervisory measure: the use of tail distributions determined on the basis of data from peers with similar operating segments or on scenario analyses; where an Extreme Value Theory approach is used, use of the stability property of the model (Peaks Over Threshold) that makes it possible to compute the measures at the regulatory percentile (99.9%) from measures estimated at a lower level.

#### SECTION IV

## CALCULATION OF THE CAPITAL REQUIREMENT

#### 1. Calculation of the capital requirement

The capital requirement for operational risks shall be the sum of the expected loss and unexpected loss (sub-section 1.1) estimated by the calculation model.

Banks shall calculate the requirement as the sum of the measures for the individual operational risk classes. Where the model incorporates correlation estimates (sub-section 1.2), banks shall take this into account in calculating the requirement.

The capital requirement for operational risks may be reduced by the use of insurance policies and other risk transfer mechanisms (sub-section 1.3) up to a limit of 20% of the gross requirement.

## 1.1 Losses deducted from the capital requirement

The calculation model shall use a definition of expected loss that is stable and robust.  $^{15}$ 

Operational losses that meet all of the following conditions may be deducted from the capital requirement:

- they are covered by specific provisions through the income statement;
- they are identified on the basis of documented criteria and recorded in the calculation data set.

The deduction shall not in any case exceed the value of the total expected loss estimated by the calculation model.

## 1.2 Correlation

The presence of common factors of different nature, either specific to a bank (for example, processes, systems and persons) or attributable to external factors, that jointly influence different classes of operational risk may give rise to correlations between the frequency or severity of losses.

<sup>&</sup>lt;sup>15</sup> The arithmetic mean of sample data provides a high degree of stability and robustness where the reference distribution is normal or nearly normal. However, with heavy-tailed distributions, as is generally the case with operational risk, the arithmetic mean may be very high, since it is more sensitive to extreme data. The use of a trimmed or weighted (winsorised) version of the arithmetic mean or of ordinal statistics, such as the median, makes it possible to obtain more stable and robust values for expected losses.

Banks may use correlation estimates in calculating the capital requirement, provided that the criteria underlying the correlation assumptions are documented, that the techniques used are robust and applied correctly and that they capture the uncertainties connected with the estimates.

Banks shall devote specific attention to the methods for identifying and calculating correlations between the tails of loss distributions and the related impact on operational risk measures.

Where possible, the correlation shall be captured implicitly by way of appropriate treatment of data.

Banks shall verify the continuing validity of the correlation assumptions using appropriate quantitative and qualitative techniques.

## 1.3 Risk transfer

Banks shall specify the insurance policies that they intend to use to reduce the capital requirement.

For this purpose, insurance policies shall meet the following conditions:

- the insurance provider is authorized to provide insurance or reinsurance and shall have a rating from an ECAI equal to or higher than credit quality step 3;
- the insurance policy has an initial term of no less than one year. For policies with a residual term (in relation to the reference date of the capital requirement) of less than one year, the banks shall make appropriate haircuts reflecting the declining residual term of the policy. There shall be no reduction in the requirement for policies with a residual term of 90 days or less. Where, however, the contract contains an automatic renewal option on terms and conditions similar to those of the current contract and the insurance provider must give at least 90 days notice of non-renewal, the policy shall be recognized for the purpose of reducing the requirement without applying any haircut;
- the insurance policy has a minimum notice period for cancellation of the contract of 90 days;
- the insurance policy has no exclusions or limitations triggered by supervisory actions, or in the case of an insolvent bank, that preclude the bank or the receiver from recovering for damages suffered or expenses incurred by the bank, except in respect of events occurring after the initiation of liquidation proceedings in respect of the bank. The insurance policy may, however, exclude any fine, penalty or punitive damages resulting from supervisory actions;
- the insurance is provided by a third party entity. In the case of insurance through captives and affiliates, the exposure shall be laid off

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to an independent third party entity, for example through re-insurance that meets the eligibility criteria.

The methodology for recognizing insurance shall:

- be adequately documented;
- take account in a transparent and consistent manner of the relationship between the insurance coverage and the likelihood and impact of the loss used in the determination of the capital requirement;
- capture the uncertainty of payment as well as mismatches in coverage of insurance policies.

Mitigation through other operational risk transfer mechanisms shall be recognized provided that the latter are of a quality comparable to that of insurance coverage, and that the bank is able to demonstrate that a significant degree of risk mitigation has been achieved.

Banks shall monitor the effectiveness of the coverage arising from the use of risk transfer techniques.

# 2. Notification to the Bank of Italy

Once a year, banks shall submit the internal audit report on the operational risk management and measurement systems to the Bank of Italy.

#### SECTION V

# AUTHORIZATION BY THE BANK OF ITALY

The Bank of Italy shall authorize the use of Advanced Measurement Approaches for calculating the operational risk capital requirement provided that the qualifying criteria specified in this Chapter are met, in compliance with the provisions of Title I, Chapter 2, Part 5.

Where certain aspects of operational risk management and measurement systems are not fully consistent with the operational complexity and risk profile of the applicant but do not affect the general validity and reliability of such systems, the authorization may be accompanied by prescriptions concerning organizational measures and the capital requirement.

The formal application for authorization shall be accompanied by the documentation listed in Annex E for an individual bank or an entire banking group and the parent undertaking.

Banks or banking groups intending to adopt an AMA shall perform a parallel calculation of operational risk, comparing the result obtained with the result produced by the Standardized Approach for the year preceding the date the application is submitted. The parallel calculation shall also be performed for the three years following authorization.

Except where the combined use described in Section I, Part 4 of this Chapter is used, banks authorized to use an AMA may not revert to the BIA or the Standardized Approach for calculating the capital requirement except for demonstrated good cause and subject to the authorization of the Bank of Italy.

PART 4

# COMBINED USE OF CAPITAL REQUIREMENT CALCULATION METHODS

## SECTION I

## COMBINED USE OF DIFFERENT METHODOLOGIES

In general, banks shall adopt only one method for calculating the operational risk capital requirement.

However, the combined use of different methodologies, at the individual and at the consolidated level, shall be permitted in the cases and under the conditions specified in this Section.

The combination of methods used shall in any case cover all operating segments.

Compliance with the specific qualifying criteria for the Standardized Approach (Part 2, Section II, sub-section 2) and AMAs (Part 3, Sections II and III) for each operating segment for which these methods are used shall not be affected by the combined use of methods. Annex F provides a table summarizing the various combined use options at the consolidated and individual levels.

# 1. Basic Indicator Approach

The parent undertaking of a banking group that adopts the BIA at the consolidated level shall generally not include the output of other methods used by one or more group operating segments in the consolidated operational risk capital requirement calculation.

However, combined use with the AMAs already used by companies that join the banking group ("permanent partial use of the BIA") shall be permitted subject to prior authorization by the Bank of Italy.

The combined use of the BIA with other methods shall not be permitted at the individual level.

#### 2. Standardized Approach

The parent undertaking of a banking group that adopts the Standardized Approach at the consolidated level may include the output of the AMA and BIA in the calculation of the consolidated operational

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risk capital requirement ("permanent partial use of the Standardized Approach") in the following cases:

- combined use with the AMAs already use by companies that join the banking group shall be permitted subject to authorization by the Bank of Italy;
- combined use with the BIA shall be permitted provided that the total of the operating segments covered by this method does not exceed 10% of the average of the last three annual observations of the relevant indicator at the consolidated level. The 10% limit may only be exceeded in duly justified exceptional circumstances (for example, in the event of a business combination) and in any event for a limited period of time. On an annual basis the parent undertaking shall verify compliance with the limit. Where the limit has been exceeded, the parent undertaking shall inform the Bank of Italy of the procedures and timetable for rolling out the Standardized Approach to the operating segments exceeding the limit.

The combined use of the Standardized Approach with other methods shall not be permitted at the individual level.

## 3. Advanced Measurement Approaches

# 3.1 Combined use

A banking group or individual bank that adopts an AMA may include the output of methods other than an AMA used by one or more operating segments in the calculation of the consolidated operational risk capital requirement provided that:

- the AMA initially covers operating segments representing at least 50% of the relevant indicator at the consolidated level for banking groups or on an individual basis for banks not belonging to a group ("AMA significance threshold").<sup>16</sup> In exceptional circumstances, where the group structure is particularly complex, the Bank of Italy may permit combined use at a lower significance threshold;
- a plan for the rollout (see sub-section 3.2) of the AMA is submitted specifying the procedures and timetable for its application to the operating segments not initially covered by the method.

Permanent partial use shall be permitted where the contribution to the consolidated or individual relevant indicator for all the operating segments to be covered using methods other than an AMA is less than 15% of the average of the last three annual observations of the relevant indicator at the consolidated level for banking groups or on an individual

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<sup>&</sup>lt;sup>16</sup> Reference shall be made to the figure available at the time the application is submitted.

basis for banks not belonging to a group ("permanent partial use of AMAs"). On an annual basis, parent undertakings or individual banks shall verify compliance with the limit. Where the limit has been exceeded, the parent undertaking shall inform the Bank of Italy of the procedures and timetable for rolling out the AMA to the operating segments exceeding the limit. In the case of individual banks, combined use with the BIA shall be permitted solely for operating segments represented by foreign branches.

# 3.2 Phased rollout of AMAs

The AMA rollout plan shall be approved by the supervisory body, having obtained the opinion of the control body, and shall be submitted to the Bank of Italy together with the application for authorization.

The rollout plan shall provide detailed information concerning:

- the criteria, sequence and timetable of the roll out of the AMA across individual operating segments;
- the arrangements in place for its implementation (structures and resources involved in managing the project, procedures to be adopted in the event of delays, etc.).

The rollout shall be completed within seven years of the date on which the bank receives authorization to use the AMA. Derogations from this limit may be granted for especially complex groups.

The AMA rollout shall be not be used selectively with a view to reducing the capital requirement.

Banks shall provide the Bank of Italy with detailed information regarding the impact on the rollout plan of significant corporate events (such as mergers, reorganizations, acquisitions of business units, changes to information systems) or external factors.
#### SECTION II

# PROCEDURES FOR CALCULATING THE CAPITAL REQUIREMENT

This Section describes the procedures for calculating the operational risk capital requirement in the case of the combined use of different approaches (sub-section 1) and for banks belonging to a banking group (sub-section 2).

# 1. Combined use

Where a group adopts combined use at the consolidated level, the consolidated operational risk requirement shall be the sum of the requirements generated by the methods used:

- the BIA component, for all of the group's operating segments to which this approach is applied, calculated on the basis of their relative contribution to the consolidated relevant indicator, using the calculation methodology envisaged for this method;
- the Standardized Approach component, for all the group's operating segments to which this approach is applied, calculated on the basis of their relative contribution to the consolidated relevant indicator, using the calculation methodology envisaged for this method;
- the AMA component, for all the group's operating segments to which this approach is applied, calculated on the basis of the loss data and other information for these operating segments.

Annexes G and H contain examples of the capital requirement calculation at the consolidated and individual levels for certain combinations of methods.

In calculating the operational risk capital requirement using a combination of methods, individual banks shall apply criteria analogous to those set out above for combined use at the consolidated level.

#### 2. Individual banks belonging to a banking group

Banks that belong to a banking group shall comply with an individual operational risk capital requirement equal to the sum of:

- the BIA requirement for the bank's operating segments to which this approach is applied, calculated on the basis of the relevant indicator for these operating segments, gross of intragroup adjustments;
- the Standardized Approach requirement for the bank's operating segments to which this approach is applied, calculated on the basis of

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the relevant indicator for these operating segments, gross of intragroup adjustments;

— the amount of the AMA component allocated by the parent undertaking to the bank's operating segments to which this approach is applied. The parent undertaking shall document the methodology used to allocate the AMA component. This methodology shall be consistent with and appropriately reflect the risk of the various operating segments.

Pursuant to the provisions of Chapter 6, Section II, sub-section 5, the individual capital requirement shall be reduced by 25%.

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#### ANNEX A

# Basic Indicator Approach – examples of the calculation of the capital requirement

The data reported in the table represent cumulative gross income for each year. For year T-3 a decrease in initial gross income over the final three quarters is assumed.

Gross income	T-3	T-2	T-1	Т
March	8.0	2.5	1.5	3.0
June	6.9	4.9	3.0	
September	6.1	7.5	5.0	
December	5.0	11.0	8.0	

1. The requirement at December T-1 is equal to the 36-month average of the relevant indicators at the end of year from December T-1 to December T-3:

$$(5.0 + 11.0 + 8.0) * 12 / 36 = 8.0$$

- 2. The requirement at March T is calculate as follows:
  - Relevant indicator at December T-3 + March T-2 March T-3

$$5.0 + 2.5 - 8.0 = -0.5$$

• Relevant indicator at December T-2 + March T-1 – March T-2

$$11.0 + 1.5 - 2.5 = 10.0$$

- Relevant indicator at December T-1 + March T March T-1 8.0 + 3.0 - 1.5 = 9.5
- Eliminating the first indicator, which is negative, the 24-month average is equal to (10.0 + 9.5) \* 12 / 24 = 9.8

\* \* \*

Where the bank began operation in July T-3, the requirement at March T is calculated over 33 months, as follows:

Gross income	T-3	T-2	T-1	Т
March		2.5	1.5	3.0
June		4.9	3.0	
September	6.1	7.5	5.0	
December	5.0	11.0	8.0	

• Relevant indicator at December T-3 + March T-2 (9 months) 5.0 + 2.5 = 7.5

• Relevant indicator at December T-2 + March T-1 – March T-2  
$$11.0 + 1.5 - 2.5 = 10.0$$

• Relevant indicator at December T-1 + March T – March T-1 8.0 + 3.0 - 1.5 = 9.5

• The average is equal to

$$(7.5 + 10.0 + 9.5) * 12 / 33 = 9.8$$
  
\* \* \*

Where a banking group acquires a new bank in the early part of year T, the related increase in consolidated gross income only has an impact from the first quarter subsequent to the transaction.

In the example, it is assumed that at March T the group's gross income prior to the acquisition was equal to 3 and that of the new bank equal to 2.5. Assuming that the intercompany components attributable to the new bank are equal to 0.5, consolidated gross income is equal to 5. For past dates, only the group's gross income prior to the acquisition is considered.

Gross income	T-3	T-2	T-1	Т
March	4.0	2.5	1.5	5.0
June	4.5	4.9	3.0	
September	5.1	7.5	5.0	
December	5.5	11.0	8.0	

The requirement at March T is equal to the average of the three relevant indicators of which only the final indicator (partially) reflects the entry of the new bank:

• Relevant indicator at December T-3 + March T-2 – March T-3

$$5.5 + 2.5 - 4.0 = 4.0$$

- Relevant indicator at December T-2 + March T-1 March T-2 11.0 + 1.5 - 2.5 = 10.0
- Relevant indicator at December T-1 + March T March T-1

8.0 + 5.0 - 1.5 = 11.5

• The average is equal to

$$(4.0 + 10.0 + 11.5) * 12 / 36 = 8.5$$

The acquired bank shall calculate an individual requirement equal to 75% of the three-year average of its own gross income, also considering the periods in which it was not part of the group.

\* \* \*

Where a banking group sells a bank in the early part of year T, the relative decrease in consolidated gross income only has an impact from the first quarter subsequent to the transaction.

In the example, it is assumed that the group's post-sale gross income at March T is equal to 1. Previous dates use the group's pre-sale gross income figures.

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Gross income	Т-3	T-2	T-1	Т
March	4.0	2.5	1.5	1.0
June	4.5	4.9	3.0	
September	5.1	7.5	5.0	
December	5.5	11.0	8.0	

The requirement at March T is equal to the average of the three relevant indicators, of which the first two reflect the pre-sale presence of the bank in the group:

- Relevant indicator at December T-3 + March T-2 March T-3 5.5 + 2.5 - 4.0 = 4.0
- Relevant indicator at December T-2 + March T-1 March T-2 11.0 + 1.5 - 2.5 = 10.0
- Relevant indicator at December T-1 + March T March T-1 8.0 + 1.0 - 1.5 = 7.5
- The average is equal to

$$(4.0 + 10.0 + 7.5) * 12 / 36 = 7.2$$

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# ANNEXB

# Standardized Approach - mapping business lines to bank activities

Business lines	List of activities
Corporate finance	Mergers, acquisitions, placements (public tenders and offerings, private placements, bond issues). Investment banking activities involving equity and debt capital (IPOs, privatisations, syndications, secondary private placements, underwriting, etc.). Business appraisals. Securitizations on behalf of third parties. Corporate financial management. Capital increases (lead manager only). Advisory and research services (capital structure, industrial strategy, undertakings, reorganizations, etc.). Investment advice as a specific business.
Trading and sales	Dealing on own account. Treasury management and funding on own account (asset & liability management, etc.). Securitization on own account. Reception, transmission and execution of orders for corporate and professional clients. <sup>17</sup> Advice, underwriting, placement of financial instruments and insurance products ( <i>bancassurance</i> , investment funds, securities and fund portfolio products, equities, bonds, derivatives, etc.) with corporate and professional clients.
Retail banking	Acceptance of deposits and lending. Guarantees and commitments. Consumer credit for retail customers. Leasing and factoring. Other transactions with retail counterparties not allocated to other business lines. Ancillary services such as collection and payment (issuing debit and credit cards, funds transfer and other payments on behalf of customers, exchanging foreign currency, etc.) and custodianship and administration of financial instruments.
Commercial banking	Acceptance of deposits and lending. Guarantees and commitments. Leasing and factoring. Export and trade credit. Other transactions with corporate counterparties not allocated to other business lines. Ancillary services such as collection and payment (issuing debit and credit cards, funds transfer and other payments on behalf of customers, foreign exchange, etc.) and custodianship and administration of financial instruments. Net income (for example, coupons and dividends) on non-trading books.
Payment and settlement	Payment, settlement and clearing services and systems (EBA, BIREL, TARGET, CLS, SWIFT, MASTERCARD, VISA, AMEX, etc.). Issuing and administering means of payment and funds transfer as a specific business. Correspondent bank.
Agency services	Depository bank. Custodianship and related services (cash/collateral management, deposits with third parties, etc.) as a specific business. Tax collection services. Treasury services for government entities. Trust services.
Asset management	Portfolio management and other forms of asset management (investment funds, pension funds, securities and fund portfolio products, hedge funds, etc.). This refers only to the production, and not the distribution, of asset management products, except for placement with professional clients by specialised companies.
Retail brokerage	Reception, transmission and execution of orders for retail customers. Advice, underwriting, placing of financial instruments and insurance products (bank insurance, investment funds, securities and fund portfolio products, equities, bonds, derivatives, etc.) with retail customers.

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 $<sup>^{17}\,</sup>$  See the definition of "professional clients" in Annex II of Directive 2004/39/EC (the so-called "MiFID").

ANNEX C

Business line		Step 1			Step 2		
	Calculation of the relevant indicator by business line		Percentage	Calculat relevant i	Calculation of the weighte relevant indicator by busine		
	T-2	T-1	Т		T-2	T-1	Т
Corporate finance	10	10	10	18%	1.80	1.80	1.80
Trading & sales	20	- 60	30	18%	3.60	- 10.80	5.40
Retail banking	20	20	30	12%	2.40	2.40	3.60
Commercial banking	20	15	10	15%	3.00	2.25	1.50
Payment and settlement	10	- 40	10	18%	1.80	- 7.20	1.80
Agency services	20	15	0	15%	3.00	2.25	0.00
Asset management	0	20	30	12%	0.00	2.40	3.60
Retail brokerage	-10	10	20	12%	-1.20	1.20	2.40
						Step 3	
					Algebra	ic sum for t	he year
					14.40	- 5.70	20.10
						Step 4	
					Calculation App	n of the Star	ndardized unt
					14.40	0.00	20.10
						Step 5	
					Standardiz	zed Approad	ch capital
					r	equirement	
						11.50	

# Standardized Approach – example of the calculation of the capital requirement

- 1. Calculate the relevant indicator on an annual basis for each business line (the result may be either positive or negative).
- 2. Multiply the relevant indicator of each business line by the corresponding percentage (the result may be either positive or negative).
- 3. Sum the weighted relevant indicators of the eight business lines, offsetting the positive amounts against the negative amounts. If the total result for the year is negative, set it equal to zero.
- 4. Calculate the Standardized Approach amount for each of the three years (the result may be either positive or equal to zero).
- 5. Calculate the total capital requirement as the simple average of the Standardized Approach amounts for the three years.

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#### ANNEX D

# Loss event types

Event-type category	Definition
Internal fraud	Losses due to unauthorized acts, acts of a type intended to defraud, misappropriate property or violate regulations, the law or company policy that involve at least one internal party.
External fraud	Losses due to acts of a type intended to defraud, misappropriate property or violate the law by a third party.
Employment practices and workplace safety	Losses arising from acts inconsistent with employment, health or safety laws or agreements, from payment of personal injury claims, or from diversity/discrimination events.
Clients, products and business practices	Losses arising from failure to meet a professional obligation to clients or from the nature or design of the product or service.
Damage from external events	Losses arising from external events, such as natural catastrophes, terrorism and acts of vandalism.
Business disruption and system failures	Losses arising from disruption of business or system failures or unavailability.
Execution, delivery and process management	Losses arising from failed transaction processing or process management, from relations with trade counterparties, vendors and suppliers.

ANNEX E

## Required documentation for Advanced Measurement Approaches

#### 1. General documentation

Framework board resolutions approving the AMA project and the minutes of meetings of committees or other governance bodies of the project.

Description of the scope of validation, specifying the group companies involved in the AMA rollout, the areas subject to permanent partial use, the operating segments to which the AMA will initially be applied and the procedures and timetable the AMA rollout.

List of internal regulations applicable to the project.

Current status of project implementation and subsequent stages.

Certification of compliance with the eligibility thresholds and the percentage of the relevant indicator covered by an AMA ("AMA significance threshold").

Statement of expenses (preferably broken down by type, for example human resources, systems, etc.) incurred and expected for initiatives associated with operational risk management and measurement for the three years preceding the application submission date.

# 2. Specific documentation on organizational aspects<sup>18</sup>

Resolutions approving operational risk management and measurement policies, as well as the related organizational structure.

Organization and roles of the operational risk control function and the internal validation process.

Internal rules on the criteria and procedures for collecting and storing operational risk data.

Description of the operational risk reporting system. Reports sent to governing bodies during the two years preceding the application submission date.

Architecture of the dedicated information subsystem and description of the main electronic procedures for the operational risk management and measurement systems, especially with regard to data collection and storage. Indicate the use of external resources (e.g. outsourcing, applications packages).

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<sup>&</sup>lt;sup>18</sup> Where not already included in the general documentation.

Excerpt from the business continuity plan relating to the recovery of systems and databases used to measure operational risk and the related IT security policies.

Internal rules regarding internal validation procedures and activities, specifying the roles and responsibilities of the units, personnel and functions involved.

Final report on the internal validation process containing a detailed statement of compliance status for each organizational and quantitative requirement.

Report of the internal audit function on its assessments of the operational risk management and measurement systems, their use in managing the bank and the internal validation process.

Records of any additional internal or external analyses and verifications of the operational risk management and measurement systems and their findings.

# *3.* Specific documentation on quantitative aspects<sup>19</sup>

Quality standards for the four elements (see Sections III, paragraphs 1 and 2), with specific reference to the criteria adopted:

- for identifying and classifying internal loss data, especially with regard to the treatment of specific aspects (minimum loss thresholds, rapidly recovered losses, multiple-time losses, multiple-effect losses, boundary losses, etc.);
- for selecting sources of external loss data and for incorporating this data in the measurement system;
- for generating scenarios;
- for selecting business environment and internal control factors.

Information on the operational risk requirement calculation model, specifying:

- the criteria for determining operational risk classes;
- the methods for integrating and weighting the four elements (see Section III, sub-sections 1 and 2);
- the methodologies, parameters and assumptions used in estimating distributions or operational risk measures;
- where performed, the methods for calculating capital requirement mitigation factors (expected loss, correlation, operational risk transfer mechanisms);

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<sup>&</sup>lt;sup>19</sup> Where not already included in the general documentation or that on qualitative aspects.

— the criteria for allocating the capital requirement among operating segments.

Data on the four elements (see Section III, sub-sections 1 and 2) used in estimating the capital requirement.

Estimate of the total capital requirement and the requirement broken down by operating segment, calculated gross and net of the impact of risk mitigation factors.

Results of the parallel calculation of operational risks for the year preceding submission of the application obtained through comparison of the Standardized Approach and the AMA.

# ANNEXF

# Combined use

Combined use at the consolidated level	Cons	bach	
Approach adopted by operating segment	BIA	Standardized Approach	AMA
BIA	///	Allowed up to 10%	Allowed up to 15%
Standardized Approach	Not allowed	///	Allowed up to 15%
AMA Allowed in case of entry into group		Allowed in case of entry into group	///

Combined use at the individual level	Individual level approach					
Approach adopted by operating segment	BIA	Standardized Approach	AMA			
BIA	///	Not allowed	Only allowed for foreign branches			
Standardized Approach	Not allowed	///	Allowed up to 15%			
AMA	Not allowed	Not allowed	///			

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#### ANNEX G

# Example of application of the Standardized Approach at the consolidated and individual levels

<b><u>Full</u></b> compliance at the group level with qualifying criteria for use of the Standard Approach (see Part 2, Section II, sub-section 1)		level with the e Standardized (, sub-section 2)	<b><u>Partial</u></b> compliance at the group level with the qualifying criteria for use of the Standardized Approach (see Part 2, Section II, sub-section 2)		evel with the Standardized Sub-section 2)		
Type of company		Compliance, for the related operating segments, with the Standardized Approach qualifying criteria	Requirement on individual basis	Contribution to the consolidated capital requirement (net of intercompany items)	Compliance, for the related operating segments, with the Standardized Approach qualifying criteria	Requirement on individual basis	Contribution to the consolidated capital requirement (net of intercompany items)
	Parent banks	YES	Standardized Approach gross of intercompany items	Standardized Approach	YES	Standardized Approach gross of intercompany items	Standardized Approach
Companies	Other banks	YES	Standardized Approach gross of intercompany items	Standardized Approach	NO	BIA gross of intercompany items	BIA
subject to individual requirements for operational risks	Investment firms pursuant to Article 20, paragraphs 1, 2 and 3 of Directive 2006/49/EC and financial intermediaries entered in the special register provided for by Article 107 of the 1993 Banking Law, excluding securitization vehicles	YES	Standardized Approach gross of intercompany items	Standardized Approach	NO	BIA gross of intercompany items	BIA
Companies	Asset management companies	YES	"Other risks" requirement (see Circular 189)	Standardized Approach	NO	"Other risks" requirement (see Circular 189)	BIA
not subject to individual requirements for operational risks	Financial intermediaries not entered in the special register provided for by Art. 107 of the 1993 Banking Law, instrumental companies	YES	NO	Standardized Approach	NO	NO	BIA

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#### ANNEX H

# Example of application of the AMA at the consolidated and individual levels

	<u><b>Full</b></u> compliance at the group level of the qualifying criteria for use of AMAs (see Part 3, Sections II and III)		Partial compliance at the group level of the qualifying criteria for use of AMAs (see Part 3, Sections II and III)				
Type of company		Compliance, for the related operating segments, with the AMA qualifying criteria	Requirement on individual basis	Contribution to the consolidated capital requirement	Compliance, for the related operating segments, with the AMA qualifying criteria	Requirement on individual basis	Contribution to the consolidated capital requirement
	Parent banks	YES	AMA allocated	Data and information for AMA purposes	YES	AMA allocated	Data and information for AMA purposes
Companies	Other banks	YES	AMA allocated	Data and information for AMA purposes	NO	BIA or Standardized Approach gross of intercompany items	BIA or Standardized Approach net of intercompany items
subject to individual requirements for operational risks	Investment firms pursuant to Article 20, paragraphs 1, 2 and 3 of Directive 2006/49/EC and financial intermediaries entered in the special register provided for by Article 107 of the 1993 Banking Law, excluding securitization vehicles	YES	AMA allocated	Data and information for AMA purposes	NO	BIA or Standardized Approach gross of intercompany items	BIA or Standardized Approach net of intercompany items
Companies not subject to	Asset management companies	YES	"Other risks" requirement (see Circular 189)	Data and information for AMA purposes	NO	"Other risks" requirement (see Circular 189)	BIA or Standardized Approach net of intercompany items
individual requirements for operational risks	Financial intermediaries not entered in the special register provided for by Art. 107 of the 1993 Banking Law, instrumental companies	YES	NO	Data and information for AMA purposes	NO	NO	BIA or Standardized Approach net of intercompany items

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# TITLE II

Chapter 6

# DETERMINATION OF THE TOTAL CAPITAL REQUIREMENT

# TITLE II - Chapter 6

# DETERMINATION OF THE TOTAL CAPITAL REQUIREMENT

#### SECTION I

#### GENERAL PROVISIONS

# 1. Introduction

Specific capital requirements have been established for the main risks associated with banking (credit, counterparty, market and operational risks) (see Section II, sub-sections 1-3). Other capital requirements have been established for investments in holdings and real estate acquired in debt collection (see Section II, sub-section 4).

In order to ensure that the application of the new prudential regulations does not lead to an excessive reduction in current capital levels, for banks and banking groups that adopt IRB approaches and AMAs, for the period from 2007 to 2009 the sum of the capital requirements for credit, counterparty, market and operational risks shall not be less than certain specified levels (see Section II, subsection 6).

Under certain conditions, the total capital requirement to which banks belonging to banking groups, including the parent undertaking, are subject shall be reduced by 25 per cent (see Section II, sub-section 5).

The Bank of Italy may establish other capital requirements to be included in determining the total capital requirement.

#### 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:
  - Article 53, paragraph 1, sub-paragraph a), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 60, which defines the composition of banking groups;

• Article 61, which specifies the characteristics of the parent undertaking of a banking group;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraph a), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking or to the components of the banking group with regard to capital adequacy;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

— the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

# 3. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

The branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy shall not be subject to these provisions, with the exception of those regarding holdings and real estate acquired in debt collection.

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#### SECTION II

# TOTAL CAPITAL REQUIREMENT

Banks and banking groups shall hold supervisory capital that is at all times more than or equal to the total capital requirement, which shall be the sum of the capital requirements for credit, counterparty, market and operational risk, as well as those for holdings and real estate acquired in debt collection. The regulations for calculating the total capital requirement are as follows.

### 1. Credit and counterparty risks

# 1.1 Individual capital requirement

The individual capital requirement for credit and counterparty risk shall be equal to 8 per cent of risk-weighted assets, as determined in accordance with the procedures envisaged in the specific regulations governing such risk categories (see Chapters 1 and 3).

# 1.2 Consolidated capital requirement

The consolidated capital requirement shall be equal to 8% of risk-weighted assets, as determined in accordance with the procedures envisaged in the specific regulations governing such risk categories (see Chapters 1 and 3).

The requirement shall be equal to the sum of the individual capital requirements<sup>1</sup> of the entities included in the scope of consolidation, subject to elimination of intercompany transactions.

The individual capital requirements shall be calculated:

- in accordance with the rules in force in each country for entities established in a Member State or a Group of Ten country;
- in accordance with these regulations for entities established in non-Member States other than Group of Ten countries.

<sup>&</sup>lt;sup>1</sup> In calculating the consolidated capital requirement, the individual capital requirements shall be calculated in full, i.e. without applying the reduction of 25 per cent (see sub-section 5).

#### 2. Market risk

#### 2.1 Individual capital requirement

The individual capital requirement shall be the sum of those calculated for position, settlement, concentration, foreign exchange and commodities risks, as determined in accordance with the procedures established in Chapter 4.

#### 2.2 Consolidated capital requirement

The consolidated capital requirement for position, settlement, concentration, foreign exchange and commodities risk shall be equal to the sum of the individual capital requirements<sup>2</sup> of the banks, investment firms and financial companies included in the scope of consolidation, as determined without eliminating intercompany transactions.

The individual capital requirements shall be calculated:<sup>3</sup>

- in accordance with the rules in force in each country for subsidiaries established in a Member State or a Group of Ten country;
- in accordance with these regulations for subsidiaries established in non-Member States other than Group of Ten countries. In determining the individual requirements, entities the value of whose supervisory trading book does not exceed 0.5 per cent of the total value of the group's supervisory trading book shall be excluded.

Banks exempt from the regulations (see Chapter 4, Part 1, Section I, subsection 4) shall not be considered for the purposes of calculating the consolidated capital requirement.

# 3. Operational risk

## 3.1 Individual capital requirement

Banks shall determine the individual capital requirement in accordance with the provisions of Chapter 5.

Specifically, the following sections of the above Chapter shall apply: Part 2, Section I, where the Basic Indicator Approach is used; Part 2, Section II, where the

 $<sup>^2</sup>$  In calculating the consolidated capital requirement, the individual capital requirements shall be calculated in full, i.e. without applying the reduction of 25 per cent.

<sup>&</sup>lt;sup>3</sup> Banks may eliminate intercompany transactions for settlement risk only.

Standardized Approach is used; and Part 3, where an AMA is used. For the procedures for calculating the requirement in the cases of the combined use of different methodologies and of banks belonging to banking groups, reference shall also be made to Part 4, Section II.

# 3.2 Consolidated capital requirement

Banking groups shall determine the consolidated capital requirement in accordance with the provisions of Chapter 5.

Specifically, the following sections of the above Chapter shall apply: Part 2, Section I, where the Basic Indicator Approach is used; Part 2, Section II, where the Standardized Approach is used; and Part 3, where an AMA is used. For the procedures for calculating the requirement in the cases of the combined use of different methodologies, reference shall also be made to Part 4, Section II, subsection 1.

## 4. Holdings and real estate acquired in debt collection

The acquisition of holdings and real estate in debt collection in excess of the limits provided for in the relevant regulations (see *Istruzioni di Vigilanza per le banche*, Title IV, Chapter 9, Section V, sub-section 2 and Chapter 10, Section II) shall give rise to capital requirements for the excess amount that shall be included in the calculation of the total capital requirement.

## 5. Reduction of the individual capital requirement by 25 per cent

For Italian banks belonging to a banking group,<sup>4</sup> the individual capital requirements for credit, counterparty, market and operational risks shall be reduced by 25 per cent, provided that supervisory capital at the consolidated level is at least equal to the total capital requirement.

# 6. Transitional arrangements for banks that adopt IRB approaches or AMAs

For banks and banking groups that calculate the capital requirement for credit risk using an IRB approach or that for operational risk using an AMA, in 2007, 2008 and 2009 the sum of the capital requirements for credit, counterparty, market and operational risk shall not be less than 95%, 90% and 80% (floors), respectively, of the capital requirement calculated using the rules in force until the end of 2006.

<sup>&</sup>lt;sup>4</sup> These regulations shall not apply to Italian banks belonging to a banking group that have been excluded from the scope of consolidation pursuant to the provisions of Title I, Chapter 1, Part 2, Section III, sub-section 1.

By way of example, for 2007 the following variables shall be considered:

- a) 0.95% \* WRABasel1 \* 8%
- b) WRABasel2 \* 8% + (EL-RN) if EL>NA
- c) WRABasel2 \* 8% MIN[(RN-EL); WRABasel2\* 0.6%] if NA>EL

where:

WRABasel1 = risk-weighted assets calculated on the basis of the methodology in force until the end of 2006;<sup>5</sup>

WRABasel2 = risk-weighted assets calculated on the basis of the methodologies in force as from 1 January 2007;<sup>6</sup>

EL = expected losses;

NA = total net specific and portfolio value adjustments.

Where the difference between the amounts under points a) and b) or a) and c) is positive, it shall be multiplied by 12.5 and added to WRABasel2.

The Bank of Italy may extend application of the floors beyond 2009. As from the end of 2009, the reference methodologies for calculating the floors shall be the Standardized Approach for credit risk (see Chapter 1, Part 1) and the Basic Indicator Approach for operational risk (see Chapter 5, Part 2, Section I).

<sup>&</sup>lt;sup>5</sup> For market risks, the same amount, equal to the total requirement for such risks at the reference date multiplied by 12.5, shall be used for both WRABasel1 and WRABasel 2. For operational risk, no amount shall be entered for WRABasel1.

<sup>&</sup>lt;sup>6</sup> For market risks, the same amount, equal to the total requirement for such risks at the reference date multiplied by 12.5, shall be used for both WRABasel1 and WRABasel 2. For operational risk, no amount shall be entered for WRABasel1.

## SECTION III

# CONSOLIDATION METHODS AND REPORTING TO THE BANK OF ITALY

# 1. Scope and methods of consolidation

The assets and liabilities to be consolidated shall be measured on the basis of the consolidation methods envisaged in the regulations governing financial reporting.<sup>7</sup>

The following consolidation methods shall apply:

- line-by-line consolidation, for banking, financial and instrumental companies belonging to a banking group;
- proportionate consolidation, for banking, financial and instrumental companies at least 20 per cent of whose capital is held by a banking group or by an individual bank, where they are held jointly with other persons on the basis of specific agreements;
- the equity method:
  - a) for other banking and financial companies at least 20 per cent of whose capital is held by a banking group or an individual bank<sup>8</sup> or are in any case subject to significant influence;
  - b) for undertakings other than banking, financial and instrumental companies controlled entirely or jointly by a banking group (or by an individual bank) or are in any case subject to significant influence.

As regards the rules governing exclusion and exoneration from the scope of consolidation, reference shall be made to the general instructions contained in Circular 115 *Istruzioni per la compilazione delle segnalazioni di vigilanza su base consolidata*.

# 2. Reporting to the Bank of Italy

The calculation of supervisory capital and the determination of the total consolidated capital requirement shall be carried out twice a year with reference to 31 December and 30 June.

The reports shall be submitted to the Bank of Italy by the 25 April and 25 October following the reference date (31 December and 30 June, respectively).

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<sup>&</sup>lt;sup>7</sup> See Circular 262 *Il bilancio bancario: schemi e regole di compilazione.* 

 $<sup>^{8}</sup>$  On the condition that the individual bank also has holdings of at least 20 per cent in entities subject to joint control.

The calculation of supervisory capital and the determination of the total individual capital requirement shall be carried out four times a year as at 31 December, 31 March, 30 June and 30 September.

The reports for 31 December and 30 June shall be submitted by the 25th of the third month following the reference month (25 March and 25 September, respectively); those for 31 March and 30 September shall be submitted by the 25th of the month following the reference month (25 April and 25 October, respectively).

\* \* \*

The governing bodies, each acting within the scope of its responsibility, shall be accountable for the accuracy of the data reported to the Bank of Italy.

In order to ensure the necessary consistency of the reported data with the company accounts, banks and banking groups shall have in place adequate administrative and accounting systems and appropriate control procedures, which shall also provide for adequate reporting to the governing bodies in line with their respective responsibilities.

Banks and parent undertakings shall submit the reports on a magnetic support device in accordance with the procedures and reporting formats set out in *Istruzioni per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali*.

# TITLE III (supervisory review process)

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# TITLE III

4

Chapter 1

# THE SUPERVISORY REVIEW PROCESS

#### TITLE III - Chapter 1

# SUPERVISORY REVIEW PROCESS

#### SECTION I

#### GENERAL PROVISIONS

# 1. Introduction

The supervisory review process (SRP) is organized into two integrated stages. The first is represented by the internal capital adequacy assessment process (ICAAP), under which banks perform an independent assessment of their current and prospective capital adequacy with regard to the risks they face and their corporate strategies. The second consists of the supervisory review and evaluation process (SREP), which is performed by the supervisory authority, who reviews the ICAAP, formulates an overall opinion about the bank and, where necessary, takes remedial measures.

The SREP is based primarily on dialogue between the supervisor and the banks. This allows the Bank of Italy to acquire a more thorough understanding of the ICAAP process and the underlying methodological assumptions. Similarly, it enables the banks to explain the reasoning behind their assessments.

Banks establish strategies and prepare tools and procedures for determining the capital that they deem adequate – in terms of amount and composition – to permanently cover all risks to which they are or could be exposed, including risks not subject to specific capital requirements (see Title II, Chapter 6).

The ICAAP is based on appropriate risk management systems and requires adequate corporate governance mechanisms, an organizational framework with clear lines of responsibility, and effective internal control systems.

Responsibility for this process lies with the banks' governing bodies, which independently establish its design and organization in accordance with their respective duties and powers. They are responsible for the implementation and updating of the ICAAP, in order to ensure its continuing conformity with the banks' operational characteristics and the strategic environment in which they operate.

The ICAAP shall be documented, understood and shared by all bank structures and shall be subject to independent internal review.

On an annual basis, banks shall describe to the Bank of Italy in a structured report the key features of the process, their risk exposure and the determination of the capital deemed adequate to support those risks. The report shall also contain a self-assessment of the ICAAP, indicating areas for

improvement, any deficiencies in the process and the corrective measures to be taken.

The SREP is the process by which the Bank of Italy reviews and assesses the ICAAP, analyzes the bank's risk profile, assesses the corporate governance system, the performance of the governing bodies, the organizational framework and the internal control system, and verifies overall compliance with prudential rules.

These activities are conducted through the use of a system that defines general criteria and methodologies for analyzing and assessing banks (the RAS – Risk Assessment System). This system enables the Bank of Italy to identify the material risks faced by banks and to assess their management and control systems, including for the purposes of reviewing the internal capital calculation they produce.

If the overall analysis should reveal deficiencies, the Bank of Italy shall request the adoption of appropriate corrective measures in the form of organizational or capital adjustments. The actions shall be proportionate to the scale of the anomaly: additional capital requirements shall be imposed if the application of organizational measures appears insufficient to ensure the removal of the problem within an appropriate timeframe.

The supervisory review process is informed by the principle of proportionality, under which:

- corporate governance systems, risk management processes, internal control mechanisms and the determination of capital deemed adequate to cover risks shall be proportionate to the nature, scale and complexity of the business conducted by the bank;
- the frequency and the comprehensiveness of the SREP shall have regard to the systemic importance, nature, size and complexity of banks.

The supervisory review process is conducted at the consolidated level. In the case of banking groups, responsibility for the ICAAP lies with the parent undertaking, which calculates the capital necessary for the entire group on a consolidated basis. In the case of banks or banking groups controlled by a European parent undertaking, an ICAAP shall be organized at the individual or sub-consolidated level for the Italian components, respectively.

\* \* \*

With these regulations the Bank of Italy, pursuant to its statutory obligation to ensure the transparency of its supervisory activities, provides guidelines for banks in applying the principle of proportionality and in identifying the minimum requirements of the ICAAP to be assessed within the scope of the SREP.

To this end, this document sets out:

- guidelines concerning the scope of the ICAAP for the practical application of the principle of proportionality by banks;

- the criteria for grouping banks into three categories, characterized by decreasing levels of operational complexity, for which different requirements with regard to the scope of the ICAAP are established;
- a number of simplified methodologies that may be used in calculating certain quantifiable risks other than credit, counterparty, market and operational risks;
- the assessment criteria used in the SREP, in particular the methodologies and procedures for analyzing risks and banking operations.

# 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:

• Article 53, paragraph 1, sub-paragraphs a), b) and d), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 3, which gives the Bank of Italy the power, *inter alia* to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraphs a), b) and d), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to capital adequacy, the limitation of risk in its various forms, administrative and accounting procedures and internal control mechanisms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per

cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

— the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

# 3. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy with the exception of Italian banks belonging to a banking group and Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

## 4. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Chapter:

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— adoption of specific measures for banks or parent undertakings concerning the group or its individual components (Section III, sub-section 5): Banking Supervision Department.

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#### SECTION II

#### INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)

#### 1. General provisions

Banks shall have full autonomy in establishing a process for determining the total capital currently and prospectively necessary to support all material risks. The process shall be formalized, documented, subject to internal review and approved by their governing bodies. It shall be proportionate to the nature, scale and complexity of the business conducted.

The calculation of total capital requires an assessment of all the risks to which banks are or may be exposed, including both those considered in calculating the capital requirement under Title II, Chapter 6, and those not considered in that Chapter.

Banks shall determine the risks, other than credit, counterparty, market and operational risks, for which the adoption of quantitative methodologies that can be used in determining internal capital would be appropriate,<sup>1</sup> and those for which control and mitigation measures, in combination or alternatively, would be more suitable.

Banks must in any case be able to explain in detail to the Bank of Italy the definitions adopted, the methodologies used, the effective consideration of all material risks as well as the differences, for risks covered by the capital requirements under Title II, between the system adopted internally and the regulatory system.

# 2. Proportionality in the ICAAP

The principle of proportionality shall apply to the following aspects:

- the methodologies used in measuring/assessing risks and in determining the related internal capital;
- the type and nature of the stress tests adopted;
- the treatment of correlation among risks and the determination of total internal capital;

<sup>&</sup>lt;sup>1</sup> For the purposes of the provisions of this Title, "internal capital" shall means capital at risk, i.e. the amount of capital related to a given risk that the bank deems necessary to cover losses exceeding a given expected level (this definition assumes that the expected loss shall be covered by net value adjustments – specific and portfolio – of equal amount; where the latter is lower, internal capital shall also cover this difference).

<sup>&</sup>quot;Total internal capital" shall mean the internal capital related to all material risks faced by the bank, including any internal capital associated with strategic factors.

<sup>&</sup>quot;Capital" and "total capital" shall mean the capital elements that the bank feels it can use to cover "internal capital" and "total internal capital", respectively.

- the organizational structure of the risk control systems;
- the scope and detail of ICAAP reporting to the Bank of Italy.

In order to facilitate the implementation of the principle of proportionality in practice, banks are divided into three classes that, in general, identify banks of differing scale and operational complexity.

#### Class 1

Banks and banking groups authorized to use IRB systems to calculate capital requirements for credit risk or Advanced Measurement Approaches (AMAs) to calculate capital requirements for operational risk, or internal models for quantifying capital requirements for market risks.

#### Class 2

Banking groups and banks that use standardized methodologies with, respectively, consolidated or individual assets greater than  $\notin 3.5$  billion.<sup>2</sup>

#### Class 3

Banking groups and banks that use standardized methodologies with, respectively, consolidated or individual assets equal to or less than  $\in$  3.5 billion.

Banks belonging to classes 2 and 3 may in any case develop more advanced methodologies or internal processes than those suggested for those classes in these provisions, providing a reasoned explanation for such choice.<sup>3</sup>

Banks shall make consistent choices between the risk measurement methodologies adopted for the purposes of Pillar 1 and those for calculating total internal capital.

Within the scope of the supervisory review process, the Bank of Italy shall assess the extent to which the choices and assessments of banks are in conformity with their risk profiles.

# 3. The stages of the ICAAP

The ICAAP may be broken down into the following stages: 1) identification of the risks subject to assessment; 2) measurement/assessment of individual risks and the related internal capital; 3) measurement of total internal capital; 4) determination of total capital and reconciliation with supervisory capital.

The following sections contain guidelines for each stage of the ICAAP in order to assist the banks in applying the principle of proportionality in practice.

<sup>&</sup>lt;sup>2</sup> Individual and consolidated assets refer, respectively, to aggregate 1401000 and aggregate 309001217 of the Bank of Italy's Data Dictionary. Consolidated assets refer to assets attributable to the banking group.

<sup>&</sup>lt;sup>3</sup> This could become necessary, for example, in order to adopt an approach appropriate to the risk profile, especially in cases of banks experiencing rapid growth or which have a significant volume of specialized business in highly complex market segments.

#### 3.1 Identification of the risks subject to assessment

Acting autonomously, banks shall identify the risks to which they are exposed, having regard to their own operations and the markets in which they operate.

In order to identify material risks, this analysis shall consider at least the risks listed in Annex A. This list is not exhaustive: the identification of any further risk factors connected with its specific operations is left to the prudent assessment of each bank.

Banks and banking groups shall clearly identify the sources of the various forms of risk, whether these are to be found at the level of operating units or legal entities. This makes it possible to ascertain whether the supervisory capital requirements calculated at the individual level for the most significant legal entities adequately cover the risks effectively faced by these entities.

# 3.2 Measurement of individual risks and calculation of internal capital for each of them

In order to calculate internal capital, banks shall measure or - in the case of risks that are difficult to quantify - assess all the material risks to which they are exposed, using the methodologies that they deem most appropriate in relation to their operational and organizational features.

For credit, counterparty, market and operational risks, a methodological starting point is provided by the regulatory systems for calculating capital requirements for such forms of risk.

To calculate the exposure and any internal capital related to concentration risk (for individual borrowers or groups of connected customers) and to the interest rate risk in the banking book, banks shall refer to the simplified methodologies set out in Annexes B and C, respectively.

With regard to interest rate risk, all banks (regardless of their class or the methodologies used) shall assess the impact of a hypothetical 200 basis-point shock on the interest rate exposure of the banking book. Where this should cause a reduction in the economic value of a bank of more than 20% of supervisory capital, the Bank of Italy shall examine the results with the bank and may adopt appropriate actions.

With regard to liquidity risk, Annex D sets out guidelines to which banks shall refer in developing their own measurement and monitoring systems and procedures.

\* \* \*

Taking account of the classes defined in sub-section 2, banks shall have regard to the following criteria in establishing systems for measuring/assessing material risks and for calculating any internal capital.

#### Class 3

Banks shall use the methodologies for calculating supervisory capital requirements for Pillar 1 risks: the Standardized Approach for credit and market risks and the Basic Indicator Approach or Standardized Approach for operational risk. For risks not covered under Pillar 1, banks may measure concentration risk and interest rate risk in the banking book using the simplified algorithms set out in Annexes B and C, and may refer to the guidelines in Annex D with regard to liquidity risk. Banks shall establish adequate control and mitigation systems for any other risks to which they may be exposed.

#### Class 2

In a manner analogous to Class 3 banks, intermediaries in this class may use the methodologies for calculating supervisory capital requirements for Pillar 1 risks. Depending on their operational complexity and strategic focus, banks shall assess the advisability of adopting internal Pillar 1 risk measurement methodologies that are more advanced than those used for regulatory purposes, also with a view to possible future recognition of such advanced methods for calculating supervisory capital requirements. Similarly, with regard to concentration, interest rate and liquidity risks, Class 2 banks shall assess the advisability of refining the simplified methodologies set out in Annexes B and C, and adapting the guidelines contained in Annex D to suit their operations. Banks shall establish adequate control and mitigation systems for any other risks to which they may be exposed.

# Class 1

Acting with full autonomy, banks shall establish the most appropriate measurement methodologies for calculating the internal capital supporting each risk to which they are exposed.

The Bank of Italy expects that banks in this class shall develop statistical models for calculating VaR or other measurements of maximum potential loss, including by way of appropriate refinement of the simplified methodologies proposed in Annexes  $B^4$  and C. With regard to other difficult-to-measure risks, banks in this class shall establish adequate control and mitigation systems and shall assess the advisability of developing methodologies, including experimental approaches to be refined over time, for assessing their exposure to such risks.

\* \* \*

The development of models that take account of diversification within each risk class shall be based on robust analyses, given the impact this could have on the calculation of the related internal capital. In the case of credit risk, assumptions about correlations that are less conservative than those envisaged for IRB systems shall be examined using restrictive criteria.

<sup>&</sup>lt;sup>4</sup> With regard to the methods for calculating the adjustment for granularity under Annex B, banks in this class shall take account of the specific PD and LGD values of each borrower.

#### 3.2.1 Stress testing

Banks shall conduct stress testing of their risk mitigation and control systems and, where necessary, the adequacy of their internal capital, in order to enhance the assessment of their exposure to risks.

Stress tests are quantitative and qualitative techniques used by banks to assess their vulnerability to exceptional, but plausible, events. They involve assessing the impact on banks' exposures of specific events (sensitivity analysis) or joint movements of a set of economic and financial variables under adverse scenarios (scenario analysis).

Stress testing enables banks to:

- use "what-if" analysis to assess risk exposures under adverse circumstances and determine the internal capital needed to cover such exposures or identify other actions to be taken to reduce or mitigate the risk;
- verify the results and accuracy of risk assessment models (in particular, to identify the effects of non-linearity in risk aggregation).

In principle, banks should perform stress tests that are appropriate for each risk factor material to their operations. In developing stress tests, banks should take account of the relative costs and benefits of constructing especially detailed and complex scenarios in which there are numerous correlation effects among risk factors.

\* \* \*

Taking account of the classes defined in sub-section 2, banks shall have regard to the following criteria in establishing the methods for performing stress testing.

#### Class 3

Banks shall perform analyses of sensitivity to the main risks they face, including, at the least, credit risk, concentration risk with regard to the loan portfolio and interest rate risk for the banking book. In order to perform stress testing of the latter two, banks may refer to the simplified methodologies described in Annexes B and C<sup>5</sup>,

# Class 2

Banks shall perform analyses of sensitivity to independently identified risk factors they deem material.

Stress testing with regard to credit risk could consist of an assessment of the capital impact should the ratio of impaired exposures or the rate of new classifications of loans as adjusted bad debts to overall lending rise to levels comparable to those experienced in the worst credit conditions experienced by the bank during the two most recent business cycles (a 15-year period could be considered).
#### Class 1

Banks shall use a combination of sensitivity analysis and scenario analysis techniques, the latter with a broader range of coverage of product lines and geographical areas.

In performing stress testing of the interest rate risk exposure of the banking book, banks belonging to classes 1 and 2 shall take account of shifts in the yield curve other than parallel shifts and of differences in the volatility of interest rates in relation to different maturities and currencies.

\* \* \*

Special care must be taken by all banks with a significant volume of business involving assets in the supervisory trading book in developing stress testing procedures that take account of the non-linear risk profiles typical of certain financial derivative instruments.

## 3.3 Determination of total internal capital

The assessment of benefits from diversification among the various forms of risk is especially important in determining total internal capital.

Given the complexity of such an assessment and in accordance with the classes defined in sub-section 2, banks shall have regard to the following criteria.

#### Classes 2 and 3

Banks shall determine total internal capital using a simplified building block approach, which consists in summing the supervisory capital requirements for the Pillar 1 risks (or the internal capital allocated to such risks as calculated using internal methodologies) with any allocations of internal capital to support other material risks.

## Class 1

Banks shall apply more advanced solutions, including with regard to risk aggregation. Banks in this group shall carefully document and explain:

- the basic methodologies underlying assumptions other than perfect positive correlation among risks, providing empirical evidence of their robustness, including through stress testing;
- any other methodology for determining total internal capital based on the simulation of simultaneous changes in multiple risk factors.

Banks that have developed methodologies for determining internal capital that differ from the regulatory methodologies shall in any case explain their decisions, including in terms of general consistency, concerning distributions, confidence intervals and time horizons used for the individual risks.

With specific regard to the treatment of the diversification among risks in calculating total internal capital by Class 1 banks, the Bank of Italy – in line with

Community practice - shall adopt very restrictive criteria in assessing the recognition for supervisory capital purposes of assumptions other than perfect positive correlation among risks. More specifically, banks shall demonstrate the robustness of the correlation estimates, especially with regard to the reliability of the data considered and the length of the time series used for the estimates.

Regardless of the class to which they belong, in addition to taking account of the necessity of covering unexpected losses in respect of all material risks, banks may also consider the need to support strategic operations (entry into new markets, acquisitions) or to maintain an adequate market standing in their calculation of total internal capital.

#### 3.4 Total capital and reconciliation with supervisory capital

Banks shall be able to show how total capital reconciles with the definition of supervisory capital. Specifically, they shall explain the use of capital instruments that may not be included in supervisory capital in covering total internal capital.

## 4. Frequency of the ICAAP

For the purposes of the dialogue with the Bank of Italy, on an annual basis banks shall calculate:

- the level of total internal capital and total capital determined as of the close of the most recent financial year;
- the targeted level of total internal capital and total capital as of the end of the current financial year, taking account of foreseeable developments in risks and operations.

In their annual planning, banks shall also identify corrective actions to be taken in the event of errors or changes in estimates.

The prospective calculation of total internal capital and total capital shall be consistent with the medium-term business plan. Any estimates that also refer to years subsequent to the current year must therefore be consistent with the operational and capital developments envisaged by the bank in its business plan.

Without prejudice to the annual calculation of total internal capital and total capital, the assessment/measurement of exposures to individual risks shall be performed on a more frequent basis, to be determined in relation to the type of risk and the methodologies used. In the absence of innovative or extraordinary events, stress testing scenarios may be updated less than once a year, taking account of the advisability of ensuring their stability over time in order to facilitate the intertemporal assessment of stress tests.

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## 5. Corporate governance in the ICAAP

The governing bodies shall be responsible for the ICAAP, as provided for in Title I, Chapter I, Part 4.

The calculation of total internal capital and total capital is the product of a complex organizational process that is an integral part of corporate management and contributes to deciding the strategies and current operations of banks. This process requires the involvement of a variety of units and skills (planning functions, risk management, internal audit, accounting, etc.) and the contribution of group companies.<sup>6</sup>

The designation of the corporate functions or units responsible for designing or preparing the various elements or stages of the ICAAP shall be the responsibility of the banks, which shall take account of their own organizational characteristics.

## 6. ICAAP reporting to the Bank of Italy

#### 6.1 Content and structure of ICAAP reporting

The ICAAP report is intended to enable the Bank of Italy to conduct a complete, documented assessment of the key qualitative features of the capital planning process, the overall exposure to risks and the consequent calculation of total internal capital.

The report is transmitted to the Bank of Italy along with the governing bodies' resolutions and reports containing their comments on the ICAAP, in accordance with their respective responsibilities and functions.

The ICAAP report has a dual function: description and assessment. It shall enable the Bank of Italy to appraise the following:

- the organizational and methodological structure of the process for determining internal capital, with the assignment of responsibilities among the various functions or units involved in the ICAAP; the risk assessment/measurement systems; the main control and mitigation tools for the most significant risks; the strategic and competitive scenarios that the bank used in its capital planning;
- the bank's self-assessment of its internal capital planning process. It shall identify areas for methodological and organizational improvement,

<sup>&</sup>lt;sup>b</sup> Where banks outsource certain "components" of the ICAAP, the governing bodies shall maintain full and exclusive responsibility of the process and shall ensure its consistency with the specific features and operational characteristics of the bank. Specifically, banks shall adopt every precaution to ensure that the performance of external parties meets the standards they shall establish in terms of the quality, consistency and replicability of the analyses conducted.

specifically identifying any deficiencies in the process, the corrective actions to be taken and the timetable for such actions.

The report shall be organized into the follow areas:

- 1) strategy and forecasting horizon used;
- corporate governance, organizational arrangements and internal control systems connected with the ICAAP;
- 3) methods and criteria used for the identification, measurement and aggregation of risks and for conducting stress tests;
- 4) estimation and components of total internal capital at the end of the previous financial year and, prospectively, for the current year;
- 5) reconciliation between total internal capital and regulatory requirements and between total capital and supervisory capital;
- 6) ICAAP self-assessment.

Greater detail on the contents of the report by individual area is provided in Annex E.

The decisions concerning the scope and detail of the report, as well as the reference documentation, are left to the independent judgment of the banks.

Where the bank already possesses documentation that provides information concerning one or more parts of the reporting areas, it may refer to the existing documentation without preparing documents specifically for ICAAP reporting purposes. Annual updating of some sections is not required if no significant changes have occurred. Specifically, for sections of a structural or descriptive nature (including risk control and mitigation tools and systems), banks may confirm the information submitted the previous year.

Where the documentation should prove inadequate, insufficient or in need of further clarification, the Bank of Italy may request additional information.

Without prejudice to the requirement that all three classes of banks shall adopt the proposed format for their reports, Class 3 banks may submit less detailed reports than the framework set out in Annex E.

Banks and banking groups controlled by a European parent undertaking that conduct the ICAAP on an individual or sub-consolidated basis shall provide a summary reconciliation with the ICAAP conducted at the consolidated level by the European parent undertaking.

## 6.2 Frequency of ICAAP reporting

On an annual basis, banks and banking groups shall transmit to the Bank of Italy the ICAAP report as at 31 December of the previous year by the following deadlines:

- 31 March: individual banks not belonging to a group;
- 30 April: banking groups.

Based on the capital reported at the close of the previous year, the ICAAP document shall plan the bank's strategies for taking on risk and ensuring that the related capital needs through the end of the current year are met.

#### SECTION III

#### SUPERVISORY REVIEW AND EVALUATION PROCESS (SREP)

## 1. General provisions

The SREP shall be conducted for banks and banking groups on an annual basis in order to verify that these intermediaries have established capital and organizational arrangements that are appropriate to the risks they face, preserving overall operational equilibrium.

The supervisory review and evaluation process is organized into the following main stages:

- analysis of exposure to all material risks and the relative control systems. For banks authorized to use internal risk measurement systems for calculating capital requirements, continuing compliance with the related organizational and quantitative requirements is also verified during this stage;
- verification of compliance with capital requirements and other supervisory rules;
- assessment of the procedure for calculating total internal capital and of the adequacy of total capital in relation to the bank's risk profile;
- issuance of specific opinions for each form of risk and of an overall opinion on the situation of the bank;
- determination of any supervisory response (see sub-section 5)

The Bank of Italy employs a system for analyzing banks (the "corporate analysis system") that enables it to examine and assess the aspects referred to above at both the individual and consolidated level. The system analyzes – through the rationalization and standardization of all available information - the material risks faced by the banks, using specified criteria, methodologies and timetables. The analysis methods may be adapted to permit the use of more appropriate methodologies depending on the type of risk or bank.

The SREP is based primarily on dialogue with the banks, a process composed of a number of several phases with varying degrees of formalization. Where a bank's situation requires the adoption of corrective actions, the Bank of Italy shall require the bank to implement the necessary measures.

## 2. Proportionality in the SREP

The SREP and the dialogue with the banks are also informed by the principle of proportionality. The scope and depth of analysis and control activities, as well as the intensity and frequency of interaction with the banks, are gauged on the basis of the risk profile, scale of operations and extent of any problems at the banks themselves.

## 3. RAS

The RAS employs off-site reviews and on-site inspections/examinations. These make it possible to conduct an integrated assessment of the overall situation of the bank, which forms the basis of any supervisory actions that may prove necessary.

Off-site reviews draw on a comprehensive set of information: periodic supervisory reports, official financial statements, information submitted by the banks on the ICAAP (see Section II), other documentation submitted for a variety of reasons (for example, internal audit reports), and information acquired through meetings with management and on-site examinations.

The RAS envisages a structured analysis process through which the various stages of the SREP are performed.

The primary tools supporting this process are known as "analysis models". They address five main aspects: capital adequacy, profitability, credit risk, organization and liquidity (the Pat.R.O.L. system). Consisting of a set of methodological tools and standardized forms for representing data, the models delineate a logical process for interpreting information and provide a guide for formulating assessments of the individual aspects examined and an overall assessment of the bank's position. The latter is based on the partial scores assigned to the individual aspects and takes account of all the other information available about the bank, acquired within the framework of the dialogue with the bank concerning the ICAAP.

Annex F describes the main features of the RAS, with a focus on the assessment criteria adopted for the different forms of risk, profitability, organizational profiles and capital adequacy.

The assessment system described is characterized by the following general methodological principles:

- flexibility: although the analysis models calculate an automatic score for the aspects specified above, the assignment of the final evaluation of the individual and overall profiles takes account of all the information available, including that not processed automatically. The electronic procedures supporting the analysis models permit stress testing to be performed using "what-if analysis. These characteristics make it possible to calibrate the scope and detail of the analysis of individual banks in accordance with the principle of proportionality;

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- peer comparison: an important analytical and assessment tool is the use of comparisons, with a targeted, flexible choice of the peer groups;
- traceability: the assessment system is documented in specific manuals and guidelines; computerized archives and procedures are used to collect and store the findings of the analyses performed.

Inspections – which are conducted on the basis of a plan that reflects any need for closer analysis that may have emerged in the course of supervisory activity – involve direct visits by supervisors to the bank's premises.

The scope of these controls can vary: they may be wide-ranging where they are intended to analyze the overall situation of the bank, or they may be targeted at specific sectors, risk areas, management and technical aspects or thematic issues, depending on the specific information needs that emerged in the off-site reviews.<sup>7</sup> Within this context, the investigations may also be of a follow-up nature, with the purpose of confirming the outcome of corrective actions undertaken at the bank's own initiative or requested by the Bank of Italy (see subsection 5).

The importance of the inspections within the scope of the overall process of assessing a bank in any case lies specifically with the opportunity to conduct a direct appraisal – through continuing dialogue with the bank's operating units and officers, as well as the acquisition of data and information on site – of its organization, the functionality of governance arrangements and internal control systems, company procedures and the reliability of the data and information supplied to the Bank of Italy.

## 4. Dialogue with the banks

Dialogue with the banks forms an integral part of the supervisory review and evaluation process conducted by the Bank of Italy.

It facilitates the analysis of risk exposures and understanding of the capital adequacy assessment process conducted by the banks and of any divergences from the findings of the RAS.

The analysis of the reports concerning the ICAAP (see Section II), which is conducted together with the other activities involved in the SREP, enables the Bank of Italy to identify any need for closer analysis, clarification or supplementation of the available information. These needs may be satisfied by acquiring further documentation, meetings with bank officers and on-site inspections.

Upon completion of the assessment process, where inadequacies or deficiencies have been found in the ICAAP or, more generally, in the overall situation of the bank, the Bank of Italy shall identify the corrective actions to be

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In the case of banking groups, the assessment may regard individual members of the group.

taken to eliminate such deficiencies, including any special measures concerning the amount of capital to be held.

#### 5. **Corrective action**

The Bank of Italy may require banks to take the following remedial measures,<sup>8</sup> whose severity differs in relation to the importance of the deficiencies discovered:

- strengthening of the systems, procedures and processes concerning risk management, control mechanisms and internal assessment of capital adequacy;
- limitation of risk exposures, including the prohibition of certain categories of transactions;
- reduction of risks, including by way of restrictions on operations or the structure of branch networks;
- prohibition of distribution of profits or other elements of capital;
- holding of an amount of supervisory capital greater than the legal minimum for credit risk, counterparty risk, market risk and operational risk.<sup>9</sup> This may also be accomplished by requiring specific treatment of the reference with regard to the methods adopted for calculating capital requirements.

Measures affecting capital shall normally be required where other measures would not have an effect within an acceptable period of time. Specifically, the Bank of Italy may order the application of a capital charge greater than the requirement provided for in Title II, Chapter 6, where:

- material deficiencies are discovered in the organizational structure, the internal controls and the systems for managing credit risk<sup>10</sup>, counterparty risk, market risks and operational risk;
- there are significant divergences between the assessments of the Bank of Italy and those of the bank concerning the amount and composition of the total capital held by the bank to support all of the risks it faces, or where the assessments correspond but the bank does not achieve the agreed level of capital within the time limits established or maintain that level over time.

In the measure establishing the application of the specific capital requirement, the Bank of Italy shall also indicate the duration of the measure adopted and the conditions that must be met for its removal.

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<sup>8</sup> The powers to intervene provided for in regulations other than Articles. 53 and 67 of the 1993 Banking Law (to which this sub-section refers) and, in particular, those of Title IV of the 1993 Banking Law, shall not be affected

See Title II, Chapter 6.

<sup>&</sup>lt;sup>10</sup> This includes the assessment of credit quality and concentration.

## ANNEX A

## RISKS SUBJECT TO THE INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)

## Pillar 1 risks

- Credit risk (including counterparty risk, i.e. the risk that a counterparty in a transaction should default before the final settlement of the cash flows involved in the transaction);
- market risks;
- operational risk.

## Other risks

- concentration risk: the risk arising from exposures to counterparties, groups of connected counterparties, and counterparties in the same economic sector or which engage in the same activity or are from the same geographic region (for concentration risk with respect to individual counterparties or groups of connected counterparties, see Annex B; for country risk, banks shall refer to the specific measurement methodology defined by the Italian Banking Association);
- interest rate risk in the banking book: the risk arising from potential changes in interest rates (Annex C);
- liquidity risk: the risk that the bank will be unable to meet its obligations when they fall due (Annex D);
- residual risk: the risk that recognized credit risk mitigation techniques used by the bank may be less effective than planned;
- securitization risk: the risk that the economic substance of a securitization operation is not fully reflected in risk assessment and management decisions;
- strategic risk: the current or prospective risk of a decline in profits or capital caused by changes in the business environment or erroneous decisions, the inadequate implementation of decisions or poor responsiveness to competitive developments;

- reputational risk: the current or prospective risk of a decline in profits or capital should customers, counterparties, shareholders, investors or supervisors take a negative view of the bank.

#### ANNEX B

## CONCENTRATION RISK FOR INDIVIDUAL COUNTERPARTIES OR GROUPS OF CONNECTED CUSTOMERS

The capital requirement for credit risk envisaged by Directive 2006/48/EC is based on the assumption that the loan portfolio consists of a very large number of exposures, each with a negligible individual value. Under this assumption, it is possible to calculate the value at risk of the portfolio as the sum of the capital requirements of the individual positions, regardless of the composition of the portfolio itself.

Where, however, the number of positions is small, or if certain individual positions account for a significant percentage of the total exposure, the premise on which the calculation of the capital requirement is based no longer holds, and the capital allocated to support credit risk may no longer represent a sufficient guarantee. The methods for calculating the minimum capital requirement for Pillar 1 risks will, all other conditions being equal, produce the same capital requirement for a portfolio (A) consisting of ten positions, each of which represents 10% of the total exposure, and a portfolio (B) consisting of one hundred positions, each of which represents 1% of the total exposure.

The capital charge for a portfolio of loans under both the standardized and the IRB approaches is calculated as follows:

Capital requirement =  $8\% \times RWA$ 

where RWA is the risk-weighted assets

Under the IRB method:

$$RWA = 12.5 \times \sum_{i=1}^{n} K_i \times EAD_i$$
<sup>[1]</sup>

and under the standardised method:

$$RWA = \sum_{i=1}^{n} Weight_{i} \times Exposure_{i}$$

The aggregation method for calculating risk-weighted assets remains the same regardless of the composition of the portfolio (see equation [1]).

This approach greatly simplifies calculation, because total credit risk is measured as the sum of the risks of individual exposures, and the risk of exposure can be calculated independently of all the others.

The formula ignores concentration risk, as demonstrated with the construction of two portfolios (A) and (B), whose exposures have the same credit quality and the same risk-weighted assets, regardless of the number of positions present in each portfolio:

- portfolio (A):  $K_i = 8\%$ ,  $EAD_i = 10$ , for  $i = 1, ..., 100 \rightarrow RWA = 1000$ ;

- portfolio (B):  $K_i = 8\%$ ,  $EAD_i = 10$ , for  $i = 1, ..., 1000 \rightarrow RWA = 1000$ ;

The supervisory capital requirement for credit risk is identical for (A) and (B), even though portfolio (B) is clearly less risky than portfolio (A). The loss that would be caused by the default of one customer (or group of connected customers) in portfolio (A) corresponds to the loss that would be caused by the default of 10 customers (or groups of connected customers) in portfolio (B).

In order to take account of the greater sensitivity of a more highly concentrated portfolio to the effects of the default of a single customer (or group of connected customers), it is possible to use algorithms that calculate an amount of internal capital for concentration risk.

Assuming a single-factor CreditMetrics portfolio (consistent with the function adopted in the IRB method), and assume all exposures have the same regulatory parameters (PD, LGD), the following algorithm is obtained for the calculation of internal capital (the so-called granularity adjustment, GA):

$$GA = C \times H \times \sum_{i=1}^{n} EAD_i$$
<sup>[2]</sup>

In equation [2], H is the Herfindahl index calculated with respect to the exposures, as follows:

$$H = \frac{\left(\sum_{i=1}^{n} EAD_{i}^{2}\right)}{\left(\sum_{i=1}^{n} EAD_{i}\right)^{2}}$$
[3]

The value of the proportionality constant C depends on the values of the regulatory parameters ( $\rho$ , PD, LGD). The following presents a calibration of C consistent with the methodological choices made in the foundation IRB approach:

specifically  $\rho = 18\%$  and LGD = 45%, which, depending on the value of PD, correspond to the following constant:

PD	0.5%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
С	0.773	0.784	0.848	0.885	0.909	0.927	0.939	0.948	0.955	0.959	0.963

From a prudential standpoint, it is considered appropriate to set the value of PD at the greater of 0.5% and the three-year average of the rate of new classifications of loans as adjusted bad debts for the bank's portfolio.

By way of example, taking the two portfolio mentioned above and calibrating the constant C on the basis of a *PD* of 1% (C = 0.784), portfolio (A) - that with the higher concentration risk - gives a GA = 7.84 (equal to 0.8% of RWA, or 7.84 euros of hypothetical internal capital compared with a requirement of 80 euros for the credit risk generated by 1000 euros of RWA. In Portfolio (B) - the less concentrated of the two - GA = 0.784 (equal to 0.08% of RWA). Generally, holding the total exposure constant, *GA* tends to decrease in as the number of exposures increases and moves close to zero in portfolios with high granularity (portfolios with a large number of small exposures).

After introducing the simplifying assumption of the homogeneity of banks in terms of *PD* and *LGD*, Equation [2] is readily calculated and thus offers an easily replicable yet accurate means for supervising concentration risk and calculating internal capital to support this form of risk for banks with a low level of complexity.

TITLE III - Chapter 1

## INTEREST RATE RISK IN THE BANKING BOOK

Banks have shall implement effective rules, processes and instruments for managing the interest rate risk on from assets other than those allocated to the supervisory trading book. The following section provides methodological guidelines - consistent with the principles enunciated by the Basel Committee <sup>11</sup> - for the construction of a simplified system for the measurement of internal capital to support interest rate risk in the banking book.<sup>12</sup>

Exposure to interest rate risk is measured with reference to the assets and liabilities (of units operating in Italy and abroad) included in the banking book. The methodology may be applied at both the individual and consolidated levels.

## 1) Determining "significant currencies"

"Significant currencies" are those that account for more than 5% of the total assets or liabilities in the banking book. For the purposes of the methodology for the calculation of interest rate risk exposure (see points 2, 3 and 4 below), positions denominated in "significant currencies" shall be considered currency by currency, while positions not in "non-significant currencies" shall be aggregated.<sup>13</sup>

#### 2) Classification of assets and liabilities into time bands

Fixed-rate assets and liabilities shall be slotted into 14 time bands (see table 1) on the basis of their residual maturity. Floating-rate assets and liabilities shall be slotted into different time bands on the basis of the time remaining to the next repricing date.<sup>14</sup>

The reserve requirement shall be classified in the "up to one month" time band.  $^{\rm 15}$ 

Bad debts (net of value adjustments) shall be classified in the "5 to 7 years" band, in line with the estimated residual life of the loans based on their turnover rate.

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<sup>&</sup>lt;sup>11</sup> Principles for the Management and Supervision of Interest Rate Risk, Basel Committee on Banking Supervision, July 2004.

Assets other than those allocated to the supervisory trading book. 13

<sup>&</sup>lt;sup>13</sup> Accordingly, offsetting among amounts denominated in different currencies is only allowed for nonsignificant currencies.

<sup>&</sup>lt;sup>14</sup> Reference shall be made to the criteria set out in the *Manuale per la compilazione della matrice dei conti* and the *Istruzioni per la compilazione delle segnalazioni di vigilanza su base consolidata degli enti creditizi*.

<sup>&</sup>lt;sup>15</sup> This reflects the frequency of the Eurosystem's main refinancing operations, the yield of which is used as a benchmark in determining the interest rate on the reserve requirement.

Securities repurchase operations shall treated as lending and funding operations.

Current account assets are classified in the "demand" time band<sup>16</sup> while the sum of current account liabilities and demand deposits are allocated as follows:

- in the "demand" time band up to the amount of current account assets;
- for the remaining amount, in the next four time bands (from "up to one month" to "6 months to 1 year") in proportion to the number of months contained in them.<sup>17</sup>

Derivatives are allocated to the time bands in accordance with the criteria for capital requirements in respect of market risks. For units in CIUs, the provisions regarding capital requirements in respect of market risks shall apply (Title II, Chapter 4).

#### 3) Weighting of net exposures within each time band

Within each time band, assets are offset against liabilities to produce a net position. The net position of every time band is multiplied by the weighting factors shown in Table 1. The factors are based on a hypothetical interest rate shift - 200 basis points throughout the time spectrum - and a proxy of the modified duration for each time band.<sup>18</sup>

#### 4) Sum of weighted exposures of the different time bands

The weighted exposures of the different bands can be summed.<sup>19</sup> The net weighted exposure thus approximates the change in the present value of positions held in a given currency in the event of the interest rate shock assumed.

## 5) Aggregation of exposures in different currencies

The absolute values of exposures for the individual "significant currencies" and the aggregate of "non-significant currencies" are summed.<sup>20</sup> This method gives a value representing the change in economic value of the bank for the given interest rate scenario.<sup>21</sup>

#### 6) Determining the risk indicator

The amount obtained at point 5) divided by supervisory capital to determine the risk indicator, whose alert threshold is set at 20%.

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<sup>&</sup>lt;sup>16</sup> This does not include transactions formally settled as current accounts but regarding other forms of lending with specific time profiles (such as advances subject to final payment).

For example, the band "up to one month" includes 1/12 of the residual amount, and the band "6 months-1 year" includes 6/12.

 <sup>&</sup>lt;sup>18</sup> Modified duration approximates the sensitivity of the economic value of a position in a time band with respect to interest rate shifts for that time band. The Basel Committee document specifies that it was calculated assuming that all positions in each time band have a yield of 5%.

 $<sup>\</sup>frac{1}{20}$  Accordingly, the long and short of different bands can be fully offset against one another.

Considering the sum of the absolute values corresponds to assuming, for regulatory capital purposes, the worst combination of positive and negative interest rate shocks for the intermediary.

Economic value is defined as the present value of the cash flows.

Time band	Middle of time band	Proxy of modified duration (A)	Assumed interest rate shock (B)	Weighting factor (C)=(A)x(B)
Demand and revocable	0	0	200 basis points	0.00 %
Up to 1 month	0.5 months	0.04 years	200 basis points	0.08 %
From 1 to 3 months	2 months	0.16 years	200 basis points	0.32 %
From 3 to 6 months	4.5 months	0.36 years	200 basis points	0.72 %
From 6 months to 1 year	9 months	0.71 years	200 basis points	1.43 %
From 1 to 2 years	1.5 years	1.38 years	200 basis points	2.77 %
From 2 to 3 years	2.5 years	2.25 years	200 basis points	4.49 %
From 3 to 4 years	3.5 years	3.07 years	200 basis points	6.14 %
From 4 to 5 years	4.5 years	3.85 years	200 basis points	7.71 %
From 5 to 7 years	6 years	5.08 years	200 basis points	10.15 %
From 7 to 10 years	8.5 years	6.63 years	200 basis points	13.26 %
From 10 to 15 years	12.5 years	8.92 years	200 basis points	17.84 %
From 15 to 20 years	17.5 years	11.21 years	200 basis points	22.43 %
Over 20 years	22.5 years	13.01 years	200 basis points	26.03 %

## Table 1 – Weighting factors for the simplified methodology

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## ANNEX D

## LIQUIDITY RISK

## General outline

Liquidity risk generally manifests itself in the form of a failure to meet one's payment obligations, which may be caused by an inability to raise the necessary funds (*funding liquidity risk*) or the presence of limitations on the liquidation of assets (*market liquidity risk*).

Liquidity risk also includes the risk of the having to meet one's payment obligations at non-market costs, i.e. incurring high funding costs or (and sometimes at the same time) capital losses where assets have to be liquidated.

The form of liquidity risk that has received most attention in the financial sector and on which supervisory authorities have focused the most is funding risk. Funding risk is idiosyncratic in nature and can quickly trigger reactions by market counterparties, who may declare themselves unwilling to enter into normal transactions or may demand higher remuneration. The combination of these circumstances can have repercussions on the solvency of a bank that is experiencing liquidity strains.

The development of financial instruments with complex cash-flow timing structures, the widespread presence of option features in many instruments, the common use of forms of liquidity enhancement in securitization operations and, finally, the development of hedge funds and real-time multilateral payment systems have all increased liquidity risk. This is especially the case for larger banks, whose exposures is greater owning to cross-country, multi-currency transactions and the consequent need to operate across different time zones that this usually requires.

Nevertheless, robust and accepted methodologies for managing this risk have not been generally adopted yet, and the regulation differs significantly from one country to the next.

Directive 2006/48/EC made it compulsory to develop policies and processes for managing liquidity risk and, in particular, methods for managing the net funding requirements of banks, and to establish contingency plans to deal with liquidity crises.

The following discussion provides guidelines, consistent with the most common international practices, for measuring the net funding requirements of banks and suggests a number of possible liquidity risk mitigation instruments.

## Assessing net funding requirements

The constituent elements of a system for monitoring net funding requirements – less complex than methodologies for measuring liquidity at risk

but sufficiently reliable and more precise than simple operating limits on stocks, are as follows:

- the construction of a "<u>maturity ladder</u>", which can be used to compare the expected cash flows associated with the assets and liabilities maturing within each time band. The maturity ladder highlights the balances and thus the mismatches between expected cash inflows and outflows in each time band. By constructing the cumulative imbalances, the maturity ladder also permits the calculation of the net deficit (or excess) of funds over the time horizon considered. The main methodological choices to be made in preparing the adoption of a maturity ladder approach are:
  - 1. the reference time horizon for the assessment of the net funding requirement;<sup>22</sup>
  - 2. the identification of highly liquid assets (and the related haircuts) that can be rapidly liquidated to offset funding deficits expected to arise in the various scenarios;
  - 3. the modelling of cash flows for off-balance-sheet items, namely items with option features, or demand items;
- the use of scenario techniques that consider the occurrence of events that impact certain items in the various time bands of the maturity ladder. The analysis of the impact of these scenarios on liquidity enables the bank to enter into compensatory transactions to offset imbalances and to establish prior operational limits based on the volume and complexity of its operations;
- the consideration of the specific problems of liquidity risk management in a multi-currency environment, taking account of the need to manage pools of liquid reserves denominated in foreign currencies for refinancing operations with central banks that use collateral denominated in different currencies.

#### Instruments for liquidity risk mitigation

Monitoring net funding requirements must be complemented with the use of risk mitigation instruments such as a contingency funding plan. A contingency funding plan usually considers projections of the future cash flows and the funding sources of a financial institution: the projections are generated by various types of scenarios<sup>23</sup> featuring increases in commitments and cash outflows and pressure on highly liquid assets.

The main aim of contingency funding planning is to safeguard the capital of the bank in situations of cash drains by preparing strategies to manage the crisis and obtain funds under emergency conditions. The typical elements of a contingency plan are:

Banks are progressively shortening the time horizon for liquidity risk monitoring, which averages three months and in some cases reaches six months.

<sup>&</sup>lt;sup>23</sup> The most common scenarios can generally be grouped into three types: i) ordinary operational scenarios in which liquidity strains do not become acute and the countermeasures taken by the bank remain within the bounds of ordinary operations; ii) scenarios envisaging acute liquidity strains, the resolution of which requires extraordinary countermeasures, often involving external interventions; iii) general market crisis scenarios.

- the definition and formalisation of a strategy of action which must be approved by the bank's governing bodies - setting out specific policies for certain aspects of liquidity risk management, such as:
  - a) the composition of assets and liabilities;
  - b) the diversification and stability of funding sources;
  - c) the limitations and conditions for access to the interbank market;
- the cataloguing of different types of liquidity strains to identify their nature (systemic or idiosyncratic) and the balance sheet items (assets and/or liabilities) most affected in the different scenarios;
- the approval by management of contingency actions. The strategy to manage liquidity crises must clearly delineate responsibilities and roles: it must be documented, reviewed periodically and adequately communicated to all the units that may be involved; estimates of back-up liquidity that, under alternative scenarios, provide a sufficiently reliable calculation of the maximum amount that can be tapped from alternative sources of funding.

## ANNEX E

## REFERENCE FRAMEWORK FOR ICAAP REPORTING

## 1) Strategies and forecasting horizon adopted

- a) business plan and annual budgets; schedule of reviews of business plan and its components; extraordinary events necessitating review;
- b) reconciliation between time horizon of business plan and capital plan;
- c) ordinary and extraordinary sources of capital.

## 2) <u>Corporate governance, organizational arrangements and</u> <u>internal control systems connected with the ICAAP</u>

- a) description of the process for the preparation and updating of the ICAAP;
- b) description of the process for reviewing the ICAAP;
- c) definition of the role and functions assigned to the governing bodies for the purposes of the ICAAP;
- d) definition of the role and functions assigned to various corporate functions for the purposes of the ICAAP (for example, internal auditing, compliance, planning, risk management, and other units such as head office and branch network commercial units, accounting and audit);
- e) description of organizational and contractual safeguards relating to any elements of the ICAAP that are outsourced;
- f) indication of internal regulations relevant to the ICAAP.

## 3) <u>Risk exposures, risk measurement and aggregation</u> <u>methodologies, stress testing</u>

- a) risk mapping: illustration of the position of the bank in respect of Pillar 1 and Pillar 2 risks;
- b) risk mapping in relation to bank's operating units and/or legal entities of the group;
- c) techniques for risk measurement, internal capital determination and stress testing;

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- d) description, for every category of measurable risk, of the main characteristics of the main risk control and mitigation instruments;
- e) general description of systems for control and mitigation of nonmeasurable risks.

## 4) <u>Components, estimation and allocation of internal capital</u>

- a) quantification of internal capital for each risk and total internal capital;
- b) any methods for allocating internal capital (by operating unit and/or legal entity).

## 5) <u>Reconciliation of internal capital, regulatory requirements and</u> <u>supervisory capital</u>

- a) reconciliation of total internal capital and regulatory requirements;
- b) listing and definition of capital components covering internal capital;
- c) eligibility of components covering internal capital to be calculated for supervisory purposes; explanation of inclusion of ineligible components;
- d) estimate of cost of using other capital sources in addition to those used.

## 6) <u>Self -assessment of ICAAP</u>

- a) identification of the areas of the process amenable to improvement;
- b) planning of capital or organizational actions.

## ANNEX F

## THE RISK ASSESSMENT SYSTEM

## 1. The risks subject to analysis

#### Credit risk

The analysis of credit risk is intended to provide an assessment of the allocative capacities of the bank, i.e. ability of the bank in selecting creditworthy customers and economically valid projects, and the effectiveness of the lending and loan management process. Two aspects in particular are explored in detail: the quality and the concentration of loan portfolios. The first area of investigation is analysed mainly by means of estimates of the default rate of the portfolio of loans and indicators of their recoverability.<sup>24</sup> Concentration is examined with reference to the bank's compliance with large exposure limits and a concentration metric expressed by a statistical indicator approximating the Herfindahl index. Finally, information relating to country risk reported in the financial statements and in the reports to supervisory authorities contribute to the assessment of the credit risk profile.

## Market risks

Market risks are, in most cases, assessed by means of an analysis of the bank's trading in financial instruments (securities and derivatives) on own account. The aim is to assess the risks the bank must support and the results obtained in the segment, once the level of development and the nature of the operations conducted by the bank have been ascertained (with specific reference to products, positioning strategies and the types of risk taken on). Market risks are calculated using measures based on supervisory capital requirements (see Section II, Chapter 4) as well as "value at risk" (VaR) techniques. For banks whose internal models have been recognized by the supervisory authorities, the analysis is based on data that are prepared specifically for the supervisory authorities and include measures of daily VaR.

<sup>&</sup>lt;sup>24</sup> In the case of banks authorized to use an internal rating system, the analysis is based on the PD and LGD measurements. For other banks, the indicator that approximates the default rate of the loan portfolio is the rate of new classifications as adjusted bad debts expressed as a percentage of performing loans at the start of the reference period. The assessment also takes the system of guarantees and the total of doubtful debts into consideration. The risk analysis also uses statistics compiled by the Central Credit Register, which shows developments in impaired loans and their weight as a percentage of total lending.

#### Operational risk

In assessing operational risks, the exposure is measured using the reference indicators adopted in calculating the capital requirement (see Title II, Chapter 5). A central aspect of the analysis is the verification - usually effected in the course of an inspection - of whether the bank's organizational systems and processes of operational risk measurement/assessment comply with the relevant regulations.

#### Liquidity risk

The analysis of liquidity risk seeks to verify the equilibrium of expected cash flows over a time horizon of one year by comparing assets and liabilities maturing with a ladder of time bands that range from demand items and up to 7 days to one year (special attention is paid to imbalances arising in the first quarter). The analysis model assesses the capacity of the bank to meet its cash obligations both in the course of ordinary operations and under specifically identified liquidity strain scenarios.

#### Interest rate risk in the banking book

The objective of the analysis of interest rate risk is to measure the exposure to this risk in respect of the assets and liabilities in the banking book. For banks whose level of risk diverges significantly from the national average, an analysis is made of disparities by maturity time band with a view to identifying those items with the greatest impact of the exposure and to guiding supervisory action.

## Other risks

Finally, the analysis of other risks that cannot currently be measured readily (strategic risk, reputational risk and residual risks ) is based on the information concerning the organizational arrangements implemented by the banks, which are mainly assessed through inspections. The analysis of profitability, especially as regards the sustainability and variability of the various components of income flows, also provides valuable insight into the bank's exposure to strategic and reputational risks (see point 2).

#### 2. Profitability

An essential element in the assessment of a bank is the analysis of its profitability, taking account of its strategies, the risks it has assumed and the market in which it operates.

The purpose of the analysis is to assess the profit-generating capacity of the bank, both in terms of quantitative adequacy and income stability. The first aspect concerns the capacity of ordinary operating profit to cover the main -34 –

demands on that profit, namely the cost of credit risk, the remuneration of capital and the financing of company growth. The second aspect primarily considers the manner in which profit is formed.

## 3. Organizational aspects

The analysis of organizational arrangements is crucial to understanding the situation of a bank. Supervisory inspections constitute the most important element of this analysis.

The criteria adopted in assessing organizational variables regard the adequacy of the bank's organization to support its strategies and operations. In particular, the analysis seeks to detect any weaknesses in the components of the organizational system that might result in uninformed management of risks and have a negative impact on the financial situation and competitive capacity of the bank.

Especially important in this regard is the functioning of internal controls (first- and second-level, internal audit, compliance) and, more generally, compliance with the regulatory provisions concerning organizational matters, including the organizational requirements necessary for the use of internal models for calculating capital requirements for credit, counterparty, market and operational risks.

The examination covers all components of the organizational structure: "contextual" aspects (corporate governance arrangements, group structures, competitive capacity and growth polices); the macro-structure; operational systems (the information system; systems for the registering and reporting corporate events); and internal controls.

The analysis of contextual aspects and the macro-structure is carried out simultaneously across all areas of risk, its purpose being to measure the bank's capacity to maintain an adequate level of competitiveness. By contrast, the assessment of the main operational systems and the system of internal controls is more tightly focused on individual risk elements: it seeks to test the effectiveness of the systems in cataloguing, measuring/assessing, controlling and mitigating the most significant forms of risk faced by the bank.

The assessment of organizational aspects is conducted in a manner that takes account of the operational complexity and size of banks, and regards each significant area of risk faced by the banking group. Accordingly:

for banking groups, the assessment is primarily conducted at the consolidated level. The components of the organizational system of the group are examined and the parent undertaking's ability to ensure effective coordination of general strategies and the individual group components, and the control of the risks confronting the group at the consolidated level and the main group entities. Within each area of risk, the depth of the analysis of the

organization of individual banks belonging to the group may vary in relation to the following factors: i) the degree of integration/centralization of operational systems and strategic functions at the group level; ii) the degree of decision-making autonomy accorded to the bank; iii) the systemic importance of the latter or the presence of other significant information counselling targeted scrutiny of the bank;

for banks and less complex banking groups (as a rule those classified under class 3 for ICAAP purposes), the scope and detail of the analysis is calibrated on the basis of their size, the type and amount of risks they face, the type of operations they engage in and the extent of the problems found.

## 4. Capital adequacy

The examination of capital adequacy is based on an assessment of capacity of the bank's capital to support current and future unexpected losses arising from bank operations. The assessment criteria regard:

- 1) the availability of sufficient supervisory capital to cover the capital requirement referred in Title II, Chapter 6;
- 2) the adequacy of the total capital that the bank intends to hold to support all its risks and any strategic needs it may have.

The first aspect regards verification that the bank has, over time, complied with the capital requirements provided for by capital adequacy regulations.

The second aspect regards supervisors' assessment of the process by which the bank determines its internal capital. A key part of this assessment is the re-examination of the ICAAP report, which explores three aspects: i) the calculation of total internal capital; ii) risk control and mitigation systems; iii) the amount and composition of total capital;

As regards point i) above, the Bank of Italy considers in particular:

- for banks that use internal risk measurement approaches different from those used for supervisory capital purposes or those set out in Annexes B, C and D, the causes of any differences between the amount of internal capital calculated by the bank and supervisory capital requirements or the amounts of internal capital calculated with the application of the simplified methods;
- the methods for aggregating any internal capital for each material risk, having particular regard to risk diversification;
- all other factors considered by the bank in assessing its exposure to material risks, such as stress testing, risks other than those referred to in Annex A and any needs associated with operations of a strategic or competitive nature.

As regards the systems, processes and procedures for risk control and mitigation referred to at point ii), the examination - which is based primarily on inspections – seeks to assess their functionality and effectiveness.

The examination of the aspects referred to at point iii) centres on the bank's reconciliation of elements eligible for inclusion in supervisory capital with the capital resources that the bank has considered in covering total internal capital.

# TITLE IV (disclosure)

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## TITLE IV

.....

Chapter 1

DISCLOSURE

TITLE IV - Chapter 1

## DISCLOSURE

#### SECTION I

#### GENERAL PROVISIONS

## 1. Introduction

In order to strengthen market discipline, banks shall comply with disclosure requirements concerning capital adequacy, risk exposure and the general characteristics of the systems established to identify, measure and manage such risks.

Where internal systems are used to calculate capital requirements for credit and operational risks and credit risk mitigation techniques are adopted, compliance with the related disclosure requirements shall also be an essential condition for the recognition of such methods and techniques for supervisory capital purposes.

Banks shall formalize the strategies and procedures used to ensure compliance with disclosure requirements, also assessing their adequacy in terms of the manner and frequency with which disclosures are made. Banks shall be responsible for ensuring the completeness, accuracy and veracity of the disclosed information.

The Bank of Italy shall verify that banks have established organizational arrangements capable of guaranteeing the reliability of processes for producing, preparing and publishing information.

#### 2. Legislative sources

The field is governed by:

- Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;
- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:
  - Article 53, paragraph 1, subparagraph d-*bis*), which gives the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning public disclosure;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 2-*bis*, which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph *a*) that shall permit banks to use:

- a) credit risk assessments issued by external companies or entities, specifying the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For banks subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 53, paragraph 3, which gives the Bank of Italy the power, *inter alia* to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, subparagraph e), 2-ter) and 3-bis), which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking concerning the banking group as a whole or its components with regard to public disclosure;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 2-*bis*), which gives the Bank of Italy the power to issue regulations pursuant to paragraph 1, subparagraph a) that permit the banking group's use of:

- a) credit risk assessments issued by external companies or entities. The regulations shall specify the requirements that such persons must meet and the related verification procedures;
- b) internal risk measurement systems for calculating capital requirements, subject to authorization by the Bank of Italy. For groups subject to supervision on a consolidated basis by an authority of another Member State, that authority shall be the competent authority for the decision in the absence of the adoption of a joint decision with the Bank of Italy within six months of the submission of the application for authorization;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis

may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-*bis*), which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

— the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

Other relevant sources are:

— the international agreement "International Convergence of Capital Measurement and Capital Standards. A Revised Framework", published by the Basel Committee for Banking Supervision in June 2006.

## 3. Definitions

For the purposes of these regulations:

- "*material information*" shall mean information which if omitted or misstated could change or influence the assessment or decision of a user relying on such information for the purpose of making economic decisions;
- "*proprietary information*" shall mean information which, if shared with the public, would undermine the bank's competitive position. It may include information regarding products or systems which, if shared with competitors, would render the bank's investment therein less valuable;
- "*confidential information*" shall mean information in respect of which the bank has obligations to customers or other counterparty relationships binding it to confidentiality.

## 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

on an individual basis, to banks authorized to operate in Italy, with the exception of:

- a) Italian banks belonging to a banking group<sup>1</sup> and the branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- b) Italian banks not belonging to a banking group if they are reference undertakings or are controlled by a European parent undertaking and have total balance sheet assets of less than €10 billion;
- on a consolidated basis:
  - a) to banking groups, with the exception of those controlled by a European parent undertaking, if that have total balance sheet assets of less than €10 billion;
  - b) to reference undertakings, including banking, financial and instrumental companies controlled by EU parent financial holding companies.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

<sup>&</sup>lt;sup>1</sup> The exception does not concern Italian banks not included in the basis of consolidation (see Title I, Chapter I, Part 2, Section III, sub-section 1).

#### SECTION II

#### DISCLOSURE REQUIREMENTS

#### 1. Organization of information and limitation of obligations

The information whose disclosure is governed by these regulations is listed in Annex A. The information is of a quantitative and qualitative nature and is presented in tables, each of which concerns a certain area of disclosure.

Italian banks not belonging to a banking group and parent undertakings, where they are controlled by a European parent undertaking and have total balance sheet assets of at least  $\in 10$  billion shall publish only the information regarding the structure of supervisory capital and capital adequacy (tables 3 and 4).

The information shall be disclosed in the order specified in the tables in the Annex.

## 2. Content and procedures for disclosing information

Banks shall disclose information related to the activities in which they are engaged, the risks assumed and methodologies used. They shall therefore not publish tables that contain no information.<sup>2</sup>

Any information already contained in other documents published by the bank (for example, in the financial statements) shall be included in the disclosure provided for in these regulations. Consequently, in order to preserve the comprehensiveness and accessibility of disclosures, references to other sources is not permitted.

Banks shall provide a level of detail for each disclosure commensurate with their organizational complexity and the type of business they engage in, taking into account the systems adopted internally to prepare reports to the governing bodies.

#### 3. Disclosure eligibility requirements

For banks that adopt internal systems to calculate capital requirements for credit or operational risks and for those using credit risk mitigation techniques, compliance with specific disclosure requirements ("disclosure eligibility requirements") shall be a necessary condition for the recognition of such systems

<sup>&</sup>lt;sup>2</sup> For example, banks calculating capital requirements for credit risk using only the standardized approach (see Title II, Chapter I, Part 1) shall not publish information relating to the internal ratings based approach (see Title II, Chapter I, Part 2).

and the effects of such techniques for supervisory capital purposes. These disclosure requirements are marked by an asterisk in the annexed tables.

#### 4. Derogations from disclosure requirements

Banks may omit the disclosure of information that is not considered material, with the exception of information that represents a disclosure eligibility requirement.

In exceptional cases, banks may omit the disclosure of proprietary or confidential information (including information that represents a disclosure eligibility requirement), provided that they specify the information that is not disclosed and the reasons for non-disclosure, and publish more general information on the matter in question.

## 5. Disclosure procedures and frequency

Information shall be disclosed through the bank's website. Banks for whom such means of publication is difficult or onerous shall disclose information through the website of their respective industry association or in printed form.

Banks shall announce the means used for disclosure purposes in their financial statements (in Part E of the notes to the financial statements).

Disclosures shall be published on at least an annual basis, within thirty days of publishing the financial statements.

Banks authorized to adopt internal systems to calculate capital requirements for credit and operational risks shall disclose, on at least a semi-annual basis, the quantitative information contained in the annexed tables and, on at least a quarterly basis, the quantitative information contained in tables 3 and 4 regarding supervisory capital and capital adequacy. Disclosure shall be made within thirty days of the reference date for the information.

Banks may publish the information on a more frequent basis, taking into consideration the importance of the business involved, of banks' presence in different countries and financial sectors, of their participation in financial markets and in international payment, clearing and settlement systems, and of the volatility of the exposure amounts.

#### 6. Organization and controls

Banks shall adopt suitable organizational arrangements to ensure the compliance of disclosure with these regulations. The governing bodies shall independently assess and verify the quality of information. The solutions adopted shall form part of the bank's system of internal controls.

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Within this framework, banks shall establish appropriate specific procedures for verifying disclosures that have not undergone specific controls by external auditors or the control body.

The choices made by banks in this area shall be approved by the supervisory body. The management body shall adopt the measures necessary to ensure compliance with the requirement. The control body shall verify the adequacy of the procedures adopted.
# ANNEX A

# DISCLOSURES

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# Table 1

# **General requirements**

			Description of disclosure
Qualitative disclosure	(a)	For each risk category (including those considered in the following tables), banks shall disclose risk management objectives and policies, including:	
		a) the strategies and processes for managing such risks;	
		b) the structure and organization of the relevant risk management function;	
		c)	the scope and nature of risk measurement and reporting systems;
		d)	the policies for hedging and mitigating risk and strategies and processes for monitoring their continuing effectiveness.

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# Scope of application

		Description of disclosure	
Qualitative disclosure	(a)	The name of the bank to which the disclosure requirement applies.	
	(b)	An outline of differences in the basis of consolidation for accounting and prudential purposes, with a brief description of the entities within the group which:	
		i) are fully consolidated;	
		ii) are proportionally consolidated;	
		iii) are deducted from the supervisory capital;	
		iv) are neither consolidated nor deducted.	
	(c)	Any current or foreseen legal or substantive impediment to the prompt apid transfer of supervisory capital or funds within the group.	
	(d)	For groups, any reduction in individual capital requirements applied to the parent undertaking and the Italian subsidiaries.	
Quantitative disclosure	(e)	The names of all subsidiaries excluded from the basis of consolidation and aggregate amount of their capital deficiencies with respect to any mandatory capital requirements.	

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# Supervisory capital structure

		Description of disclosure
Qualitative disclosure	(a)	Summary information on the main terms and conditions of the features of capital items, especially innovative capital instruments.
Quantitative disclosure	(b)	The total amount of Tier 1 capital, with separate disclosure of individual positive and negative items.
	(c)	The total amount of Tier 2 and Tier 3 capital.
	(d)	Other deductions from supervisory capital, with separate disclosure – for banks using one of the IRB systems – of any negative differences between total value adjustments and expected loss.
	(e)	Total supervisory capital.

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# **Capital adequacy**

		Description of disclosure	
Qualitative disclosure	(a)	Summary description of the bank's approach to assessing the adequacy of its internal capital to support current and future activities.	
Quantitative disclosure	(b)	For banks calculating credit risk-weighted exposure amounts using the standardized approach, the capital requirement for each of the exposure classes.	
	(c)	For banks calculating credit risk-weighted exposure amounts using the IRB approach, the capital requirement for each of the exposure classes envisaged in these regulations.	
		For retail exposures, separate disclosure shall be made for each of the following categories: "exposures secured by residential property", "qualifying revolving retail exposures" and "other retail exposures".	
		For equity exposures, disclosure shall be made for:	
		<ul> <li>each of the methods envisaged (simple risk weight approx PD/LGD approach, internal models approach); in the case of simple risk weight approach, separate disclosure shall be m for the capital requirement for: a) exchange-traded exposures private equity exposures in sufficiently diversified portfolios other exposures;</li> </ul>	
		ii) exposures subject to supervisory transition regarding capital requirements;	
		<ul><li>iii) exposures subject to grandfathering provisions regarding capit requirements.</li></ul>	
	(d)	<ul> <li>Capital requirements for market risks, with separate disclosure for:</li> <li>assets included in the supervisory trading portfolio: <ul> <li>i) position risk;</li> <li>ii) settlement risk;</li> <li>iii) counterparty risk;</li> <li>iv) concentration risk;</li> </ul> </li> <li>other assets: <ul> <li>v) foreign exchange risk;</li> <li>vi) commodity risk.</li> </ul> </li> </ul>	
	(e)	Capital requirement for operational risks.	
	(f)	Total and Tier 1 capital ratios.	

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# Credit risk: general disclosures for all banks

		Description of disclosure			
Qualitative disclosure	(a)	In addition to the general disclosure indicated in Table 1, the following information shall be disclosed for the exposure to credit risk and dilution risk: <sup>3</sup>			
		<ul> <li>i) the definitions of "past due" and "impaired" loans used for accounting purposes<sup>:4</sup></li> <li>ii) a description of methods adopted for determining value adjustments.<sup>5</sup></li> </ul>			
Quantitative disclosure	(b)	Total and average gross credit risk exposures <sup>6</sup> over the period, <sup>7</sup> with separate disclosure by major types of exposure and counterparty. <sup>8</sup> The amount shall be net of permitted accounting offsets, without considering the effects of credit risk mitigation techniques.			
	(c)	Distribution of exposures by significant geographical areas, broken down by material exposure classes and further detailed if appropriate.			
	(d)	Distribution of exposures by industry or counterparty type, broken down by type of exposure and further detailed if appropriate.			
	(e)	Distribution by residual contractual maturity <sup>9</sup> of the entire portfolio, broken down by type of exposure and further detailed if appropriate.			
	(f)	By significant industry or counterparty type, the amount of:			
		i) impaired and past due exposures, shown separately;			
		ii) total value adjustments;			
		iii) value adjustments during the period.			

<sup>&</sup>lt;sup>3</sup> Dilution risk shall mean the possibility that the amount owed by the assigned obligor in respect of purchased receivables is reduced through credits or allowances arising from returns, disputes regarding product quality, promotional or other discounts.

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<sup>&</sup>lt;sup>4</sup> Banks shall indicate that the definition used is the same as the supervisory definition.

 $<sup>^{5}</sup>$  Value adjustments include specific and portfolio allowances as well as provisions to cover guarantees issued or commitments undertaken with third parties.

<sup>&</sup>lt;sup>6</sup> Where the period-end position is representative of the bank's risk exposure during the period, the average gross exposures need not be provided.

<sup>&</sup>lt;sup>7</sup> Where average amounts are disclosed in accordance with an accounting regulations or other requirement which specifies the calculation method to be used, that method shall be followed. Otherwise, the average exposures shall be calculated using the most frequent interval that the bank's systems generate for management, prudential or other reasons, provided that the resulting averages are representative of the bank's operations. The basis used for calculating averages shall be specified only if not on a daily average basis.

<sup>&</sup>lt;sup>8</sup> This breakdown could be that applied under accounting rules.

<sup>&</sup>lt;sup>9</sup> It is possible to use the same maturity groupings envisaged by accounting regulations.

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(g)	By significant geographical areas, the amount of: 1) impaired and past due exposures, shown separately; 2) value adjustments for each geographical area, <sup>10</sup> where possible.
(h)	Reconciliation of changes in value adjustments for impaired exposures, show separately for specific and portfolio value adjustments. The information shall include:
	i) a description of the methods used to calculate the value adjustments;
	ii) the opening balance of total value adjustments;
	iii) charge-offs taken during the period;
	iv) value adjustments made during the period;
	v) amounts reversed during the period;
	vi) any other adjustment, for example exchange rate differences, business combinations, acquisitions and disposals of subsidiaries, including transfers between value adjustments;
	vii) the closing balance of total value adjustments.
	Charge-offs and recoveries recorded directly to the income statement should be shown separately.

<sup>10</sup> The portion of portfolio value adjustments that is not allocated to a specific geographical area shall be disclosed separately.

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# <u>Credit risk: disclosures for portfolios treated under the standardized</u> <u>approach and specialized lending and equity exposures treated under IRB</u> <u>approaches</u>

		Description of disclosure		
Qualitative disclosure	(a)	Banks calculating credit risk-weighted exposures using the standardized approach shall provide the following information for each exposure class:		
		i) names of the nominated external credit assessment institutions (ECAIs) and export credit agencies (ECAs), and the reasons for any changes;		
		ii) the exposure classes for which each ECAI or ECA is used;		
		iii) a description of the process used to transfer the issuer or issue credit ratings to comparable assets not included in the supervisory trading book.		
Quantitative disclosure	(b)	Banks calculating credit risk-weighted exposures using the standardized approach shall provide, for each exposure class, the exposure values, with and without credit risk mitigation, associated with each credit quality step as well as the exposure values deducted from the supervisory capital.		
	(c)	For exposures subject to the supervisory risk weights in IRB approaches (specialized lending – equity exposures under the simple risk weight method), the exposures assigned to each credit risk class shall be provided.		

		Description of disclosure		
Qualitative disclosure	(a)	Authorization from the Bank of Italy to use the approach selected and/or to us phased roll-out.		
	(b)	Explanation of:		
		i) the structure of internal rating systems and relation between internal and external ratings;		
		ii) the use of internal estimates for purposes other than the calculation of risk- weighted exposure amounts in accordance with IRB approaches;		
		iii) the process for managing and recognizing credit risk mitigation techniques;		
		iv) the control and review mechanisms for the rating systems, including discussion of independence and accountability.		
	(c)	Description of the internal ratings process, provided separately for the following exposure classes:		
		i) central governments and central banks;		
		ii) banks and other financial companies;		
		<li>iii) non-financial companies, including SMEs, specialized lending and purchased receivables;</li>		
		iv) retail exposures, for each of the categories envisaged (exposures secured by residential property; qualifying revolving retail exposures; other retail exposures);		
		v) equities. <sup>11</sup>		
		The description shall include:		
		- the types of exposure included in the exposure classes;		
		- the definitions, methods and data for estimation and validation of PD and, where applicable, LGD and the credit conversion factors, including assumptions employed in the derivation of these variables; <sup>12</sup>		

	Table 7	
Credit risk: disclosures for po	ortfolios treated under	IRB approaches (*)

<sup>&</sup>lt;sup>11</sup> Equities shall only be disclosed here as a separate class where the bank uses the PD/LGD approach for equities held in the banking book. <sup>12</sup> Banks shall provide a general overview of the system approach, describing definitions of the variables, and methods for estimating and validating those variables set out in the quantitative risk disclosures. This should be done for each of the classes indicated in the text. Banks should draw out any significant differences in approach to estimating these variables within each class.

		- the description of deviations from the definition of default as permitted by prudential regulations, where these are determined to be material, also indicating for each class the main categories of exposure affected by such deviations. <sup>13</sup>
Quantitative	(d)	Exposure values for each exposure class.
disclosure: risk		Exposures towards central governments and central banks, banks and other financial
assessment		companies, and corporates, where the banks use the IRB advanced approach, must be shown separately from exposures for which the banks do not utilize this approach.
	(e)	<ul> <li>For each exposure class – central governments and central banks; banks and other financial companies; corporates; equities – provide the following information, with a sufficient breakdown between PD categories (including default) to allow a significant differentiation of credit risk:<sup>14</sup></li> <li>i) total exposures (for exposures towards central governments and central banks, banks and other financial companies, and corporates, the sum of outstanding loans plus unutilized margins; for equities, outstanding amount);</li> <li>ii) for banks on the IRB advanced approach, exposure-weighted average LGD (percentage);</li> <li>iii) exposure-weighted average risk-weight;</li> </ul>
		relative exposure-weighted average EAD. <sup>15</sup>
	(f)	For retail exposures, provide for each category envisaged:
		i) the information referred to in point e) (if applicable, on a pool basis) or
		ii) analysis of exposures (if applicable, on a pool basis) against a sufficient number of expected loss (EL) grades to allow for a meaningful differentiation of credit risk.

<sup>&</sup>lt;sup>13</sup> Banks shall only describe the main areas where there has been material divergence from the reference definition of default such that it would affect the reader's ability to compare and understand the disclosure of exposures by PD grade.

<sup>&</sup>lt;sup>14</sup> The PD, LGD and EAD disclosures below shall reflect the effects of collateral, netting and guarantees/credit derivatives, where recognized. Disclosure of each PD grade should include the exposure-weighted average PD for each grade. Where banks are aggregating PD grades for the purposes of disclosure, this shall be a representative breakdown of the distribution of PD grades used in the IRB approach.

<sup>&</sup>lt;sup>15</sup> Banks shall only provide one estimate of EAD for each exposure class. However, where banks believe it is helpful, in order to give a more meaningful assessment of risk, they may also disclose EAD estimates across a number of EAD categories, against the undrawn exposures to which these relate.

Quantitative disclosure:	(g)	Actual value adjustments (for example, charge-offs and specific writedowns) in the preceding period for each exposure class (showing each retail exposure category separately) and how this differs from previous years.
results	(h)	Discussion of the factors that impacted on the loss experience in the preceding period (for example, has the bank experienced higher than average default rates, or higher than average LGDs and credit conversion factors).
	(i)	Banks' estimates against actual outcomes over a longer period. This should at least include information on estimates of losses against actual losses in each exposure class, over a period sufficient to allow for a meaningful assessment of the performance of the internal rating processes for each exposure class (for retail exposures, the information must be given for each of the categories provided). Where necessary, banks should further decompose this to provide analysis of PD and, for banks on the advanced IRB approach, LGD and credit conversion factor outcomes against estimates provided.

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(\*) Eligibility requirements for the use of particular instruments or methodologies.

# **<u>Risk mitigation techniques</u>** (\*)<sup>16</sup>

		Description of disclosure
Qualitative disclosure	(a)	Policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting.
	(b)	Policies and processes for collateral evaluation and management.
	(c)	A description of the main types of collateral taken by the bank.
	(d)	The main types of guarantor and credit derivative counterparty and their creditworthiness.
	(e)	Information about market or credit risk concentrations under the credit risk mitigation instruments used.
Quantitative disclosure	(f)	For banks calculating credit risk-weighted exposures in accordance with the standardized or foundation IRB approaches, separately for each exposure class, the total exposure value (if applicable, net of on-balance sheet netting and off-balance sheet netting agreements) that is covered by financial collateral and other eligible collateral, after application of haircuts. <sup>17</sup>
	(g)	For banks calculating credit risk-weighted exposures according to the standardized or foundation IRB approaches, separately for each exposure class, the total exposure (if applicable, net of on-balance sheet offsets and off-balance sheet offsetting agreements) covered by guarantees or credit derivatives. For equities such disclosure requirement applies to each method (simple risk weight method, PD/LGD approach, internal models method).

(\*) Disclosure requirements for banks using credit risk mitigation techniques.

<sup>&</sup>lt;sup>16</sup> Credit derivatives treated as part of synthetic securitization transactions should be excluded from CRM disclosures and included within those relating to securitizations.

<sup>&</sup>lt;sup>17</sup> If the comprehensive approach is applied, where applicable, the total exposure covered by collateral after haircuts should be reduced further to remove any positive adjustments that were applied to the exposure.

# Counterparty risk<sup>18</sup>

		Description of disclosure
Qualitative disclosure	(a)	<ul> <li>Description of:</li> <li>i) the method used to assign the operating limits defined in terms of internal capital and credit for counterparty credit exposures;</li> <li>ii) policies relating to guarantees and assessments concerning counterparty risk;</li> <li>iii) policies with respect to wrong-way risk exposures;</li> <li>iv) the impact in terms of the amount of collateral that the bank would be required to provide given a credit rating downgrade.</li> </ul>
Quantitative disclosure	(b)	<ul> <li>i) Gross positive fair value of contracts;</li> <li>ii) reduction in gross positive fair value due to netting;</li> <li>iii) positive fair value net of netting agreements;</li> <li>iv) collateral held;</li> <li>v) positive fair value of derivative contracts net of netting and collateral agreements;</li> <li>vi) measures of EAD, or value of the exposure to counterparty risk, calculated in accordance with the methods used (internal, standardized, mark-to-market models)</li> <li>vii) notional amount of credit derivative hedges for counterparty risk;</li> <li>viii) distribution of positive fair value of contracts by type of underlying;<sup>19</sup></li> <li>ix) notional amount of credit derivatives in the banking book and the supervisory trading book, divided by product type;<sup>20</sup> further broken down according to the role played by the bank (buyer or seller of protection) within each product group;</li> <li>x) estimated alpha if the bank has received authorization from the Bank of Italy to estimate alpha.</li> </ul>

<sup>&</sup>lt;sup>18</sup> Applicable to OTC derivatives (including credit derivatives) as well as securities financing transactions (repurchase agreements, securities or commodities lending and borrowing transactions, remargining transactions based on securities or commodities, long settlement transactions).

<sup>&</sup>lt;sup>19</sup> For example: interest rate contracts, FX contracts, equity contracts, credit derivatives, commodity/other contracts. <sup>20</sup> For example: credit default swap, total rate of return swap.

# Securitization transactions<sup>21</sup>

		Description of disclosure
Qualitative (a disclosure	(a)	<ul> <li>i) Description of the bank's objectives with regard to securitization activity;</li> <li>ii) roles played in the securitization process<sup>22</sup> and, for each of them, indication of the extent of the bank's involvement;</li> <li>iii) indication of the methods applied by the bank for securitization purposes to calculate the amounts of risk-weighted exposures (standardized method, ratings-based approach, supervisory formula approach, internal assessment approach).</li> </ul>
	(b) (c)	<ul> <li>Summary of bank's accounting policies for securitization activities, specifying: <ul> <li>i) whether the transactions are treated as sales or financings;</li> <li>ii) recognition of gain on sale;</li> <li>iii) key assumptions for valuing securitization exposures;</li> <li>iv) treatment of synthetic securitizations, if this is not covered by other accounting policies (for example, on derivatives).</li> </ul> </li> <li>Names of ECAIs used for securitizations and the types of exposure for which each agency is used.</li> </ul>
Quantitative disclosure	(d) (e) (f)	The total outstanding exposures securitized by the bank and subject to the securitization regulations (broken down into traditional/synthetic), by exposure type. <sup>23 24</sup> For exposures securitized by the bank and subject to the securitization regulations, the breakdown, by type of exposure: i) of the amount of impaired and past due exposures; and ii) of losses recognized by the bank during the period. <sup>25</sup> Aggregate amount of securitization positions retained or purchased, <sup>26</sup> broken down by exposure type.

<sup>&</sup>lt;sup>21</sup> Credit derivatives that are treated, for the purposes of these regulations, as part of synthetic securitization structures shall be excluded from the credit risk mitigation disclosures and included within those relating to <sup>22</sup> For example; originator, investor, servicer, provider of credit enhancement, ABCP sponsor, liquidity provider,

 <sup>&</sup>lt;sup>23</sup> For example, credit cards, home equity, auto, etc..

 <sup>&</sup>lt;sup>24</sup> Securitization transactions in which the originator does not retain any securitization exposure shall be shown separately but need only be reported for the year of inception.
 <sup>25</sup> For example, charge-offs/value adjustments (if the assets remain on the bank's balance sheet).

<sup>&</sup>lt;sup>26</sup> Securitization exposures include, but are not limited to, debt securities, liquidity facilities, other commitments and credit enhancements such as cash collateral accounts and other subordinated assets.

	(g)	Aggregate amount of securitization positions retained or purchased, broken down according to a significant number of risk weight bands. Positions for which a risk weight of 1250% has been applied or which have been deducted should be disclosed separately.
	(h)	For transactions subject to the treatment envisaged for securitizations of revolving exposures with prepayment clauses, the aggregate amount outstanding of such exposures, separated on the basis of the interests, respectively, of the sellor and the investor.
	(i)	Summary of securitization transactions during the period, including the amount of exposures securitized (by exposure type), as well as gains and losses on sale, broken down by exposure type.

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# <u>Market risks: disclosures for banks using the internal models approach (IMA)</u> <u>for position risk, foreign exchange risk and commodity risk</u>

		Description of disclosure
Qualitative disclosure	(a)	<ul> <li>For each portfolio covered by the IMA:</li> <li>i) characteristics of the models used;</li> <li>ii) a description of stress testing applied to the portfolio;</li> <li>iii) a description of the approach used for backtesting and/or validating the accuracy and consistency of the internal models and modelling processes.</li> </ul>
	(b)	The scope of acceptance by the Bank of Italy regarding the use of the internal models approach.
	(c)	Description of the level of conformity with the rules governing the systems and controls used to ensure prudent and reliable assessments of the positions included in the supervisory trading portfolio (see Title II, Chapter 4, Annex A, Part B), as well as the methods used to ensure compliance with such rules.

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# **Operational risk**

		Description of disclosure
Qualitative disclosure	(a)	A description of the approach used for operational risk capital assessment.
	(b)	A description of the advanced measurement approaches (AMA), if used by the bank, including a discussion of relevant internal and external factors considered in the approach adopted.
		In case of partial use of the AMA, the scope and coverage of the different approaches used should be indicated.
	(c)*	For banks using the AMA, a description of the use of insurance for the purpose of mitigating operational risk.

(\*) Eligibility requirements for the use of particular instruments or methodologies.

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# Equity exposures: disclosures for banking book positions

		Description of disclosure	
Qualitative disclosure	(a)	<ul> <li>i) Differentiation between exposures according to the objectives pursued (for example, capital gains, relationships with counterparties, strategic reasons);</li> <li>ii) description of accounting techniques and valuation methodologies used, including key assumptions and practices affecting valuation, as well as significant changes in these practices.</li> </ul>	
Quantitative disclosure	(b)	Value disclosed in the balance sheet and fair value; in addition, for listed securities, a comparison with market quotation where it is materially different from fair value.	
	(c)	<ul> <li>Type, nature and amounts of exposures, distinguishing between:</li> <li>i) exposures traded in the market;</li> <li>ii) exposures in private equity instruments held in sufficiently diversified portfolios;</li> <li>iii) other exposures.</li> </ul>	
	(d)	Total cumulative realized gains and losses arising from sales and liquidations in the reporting period.	
	(e)	<ul> <li>i) Unrealized gains/losses (recognized in the balance sheet but not taken to the income statement);</li> <li>ii) amount of the above gains/losses included in Tier 1 or Tier 2 capital.</li> </ul>	

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# Interest rate risk on positions in the banking book

		Description of disclosure	
Qualitative disclosure	(a)	<ul> <li>i) Nature of the interest rate risk;</li> <li>ii) key assumptions used in measuring and managing risk, particularly as regards loans with prepayment option and the behaviour of non-maturity deposits;</li> <li>iii) frequency of measurement of this type of risk.</li> </ul>	
Quantitative disclosure	(b)	Consistently with the method used by management to measure interest rate risk, the increase/decline in earnings or economic capital (or other relevant indicators) – broken down by main currencies <sup>27</sup> – in case of upward or downward rate shocks.	

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<sup>&</sup>lt;sup>27</sup> Non-material currencies shall be treated as a single currency.

# TITLE V (risk concentration)

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# TITLE V

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# Chapter 1

# **RISK CONCENTRATION**

#### TITLE V - Chapter 1

## **RISK CONCENTRATION**

#### SECTION I

#### GENERAL PROVISIONS

## 1. Foreword

These regulations seek to limit the threat to bank stability associated with exposures that are large relative to supervisory capital. They incorporate the principles and regulations set out in Directive 2006/48/EC.<sup>1</sup>

The regulations establish limits on the size of exposures to individual borrowers and on the overall level of large exposures. The rules on individual large exposures seek to limit the maximum potential loss that a bank could incur in the event of the insolvency of a single counterparty, while those governing overall large exposures are intended to ensure that credit risk remains sufficiently diversified.

The limits, which are stated in terms of supervisory capital, refer not only to lending operations in which the bank provides financial resources to a borrower, but also to other forms of exposure to the same counterparty.

The rules also specify that exposures to individual borrowers from the same bank shall be treated as a single risk where the borrowers are connected by legal or economic ties.

In the case of large loans, remaining within the ceilings on the value of exposures established under risk concentration rules does not in itself exempt banks from their obligation to proceed with special caution, conducting rigorous creditworthiness assessments and monitoring the financial condition of borrowers.

For banks lacking adequate structures for the selection and monitoring of major borrowers, the Bank of Italy may set more restrictive limits.

#### 2. Legislative sources

The field is governed by:

 Directive 2006/48/EC of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions;

<sup>&</sup>lt;sup>1</sup> The regulations establish specific regulations on exposures to "connected persons". This field will undergo a major revision to bring the rules into line with the new provisions introduced in Article 53, paragraph 4, et. seq. of the 1993 Banking Law by Law 262/2005 and subsequent coordinating amendments.

- Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions;
- the following articles of the 1993 Banking Law:
  - Article 53, paragraph 1, sub-paragraph b), which give the Bank of Italy, in compliance with the resolutions of the Credit Committee, the power to issue general regulations concerning the limitation of risk in its various forms;

• Article 53, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide that certain transactions shall be subject to authorization by the Bank of Italy;

• Article 53, paragraph 3, which gives the Bank of Italy the power, inter alia to adopt specific measures regarding individual banks concerning the matters referred to in paragraph 1, where the situation so requires;

• Article 65, which specifies the persons subject to supervision on a consolidated basis;

• Article 67, paragraphs 1, sub-paragraph b), 2-*ter* and 3-*bis*, which, for the purpose of carrying out consolidated supervision, establishes that the Bank of Italy, in compliance with the resolutions of the Credit Committee, shall, by way of general or specific regulations, issue instructions to the parent undertaking or components of the banking group with regard to the limitation of risk in its various forms;

• Article 67, paragraph 2, which establishes that the regulations issued pursuant to paragraph 1 may provide for certain transactions to be subject to authorization by the Bank of Italy;

• Article 67, paragraph 3, which establishes that the regulations issued by the Bank of Italy for the carrying out of supervision on a consolidated basis may take account, also with reference to an individual bank, of the situation and activities of banking, financial and instrumental companies at least 20 per cent of whose capital is held by companies belonging to a banking group or by an individual bank, as well as the banking, financial and instrumental companies not included in a banking group but controlled by a natural or legal person who controls a banking group or an individual bank;

• Article 69, paragraphs 1 and 1-bis, which call for the Bank of Italy to establish, including by way of agreements with the supervisory authorities of other Member States, forms of cooperation and coordination and the allocation of specific tasks to each authority with regard to the application of supervision on a consolidated basis to groups operating in more than one country and identifies the persons over which, by effect of such agreements, the Bank of Italy may exercise supervision on a consolidated basis;

- Decree 242633 issued by the Minister of the Treasury on 22 June 1993;
- the Decree adopted as a matter of urgency by the Minister for the Economy and Finance as Chairman of the Credit Committee, of 27 December 2006.

#### 3. Definitions

For the purposes of these regulations:

— "*borrower*" shall mean an individual obligor or a group of connected obligors in respect of which the bank has assumed an exposure, including banks, international organizations and countries.

A "group of connected obligors" shall mean two or more natural or legal persons who together constitute a single exposure because:

a) one controls the other or others ("legal" connection);<sup>2</sup>

or

b) regardless of the existence of control as referred to in letter *a*) above, the persons can be considered as constituting a single exposure because they are interconnected to such an extent that if one of them experiences financial problems it is likely that the others will encounter repayment difficulties ("economic" connection).

In any case, the exercise of control or the holding of shares by central government shall not in itself constitute the existence of a group of connected obligors;<sup>3</sup>

- "exposure" shall mean the sum of the on-balance-sheet exposures and offbalance-sheet transactions with a borrower, as defined by the regulations governing credit and counterparty risks;<sup>4</sup>
- "large exposures" shall mean exposures whose value is equal to or greater than 10% of a bank's supervisory capital;
- "supervisory capital" shall mean the aggregate defined in Title I, Chapter 2, Sections II and III, excluding the following items:
  - Tier 2 capital: a6);
  - deductions: e) and f);
- "risk position" shall mean an exposure weighted in accordance with the rules specifically set out in these regulations in consideration of the nature of the borrower, any guarantees provided and the maturity of the transaction (see Section III).

The risk position shall be calculated on the basis of the balance-sheet value of each exposure, taking account of prudential filters;

 $<sup>^2</sup>$  Without prejudice to the responsibility of banks to identify groups of connected customers, the basic legal framework for non-bank companies shall be the provisions concerning the notions of control for the purposes of consolidation contained in Article 26 of Decree Law 127/91, while that for banks and financial companies shall be Article 59, paragraph 1(a) of the 1993 Banking Law.

<sup>&</sup>lt;sup>3</sup> The treatment of central government does not apply to regional governments or local authorities or to entities and companies owned by central government. These entities, considered individually, shall be subject to the general rules governing the identification of groups of connected customers.

<sup>&</sup>lt;sup>4</sup> See Title II, Chapters 1 and 2.

— "connected persons":

- *"significant shareholder"* shall mean the person who directly or indirectly holds at least 15 per cent of the share capital of, or otherwise controls, a parent undertaking or an individual bank that does not belong to a banking group.<sup>5</sup> Central government shall not be considered a significant shareholder;<sup>6</sup>
- *"investee companies"* shall mean companies in which the bank holds at least 20 per cent of the share capital or otherwise exercises control. This shall not apply to companies belonging to the banking group or those consolidated on a line-by-line or proportionate basis (see Section IV).

The calculation of exposures to connected persons shall also include loans made to groups of obligors tied to such persons by legal connections.

## 4. Scope of the regulations

These provisions shall apply, pursuant to Title I, Chapter 1, Part 2:

- on an individual basis, to banks authorized to operate in Italy, with the exception of the Italian branches of non-EC banks having their registered office in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy;
- on a consolidated basis:
  - to banking groups;
  - to reference undertakings, including the banking, financial and instrumental companies controlled by the EU financial holding company;
  - to the sub-consolidating members of the group.

Italian banks not belonging to a banking group that hold, jointly with other persons on the basis of specific agreements, at least 20 per cent of the voting rights or capital of banking, financial and instrumental companies shall apply these provisions on a consolidated basis.

## 5. Units responsible for administrative procedures

The following units shall be responsible for the administrative procedures referred to in this Chapter:

— establishment of individual and global limits more restrictive than the general limits (Section II, sub-section 5): Banking Supervision Department.

<sup>&</sup>lt;sup>5</sup> To calculate the percentage, reference shall be made to *Istruzioni di Vigilanza per le banche* (Circular 229), Title II, Chapter 1.

<sup>&</sup>lt;sup>6</sup> Regional governments and local authorities shall be treated as significant shareholders where applicable.

#### SECTION II

## RISK CONCENTRATION LIMITS

## 1. General limits

Banking groups and banks not belonging to banking groups shall limit:

- a) the total amount of large exposures to no more than eight times their supervisory capital (global limit);
- b) each risk position to no more than 25 per cent of supervisory capital (individual limit).

For exposures to connected persons, the individual limit shall be 20 per cent of supervisory capital.

Banks belonging to banking groups shall be subject to an individual limit of 40 per cent of their supervisory capital<sup>7</sup> provided that the group to which they belong complies with the above limits at the consolidated level.

## 2. Exposures in the supervisory trading book

Exposures in the supervisory trading book (see Title II, Chapter 4, Part 1, Section I, sub-section 3.1) of banks and banking groups may exceed the concentration limits specified in sub-section 1.

In this case, banks and banking groups shall maintain supervisory capital in respect of the portion of the exposure in the supervisory trading book that exceeds the above limits (see Title II, Chapter 4, Part 2, Section IV).

#### 3. Exposures not subject to limits

The risk concentration limits shall not apply to:

- transactions between companies belonging to the same banking group;
- loans, including credit in leasing transactions, approved but not yet executed.

This exemption shall also include transactions with a European parent undertaking and companies controlled by the latter, provided that the companies are subject to the same supervision at the consolidated level as the parent undertaking and the lending bank.

<sup>&</sup>lt;sup>7</sup> The exception is therefore not applicable to Italian banks that do not belong to a banking group and are reference undertakings.

Moreover, the general limits shall not apply to the transactions between an Italian bank and its parent non-EC bank whose registered office is located in the Group of Ten countries or in the countries included in the list published and periodically updated by the Bank of Italy, or the companies controlled by said parent bank.

#### 4. Italian branches of non-EU banks

Italian branches of non-EU banks shall be subject solely to an individual limit equal to their supervisory capital.<sup>8</sup>

#### 5. Bank of Italy measures

The Bank of Italy may establish more restrictive individual and global limits for banks and banking groups whose technical and organizational situation presents an especially high level of risk. Of special importance in this regard is the adequacy of the bank's organizational structure for selecting customers and for monitoring the financial situation of major customers and the performance of loans.

The Bank of Italy may also establish more restrictive limits for persons that, as a result of their holdings in banks belonging to a banking group, influence the management of the group.

Banks and banking groups shall comply with risk concentration limits on an ongoing basis. Where, as a result of circumstances beyond their control (such as a capital reduction or a merger between borrowers), such limits are exceeded, banks and banking groups shall take prompt action to reduce their risk positions below the limits. Banks and banking groups shall notify the Bank of Italy of the actions that they intend to take to restore compliance.

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<sup>&</sup>lt;sup>8</sup> Consequently, the individual limit shall also apply to all transactions that the Italian branches of non-EU banks have with their parent undertaking, its branches and its subsidiaries.

#### SECTION III

## CRITERIA FOR THE QUANTIFICATION OF RISK POSITIONS

# 1. Weighting system

Exposures shall normally be recognized at their nominal value (100% risk weight). To allow for the lower risk associated with certain borrower counterparties and the presence of credit protection, the risk weights set out in Annex A shall be applied. Where credit protection is available, banks and banking groups may treat the exposure as an exposure to the guarantor, provided that:

- a) the credit protection is provided in one of the forms set out in Title II, Chapter 2, Part 1, Section III;
- b) the general and specific requirements of the above regulations are met.

Where this option is exercised and the credit protection is unfunded:

- a) where the guarantee is denominated in a different currency from that of the exposure, the amount of the latter shall be calculated in accordance with the rules governing the treatment of currency mismatches for unfunded credit protection;<sup>9</sup>
- b) any mismatch in the maturities of the exposure and the credit protection shall be treated in accordance with the rules governing the treatment of maturity mismatches.<sup>10</sup>

In the case of financial collateral, the residual maturity of the guarantee may not be less than the residual maturity of the exposure.

<sup>&</sup>lt;sup>9</sup> See Title II, Chapter 2, Part 1, Annex D.

<sup>&</sup>lt;sup>10</sup> See Title II, Chapter 2, Part 1, Section III, Unit 2, sub-section 8.

#### SECTION IV

#### APPLICATION OF THE REGULATIONS ON A CONSOLIDATED BASIS

In applying the rules for risk concentration on a consolidated basis, reference shall be made to the total exposures of the companies belonging to the banking group and of companies for which the Bank of Italy has requested consolidation on a line-by-line or proportionate basis.<sup>11</sup>

For the purpose of calculating exposures to companies held jointly and consolidated on a proportionate basis, only the portion of the exposure that is not eliminated in consolidation shall be considered.

In all cases, the consolidation rules prescribed by Italian law shall apply.

<sup>&</sup>lt;sup>11</sup> In the case of proportionate consolidation, the exposure of the investee companies to third parties shall obviously be measured in proportion to the size of the holding.

#### SECTION V

#### LARGE EXPOSURES

#### 1. Procedures for assuming large exposures

In assuming the risk associated with the various forms of lending to customers, banks shall comply with rules of conduct that enable them to understand the risk, assess its quality and monitor it over time. It is a key responsibility of senior management to ensure that the rules are carefully framed, clearly communicated to all levels of the organization and rigorously implemented.

As the insolvency of a large borrower can have a major impact on a bank's capital, compliance with the quantitative limits set out in these regulations shall be supplemented by instruments designed to ensure credit quality.

In an economic context characterized by an intricate network of interdependent relationships among economic actors, the scope of banks' risk assessment activities has expanded, increasing the complexity of the process. Nevertheless, risk assessment must be guided by an understanding of the links between different economic actors and the repercussions that they can have on risk.

Specific difficulties are posed by groups, whether they involve the bank or the borrower.

As regards banking groups, the risks faced by the group as a whole must be understood and controlled. To this end, the group shall establish sufficiently comprehensive organizational structures and information systems to cover all the business lines of the various units that make up the group.

The parent undertaking shall design the system for delegating powers in a manner that ensures that it is fully aware of the group's large exposures. The responsibilities of the governing bodies of the parent undertaking shall include periodically verifying developments in large exposures and in lending relationships with connected persons within the scope of their respective duties.

In addition, the internal communication system must be sufficiently flexible to exploit potential information synergies within the group as individual operating units acquire knowledge about their customers. If shared effectively, such information can significantly enhance the group's overall understanding of its customers, their capacity to repay, the economic quality of the projects undertaken, and other factors, including economic conditions, that could influence developments in risks.

As regards borrowers, it is essential to identify ties between customers: in the case of enterprises organized as a group, the evaluation of creditworthiness shall also refer to the group as a whole. Banks shall therefore ensure that they have an internal function responsible for monitoring economic groups.

In addition, during the examination of a credit application prior to the assumption of a risk position, banks shall obtain the applicant's consolidated financial statements and any other information needed to determine the exact composition, financial situation and exposure of the group to which the customer belongs. The continuation of the relationship shall be contingent on the periodic updating of this information.

Banks shall carefully evaluate information provided by customers using all available means (company records, Central Credit Register, Company Accounts Data Service, etc.).

The centralization of finance operations within groups can make it more difficult for banks to identify the entity that is actually using the loan. In such cases, the dialogue that normally forms part of a customer relationship shall be especially comprehesive in order for the bank to monitor and assess the use of its loans.

Particular caution shall be exercised in lending to groups that include organizations whose economic function is not clear (such as off-shore companies, for example).

The rigour and professionalism with which banks acquire and monitor large exposures shall be a key element of assessments conducted by the Bank of Italy in the performance of its supervisory activities.

#### 2. Reporting to the Bank of Italy

Banks shall report their large exposures as at the end of March, June, September and December to the Bank of Italy on a quarterly basis.

The individual reports made by single banks, including those belonging to banking groups, shall refer exclusively to their own exposures, while the parent undertaking of the banking group shall report the overall exposures of the group considered as a whole.

The reports shall be submitted by individual banks on a magnetic storage device.

The reports relating to 31 December and 30 June shall be submitted to the Bank of Italy by the 25th day of the third month after the reference date (25 March and 25 September respectively), while those relating to 31 March and 30 September shall be submitted by the 25th day of the month following the reference date (25 April and 25 October respectively).

The information on large exposures on a consolidated basis shall be submitted by the parent undertaking in a specific report. The consolidated reports relating to 31 December and 30 June shall be submitted to the Bank of Italy by the 25th day of the fourth month after the reference date (25 April and 25 October respectively), while those relating to 31 March and 30 September shall be submitted by the 25th day of the second month following the reference date (25 May and 25 November respectively).

#### <u> 10 </u>

For the determination of large exposures on a consolidated basis concerning June and September, reference shall be made to consolidated supervisory capital at the end of June; for the reports concerning December and the following March, reference shall be made to consolidated supervisory capital at the end of December.

For the purposes of supervising risk concentration, the Bank of Italy may also require banks and banking groups to supply information about large exposures amounting to less than 10% of supervisory capital.

For any matters not specifically addressed in these instructions on the compilation of the reports, reference shall be made to the provisions of *Istruzioni* per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali.

#### ANNEX A

#### **RISK WEIGHTS: EXPOSURE CLASSES**

#### A) *Exposures with a risk weight of 0*:

- A.1) on- and off-balance-sheet exposures to central governments, central banks, international organizations, multilateral development banks, public sector entities and regional governments and local authorities that receive a 0% risk weight pursuant to the provisions of Title II, Chapter 1, Part 1, Section III, sub-sections 1, 3.2, 4, 5 and 6, as well as those secured by unfunded credit protection provided by such entities;
- A.2) on- and off-balance-sheet exposures secured by funded credit protection provided by central governments, central banks, international organizations, multilateral development banks, public sector entities and regional governments and local authorities where the credit protection is weighted at 0% pursuant to the provisions of Title II, Chapter 1, Part 1, Section III, sub-sections 1, 3.2, 4, 5 and 6;
- A.3) on- and off-balance-sheet exposures to central governments and central banks other than those referred to in point A1 above that are denominated and funded in the domestic currency of the borrower;
- A.4) on- and off-balance-sheet exposures to central governments and central banks other than those referred to in point A1 above secured by funded or unfunded credit protection that are denominated and funded in the domestic currency of the guarantor and the borrower;
- A.5) on- and off-balance-sheet exposures secured by pledges on cash deposits held by the bank or by another entity in the same banking group;
- A.6) on- and off-balance-sheet exposures secured by pledges on securities issued by the bank or by another entity in the same banking group and deposited with one of these entities;
- A.7) off-balance-sheet exposures that under the rules on credit risk<sup>12</sup> are classified as "low-risk" guarantees and commitments (for example, the undrawn balance on revocable credit facilities), provided that drawings on the credit facilities do not cause the individual limit established in these instructions to be exceeded. This may be accomplished by means of a clause in the loan contract to the effect that drawings on the credit facility may not exceed such limit.
- A.8) on- and off-balance-sheet exposures with a maturity of one year or less in respect of, or secured by funded or unfunded credit protection from, banks, investment firms or electronic money institutions;
- A.9) bills of trade with a maturity of one year or less bearing the signatures of other banks, investment firms or electronic money institutions;
- A.10) holdings, innovative capital instruments, hybrid capital instruments and subordinated loans in respect of other banks, investment firms,

<sup>&</sup>lt;sup>12</sup> See Title II, Chapter 1, Part 1, Annex B.

electronic money institutions, financial companies and insurance undertakings, where they have been deducted from the supervisory capital of the bank or banking group.

- B) *Exposures to be weighted at 10% of their nominal value:* 
  - B.1) on-balance-sheet exposures in the form of covered bonds weighted at 10% pursuant to the provisions of Title II, Chapter 1, Part 1, Section V.
- C) *Exposures to be weighted at 20% of their nominal value:* 
  - C.1) on- and off-balance-sheet exposures with a maturity of between one and three years in respect of, or secured by funded or unfunded credit protection from banks, investment firms or electronic money institutions;
  - C.2) on- and off-balance-sheet exposures in respect of regional governments and local authorities of Member States weighted at 20% pursuant to the provisions of Title II, Chapter 1, Part 1, Section III, sub-section 4, as well as exposures secured by funded or unfunded credit protection provided by such entities;
  - C.3) on-balance-sheet exposures in the form of covered bonds weighted at 20% pursuant to the provisions of Title II, Chapter 1, Part 1, Section V.
- D) *Exposures to be weighted at 35% of their nominal value:* 
  - D.1) on-balance-sheet exposures in respect of mortgage loans for the purchase of residential real estate in accordance with the provisions of Title II, Chapter 1, Part 1, Section IV, sub-section 2;
  - D.2) off-balance-sheet exposures in respect of irrevocable loans for the purchase of residential real estate in accordance with the provisions of Title II, Chapter 1, Part 1, Section IV, sub-section 2;
  - D.3) on- and off-balance-sheet exposures in respect of lease agreements involving residential real estate in accordance with the provisions of Title II, Chapter 1, Part 1, Section IV, sub-section 3;
- E) *Exposures to be weighted at 50% of their nominal value:* 
  - E.1) on-balance-sheet exposures in respect of mortgage loans for the purchase of commercial real estate in accordance with the provisions of Title II, Chapter 1, Part 1, Section IV, sub-section 4;
  - E.2) on- and off-balance-sheet exposures in respect of irrevocable loans for the purchase of commercial real estate in accordance with the provisions of Title II, Chapter 1, Part 1, Section IV, sub-section 4;
  - E.3) on- and off-balance-sheet operations in respect of lease agreements involving commercial real estate in accordance with the provisions of Title II, Chapter 1, Part 1, Section IV, sub-section 5;

- E.4) on- and off-balance-sheet exposures in respect of, or guaranteed by securities (other than innovative capital instruments, subordinated loans and hybrid capital instruments) issued by, banks, investment firms or electronic money institutes with a residual maturity of more than three years, provided that the securities are traded on regulated markets (see Title II, Chapter 4) and are subject to daily quotation or their issue was authorized by the competent authorities;
- E.5) off-balance-sheet exposures that under the rules on credit risk<sup>13</sup> are classified as "medium/low-risk" guarantees and commitments;
- E.6) on-balance-sheet exposures in the form of covered bonds weighted at 50% pursuant to the provisions of Title II, Chapter 1, Part 1, Section V.

\* \* \*

As regards funded credit protection, the above risk weights shall be applied to an amount that does not exceed the market value of the collateral at the moment the contract is executed and reduced by the following supervisory haircuts:

- 10% for government securities and certificates of deposit;
- 50% for securities issued by multilateral development banks;
- 20% in other cases.

No supervisory haircuts shall be applied to the cases referred to in points A.5, A.6 and C.1 where the collateral consists of a pledge on cash deposits.

\* \* \*

In order to identify the items in the automated prudential returns that correspond to the exposures specified above, reference shall be made to the provisions of *Istruzioni per la compilazione delle segnalazioni sul patrimonio di vigilanza e sui coefficienti prudenziali*.

<sup>&</sup>lt;sup>13</sup> See Title II, Chapter 1, Part One, Annex B.