Standard 4.4c

Management of market risk

Regulations and guidelines

RAHOITUSTARKASTUS
FINANSINSPEKTIONEN
FINANCIAL SUPERVISION

How to read a standard

A standard is a collection of subject-specific regulations and guidelines which both obliges and guides supervised entities and other financial market participants, indicates the quality level expected by the supervisor, sets out the supervisor’s key principles of good practice and provides justification for regulation.

Each paragraph in a standard is furnished with a particular margin note:

- **Norm:** A reference to a current legal or regulatory provision.
- **Binding:** A FIN-FSA regulation that is legally binding on supervised entities or other financial market participants, issued by the FIN-FSA by virtue of its regulatory power based in Finnish law.
- **Recommendation:** FIN-FSA recommendatory guidance to supervised entities or other financial market participants.
- **Application guideline/example:** A practical application guideline or example related to a norm, binding regulation or recommendation. A reference to a FIN-FSA standard or a particular point in the standard. See the attached example.
- **Justifications:** An explanation of the background, purpose and objectives of a regulation or standard.

Sample standard only

FIN-FSA standards may be accessed from www.fin-fsa.fi/eng

TABLE OF CONTENTS

1 APPLICATION

Issued on 16 December 2008
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(1) This standard comprises the core principles for market risk management and control as well as provisions on the establishment and maintenance of these functions. It concerns the following supervised entities referred to in section 5 of the Act on the Financial Supervisory Authority (587/2003):

- credit institutions
- investment firms
- management companies
- the amalgamation and the central body of cooperative banks as referred to in the Act on Cooperative Banks and Other Cooperative Credit Institutions (1504/2001)
- financial holding companies of financial and insurance conglomerates primarily engaged in financial activities.

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(2) However, the Financial Supervisory Authority (FIN-FSA) recommends that all entities supervised by FIN-FSA observe the core principles for market risk management and control laid down in this standard as well as the provisions on the establishment and maintenance of these functions.

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(3) This standard shall be applied to all market risks associated with a supervised entity's activities regardless of whether they can be attributed to trading book or non-trading book items or the level of trading activity.

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(4) In establishing and maintaining its market risk management, a supervised entity must take account of the nature, scale and complexity of its activities.

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(5) In this standard, the general expression supervised entity is used of all entities within the scope of the standard.

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(6) In setting up their market risk management, supervised entities must also comply with standard 4.1 (*Internal control arrangements*), Standard 4.4b (*Management of operational risk*) and Standard 4.2 (*Internal capital adequacy assessment process ICAAP*) included in the section *Capital adequacy and risk management* of FIN-FSA's set of regulations, as well as Standard 1.3 (Internal governance and organisation of activities) included in the section *Corporate governance and business activity*.

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2 OBJECTIVES

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(1) This standard deals with the core principles for market risk management and control and the establishment and maintenance of these functions. Supervised entities may be susceptible to considerable market risk due to changes in market prices, volatility and liquidity and rapidly increasing complexity of products.

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(2) Establishing and maintaining market risk management and control as part of internal control are key elements in business management. Market risk management and control are of crucial importance in ensuring that supervised entities hold adequate capital against the risks involved in their activities.

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(3) The objectives of FIN-FSA's rules and regulations concerning market risk management are

- to ensure that supervised entities and the entities belonging to the same consolidation group have adequate functions in place, commensurate with the nature and size of their activities, to identify, measure, mitigate, monitor and control market risk as part of their overall business risk management and control
- to ensure that supervised entities and the entities belonging to the same consolidation group do not expose themselves to such market risks that may jeopardise their profitability or capital adequacy
- to ensure that all the management information is reliable and correct
- to increase awareness in supervised entities of the matters that FIN-FSA focuses on in its supervision and the demands it places on the entities.

3 INTERNATIONAL FRAMEWORK

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(1) This standard is based on the recommendations issued by the Basel Committee on Banking Supervision and the Committee of European Banking Supervisors (CEBS). The recommendations entitled *Core Principles for Effective Banking Supervision* and *Core Principles Methodology,* issued in October 2006, set forth core principles for market risk management and control and essential criteria for the policies and processes involved:[1] [2]

- A supervised entity's consolidation group and the supervised entity itself must have a comprehensive and properly documented market-risk strategy in place, commensurate with the nature and size of the supervised entity's activities, to identify, measure, monitor and mitigate market risks.
- The risk management strategy and the policies and processes must be regularly reviewed and adjusted to reflect changes in the supervised entity's risk profile and developments in the external operating environment.
- A supervised entity must establish market risk limits and controls over risk taking and set up appropriate reporting mechanisms for monitoring exposures.

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(2) In this standard, particularly in the chapter dealing with management of interest rate risk, account has also been taken of the *Principles for the Management and Supervision of Interest Rate Risk, issued by the Basel Committee on Banking Supervision in July 2004*.[3]

[1] *Core Principles for Effective Banking Supervision. Basel Committee on Banking Supervision. Basel, October 2006.*
[2] *Core Principles Methodology. Basel Committee on Banking Supervision. Basel, October 2006.*
[3] *Principles for the Management and Supervision of Interest Rate Risk. Basel Committee on Banking Supervision. Basel, July 2004.*

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(3) In addition, account has been taken of the principles of market risk management contained in the *Risk Management Guidelines for Derivatives*,[4] issued by the Basel Committee on Banking Supervision in July 1994.

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(4) In the section on stress testing in this standard, account has been taken of the *Technical aspects of stress testing under the Supervisory Review Process* issued by the Committee of European Banking Supervisors (CEBS).

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(5) In Chapter 7 of this standard dealing with risk management criteria for the use of the fair value option, account has been taken of the Basel Committee's recommendation of June 2006 entitled *Supervisory guidance on the use of the fair value option for financial instruments by banks*.[5] This recommendation sets forth risk management criteria for the use of the fair value option and the evaluation of instruments.

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[4] *Risk Management Guidelines for Derivatives. Basel Committee on Banking Supervision. Basel, July 1994.*
[5] *Supervisory guidance on the use of the fair value option for financial instruments by banks. Basel, June 2006.*

4 LEGAL BASIS

Issued on 16 December 2008
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(1) The national regulatory framework for risk management is based on the following EU directives:

- Directive 2006/48/EC of the European Parliament and of the Council relating to the taking up and pursuit of the business of credit institutions (32006L0048, OJ L 177 of 30 June 2006, pp. 1–200)
- Directive 2006/49/EC of the European Parliament and of the Council on the capital adequacy of investment firms and credit institutions (32006L0049, OJ L 177of 30 June 2006, pp. 201–255.

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(2) Article 22 and Annex V of directive 2006/48/EC contain detailed risk management provisions on the establishment of internal governance, internal control and risk management, being part of the preconditions for taking up business as a credit institution. Annex V of directive 2006/48/EC contains clarifying criteria at a principal level concerning governance, monitoring and control systems as well as technical criteria concerning the classification and treatment of risks.

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(3) The requirements of governance arrangements set out in the aforesaid directives are also applicable to investment firms on the basis of Article 34 of the Directive on the capital adequacy of investment firms and credit institutions. According to the aforesaid article, every investment firm shall meet the requirements set out in article 22 of Directive 2006/48/EG.

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(4) The following national legal acts contain provisions on the management of market risk:

- The Credit Institutions Act (121/2007): Section 49, subsection 1, contains general provisions on risk management in a credit institution. The corresponding provisions applicable to consolidation groups are contained in section 74 of the aforesaid legal act.

- The Credit Institutions Act (121/2007: Section 50, subsection 1, contains provisions on the monitoring and mitigation of risk concentrations.

- The Credit Institutions Act (121/2007): Section 54, subsection 2, requires that a credit institution has policies and processes for capital adequacy and risk management in place. A corresponding provision applicable to consolidation groups is contained in section 78, subsection 2, of the aforesaid legal act.

- The Investment Firms Act (922/2007): Section 46, subsection 1 and 2, lay down that the aforesaid sections of the Credit Institutions Act also apply to investment firms.

- The Mutual Funds Act (48/1999): Section 30a, Subsection 1 requires that a management company's risk management and internal control functions are commensurate with the nature and scale of the company's activities.

- The Mutual Funds Act (48/1999): Section 6, subsection 5, lays down that section 46, subsection 1 of the Investment Firms Act (922/2007), which refers to provisions in the Credit Institutions Acts, is also applicable to management companies that provide asset management services.

- The Act on Cooperative Banks and Other Cooperative Credit Institutions (1504/2001): Section 5 contains general provisions on risk management arrangements.

- The Act on the Supervision of Financial and Insurance Conglomerates Institutions Act (699/2004): Section 16, subsections 1 and 2, contain general provisions on risk management arrangements.

- The Mortgage Bank Act (1240/1999): Section 9a contains provisions on the management of balance sheet risk.

- The Credit Institutions Act (121/2007): Section 151, subsection 4, and section 146, subsection 6, contain provisions on the use of the fair value option.

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(5) The right of FIN-FSA to issue binding rules on matters dealt with in this standard is based on the following legal provisions:

- The Credit Institutions Act (121/2007): section 93, subsection 1.
- The Investment Firms Act (922/2007): section 46, subsections 1 and 2.
- The Mutual Funds Act (48/1999): section 30a, subsection 3.
- The Act on Cooperative Banks and Other Cooperative Credit Institutions (1504/2001): section 8, subsection 5.
- The Act on the Supervision of Financial and Insurance Conglomerates (699/2004): section 16, subsection 3.
- The Mortgage Banks Act (1240/1999): section 9a, subsection 5.

5 CORE PRINCIPLES FOR MARKET RISK MANAGEMENT

5.1 Definitions of market risk and market risk management

Justifications
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Valid from 1 April 2009

(1) Market risk is defined as the possibility of financial loss as a result of fluctuations in the market value of assets. Market risk comprises interest rate risk, exchange rate risk, and price fluctuation risk on equities and commodities. Market risk also refers to potential loss as a result of influence from other risk factors, such as volatility and correlation. All the aforesaid risks, irrespective of originating from the trading book or banking book, are regarded as market risks. Interest rate risk can be divided into interest rate risk on the trading book and interest rate risk on the banking book.

Norm
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(2) A supervised entity and its consolidation group shall have internal control and adequate risk management functions in place that are commensurate with the nature and size of their activities. [6]

5.2 Market risk strategy

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(3) The Board of Directors shall adopt a market risk strategy for the supervised entity. The market risk strategy must be consistent with the supervised entity's general business plan and it must cover all the market

[6] See section 49, subsection 1 of the Credit Institutions Act (121/2007), section 46, sections 1 and 2 of the Investment Firms Act (922/2007), section 30a, subsection 1 of the Mutual Funds Act (48/1999), section 5 of the Act on Cooperative Banks and Other Cooperative Credit Institutions (1504/2001) and section 16, subsections 1 and 2 of the Act on Financial and Insurance Conglomerates (699/2004).

risks associated with its business operations, including derivative contracts. The market risk strategy must be regularly reviewed and adjusted to reflect changes in the supervised entity's business plan and significant developments in the external operational environment.

Justifications
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Valid from 1 April 2009

(4) The market risk strategy represents the supervised entity's long-term risk-taking level, reflecting the Board of Directors' decision on their appetite for market risk under the current company business plan. The market risk strategy must contain clear guidelines for the different lines of business subject to market risk, including their levels of acceptable market risk.

5.3 Market risk management and control arrangements and division of responsibility

5.3.1 Duties of the Board of Directors

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(5) The Board of Directors shall adopt a market risk strategy and a policy for market risk management and control.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(6) The Board of Directors must ensure that the CEO and other senior management implement and adhere to the adopted market risk strategy and policy for market risk management and control. Risk management and control shall be subject to regular oversight and review by the Board of Directors.

Binding
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(7) The Board of Directors shall ensure that at all times they have access to timely information on the supervised entity's risk-taking position. They shall regularly analyse this information in such detail as to be able to assess the amount of risk taken by the entity and review the market risk management and control measures taken by the CEO and other senior management.

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Valid from 1 April 2009

(8) The Board of Directors shall at least once a year establish the level of desirable risk-taking and ensure that appropriate market risk limits have been set.

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Issued on 16 December 2008
Valid from 1 April 2009

(9) The Board of Directors shall ensure that the supervised entity's remuneration policy is not in conflict with its market risk strategy. The remuneration schemes for staff responsible for trading in products containing market risk and in derivatives must not be set up in such a way that they provide an incentive to excessive market risk taking.

Binding
Issued on 16 December 2008
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(10) The Board of Directors shall adopt the strategy and policy for derivatives trading.

5.3.2 Duties of the CEO and other senior management

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(11) The CEO and other senior management shall be responsible for implementing the market risk strategy adopted by the Board of Directors and establishing and maintaining market risk management as part of internal control. The CEO and other senior management shall be responsible for developing, adopting and updating procedures for the identification, measurement, mitigation, monitoring and controlling of market risk.

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Valid from 1 April 2009

(12) The CEO and other senior management shall adopt principles and methodologies for risk measurement and valuation, and these must be properly documented.

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Valid from 1 April 2009

(13) The CEO and other senior management shall be responsible for maintaining an appropriate framework of market risk limits and designating clear risk-taking powers.

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Valid from 1 April 2009

(14) The CEO and other senior management shall be responsible for ensuring that the staff clearly understand and adhere to the entity’s market risk strategy and key principles for market risk management and control.

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(15) The CEO and other senior management shall set up an organisation for market risk management and control and designate the duties of the different units, organs and staff within this organisation. In designating the duties, attention must be paid to proper segregation of tasks so as to avoid potentially harmful combinations of duties and non-compliance with guidelines.

5.4 Identification and measurement of market risk

5.4.1 Identification of market risk and new products

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(16) It is imperative to identify and measure all sources of market risk associated with business operations. Supervised entities shall have policies and procedures in place to identify all market risks in their operations, by types of risks and products.

Application Guideline
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Valid from 1 April 2009

(17) Section 5.4 of Standard 4.4b (*Management of operational risk)* contains guidelines on the procedure for approval of new products. Supervised entities shall have procedures in place for the approval of new products. All risks related to a new product, including market risk, shall be assessed as part of

the approval procedure. The approval procedure shall include an account of the risks attendant on a new activity in relation to the supervised entity's entire risk-bearing capacity and an account of the resources required.

Justifications
Issued on 16 December 2008
Valid from 1 April 2009

(18) The objective of the approval procedure for new products is to identify and define the risks related to a new product and to determine the entity's readiness to measure these risks and establish limits and a reporting mechanism for them before trading begins.

Binding
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Valid from 1 April 2009

(19) All permissible business products must be described in writing. Supervised entities must regularly check that their product descriptions and the products they actually trade in are compatible with one another. The drafting of product descriptions is an integral part of the approval procedure for new products.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(20) Supervised entities are advised to set very strict market risk limits on new products initially, that can be later relaxed when more experience has been gained. It is also recommended that FIN-FSA be notified in advance on a supervised entity's decision to take up a new significant activity together with the analysis underlying the decision.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(21) Supervised entities shall adopt principles for derivatives trading and confirm them in writing. The principles must include details on e.g. the purpose of the use of derivatives (hedging, active position-taking or brokerage), products and markets, overall risk mitigation and possible return targets.

5.4.2 Measurement of market risk and measurement techniques

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(22) Supervised entities must be able to measure all material market risks related to their on- and off-balance sheet items. The Board of Directors, CEO and other senior management must have quick access to accurate information on the amount of market risk incurred on each of the entity's activities so as to be able to determine whether the supervised entity is operating within the limits of the market risk strategy adopted.

Justifications
Issued on 16 December 2008
Valid from 1 April 2009

(23) It is important that all information on market risk is reliable, sufficiently detailed and up-to-date. The data generated in the management information systems is used by Board of Directors, CEO and other senior management for the fulfilment of their oversight duties, including, to a vital extent, internal capital adequacy assessment in respect of market risks.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(24) Supervised entities must be able to measure and report the market risks on their trading books at least daily. As regards the reporting frequency of other market risks, account must be taken of the scope, scale and nature of

the activities concerned.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(25) A supervised entity must also have a clear view of its intraday risk positions for products subject to active trading.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(26) Supervised entities that have large trading books are advised to measure market risks on the trading book daily by means of statistical estimation techniques. This means that potential losses on open positions should be calculated using likely changes in market prices over certain periods.

Binding
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Valid from 1 April 2009

(27) Supervised entities must have procedures in place for developing, testing, adopting, implementing and maintaining techniques for measuring market risk and relevant valuation models.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(28) A supervised entity must have an independent risk control function outside the risk-taking business in place so as to ensure, as part of the regular quality control process, that the market risk measurement techniques used for risk management and the relevant valuation models are functional and reliable before implementation and for as long as they are in use. Test results shall be reported to the CEO and other senior management.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(29) The statistical estimation models used by a supervised entity shall be appraised by back testing.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(30) All techniques used for measuring market risks and the relevant valuation models, including assumptions and parameters and changes therein, need to be well-documented.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(31) FIN-FSA advises supervised entities to monitor volume developments of different derivatives (numbers of contracts, euro and foreign currency amounts of underlying assets).

Justifications
Issued on 16 December 2008
Valid from 1 April 2009

(32) Large and rapid volume increases are worth investigating in order to find out whether a realisation of credit, market or liquidation risk may be imminent as a result of the increase.

5.4.3 Stress testing

Binding
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Valid from 1 April 2009

(33) A supervised entity must complement calculations of its market risk position by stress testing in order to simulate the effects that irregular, but possible market price changes, and failure of risk measurement assumptions may have on the entity’s risk profile and financial standing.

Binding
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(34) In setting up stress testing, account must be taken of the nature of the entity's risk-taking. Stress tests must be implemented in such a way that they provide information on areas where the supervised entity’s strategies or market risk positions are the most vulnerable. Stress testing must focus on such instruments and markets in which a supervised entity has large risk concentrations, since realisation or hedging of such positions may prove difficult in disrupted markets. In addition to the entity’s overall position, all products that are illiquid or have unspecified maturities or include optionalities must undergo stress testing.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(35) In stress-testing, assumptions shall be made for situations where market prices are unexpectedly volatile, market liquidity is poor and a major market player has become insolvent. The interdependencies of different markets must also be taken into account in stress-testing.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(36) In setting up stress tests for different market risks or instruments, the following matters shall be taken into account:

- The supervised entity’s trading and investment strategies and the nature of its positions, e.g. concentrations on certain products or markets
- The time it will take to hedge or manage a risk position in difficult market conditions.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(37) The Board of Directors, CEO and other senior management shall on a regular basis evaluate stress testing plans and results. The outcome of stress tests shall always be taken into account in drawing up or adjusting business plans, market risk strategies and market risk limits. The principles for setting up stress tests and making calculations on them need to be established in writing.

5.4.4 Valuation practices in market risk management

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(38) Market risk positions must be revalued on a regular basis using reliable information on market prices. If market prices are not available, commonly-used or internal models shall be used.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(39) Trading-book items must be fair valued daily.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(40) It is the responsibility of the CEO and other senior management to ensure that valuation principles and processes are defined and documented and that the processes and valuations are subject to control. These written instructions must include a principle on how the outcome of the valuation control process is reported to the CEO and other senior management.

Application Example
Issued on 16 December 2008
Valid from 1 April 2009

(41) Uncertainty of vluation may for instance be due to illiquidity of positions, models used in valuation and possible closing costs of positions.

Binding
Issued on 16 December 2008
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(42) The CEO and other senior management bear the responsibility for ensuring that the supervised entity has principles and processes in place for making fair value adjustments to positions where valuation includes uncertainty due to large exposures/concentrations or illiquid positions. The written instructions shall include principles on how the fair value adjustments used are reported to the CEO and other senior management.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(43) An independent risk control function that is responsible for appropriate valuation of positions shall be in place. The risk control staff must have adequate skills and experience to carry out valuation. This independent risk control function shall also validate and monitor fair value adjustments.

5.4.5 Contracts made at prices deviating from current market prices

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(44) As a rule, financial assets shall be traded at market price.

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(45) In the following cases, trading at prices deviating from market prices can be justified:

- A transaction price that differs from the market price may be deemed acceptable due to the nature of the transaction.
- The supervised entity has internal guidelines in place for the conclusion of contracts at prices deviating from market prices.
- The supervised entity's internal credit granting process permits the extension of forward contracts at historical prices with specific counterparties.
- The supervised entity has obtained approval also from the management of the counterparty for the conclusion of contracts at prices deviating from current market prices.
- Documentation, including counterparty confirmation, clearly show the difference between contract price and market price and its impact on profit and loss.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(46) Forward contracts that are extended at historical prices shall be treated as separate products that are subject to new product approval procedures and separate product descriptions.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(47) Forward contracts that are extended at historical prices shall be entered in the trading book and recognised at fair value as profit or loss.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(48) Forward contracts between supervised entities shall always be extended at current market prices and be treated as new contracts. The spot part of a currency swap shall always be executed at the current spot rate.

5.5 Market risk mitigation and monitoring

5.5.1 Market risk limits

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(49) A supervised entity must have a limits framework that covers the mitigation and monitoring of all market risks associated with the business. All limits must be consistent with the supervised entity's business plan and market risk strategy and commensurate with its risk-bearing capacity. The level of risk permitted under the limits set on market risk taking must be taken into account in the entity's capital adequacy planning. The limits set must be reviewed on a regular basis and be reviewed whenever the business plan is updated or otherwise required.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(50) The risk-control function segregated from the entity's risk-taking activities shall monitor compliance with set limits and report excess exposures. A supervised entity must have guidelines in place for dealing with exposures in excess of set limits.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(51) Supervised entities must be able to allocate appropriate limits for different units and lines of business, specific portfolios, products and even individual employees (dealers) according to the business structure.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(52) A supervised entity must determine the acceptable level of market risk concentrations, e.g. in respect of individual currencies or instruments.

5.5.2 Reporting

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(53) Regular reports on market risk positions shall be submitted to the entity's CEO, other senior management and the relevant business line managers. Reporting is an obligatory part of a supervised entity's internal governance constituting a basis for the entity's decisions on changes in risk positions and risk limits.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(54) FIN-FSA recommends that the reports submitted to the Board of Directors, CEO and other senior management provide at least the following

details:

- The supervised entity's risk position in brief
- The utilisation of risk limits during the period under review
- The operating performance
- Any non-compliance with risk management principles
- The major assumptions underlying adopted measurement techniques
- The outcome of stress testing
- The outcome of back testing.

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6 MANAGEMENT OF INTEREST RATE RISK

6.1 Measurement of interest rate risk

Binding
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(1) Supervised entities shall apply measurement techniques that are commensurate with the nature and scale of their activities and, as far as possible, take into account the different material sources of interest rate risk associated with interest rate risk positions as well as likely changes in the different types of interest rates.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(2) Supervised entities must be able to measure the entire interest rate risk on all their business activities, including interest rate risk on the banking book and interest rate risk on the trading book. Taking account of the nature and scale of the entity's activities, the calculation techniques adopted must be able to measure the effects of interest rate changes on both net interest income and economic value of interest-rate sensitive items. Supervised entities may adopt different types of measurement techniques for different lines of business.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(3) The techniques adopted must enable the measurement of all material interest rate risks originating from different sources, such as re-pricing risk, yield curve risk, basis risk and optionality risk, in a reliable and sufficiently accurate way. A supervised entity must pay close attention to the treatment of items that involve major concentrations or high amounts of interest rate risk. In addition, close attention must be paid to interest rate options, complicated products involving a high degree of optionality as well as positions containing items denominated in different currencies.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(4) Whenever deposits payable on demand constitute an essential part of a supervised entity's source of funding, the entity must be able to calculate the effects of given deposit assumptions on the entity's imputed interest rate risk position.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(5) Supervised entities are advised to develop models for the behaviour of deposit volumes and deposit rates under different interest rate scenarios.

6.2 Interest rate risk management policy

Binding
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(6) A supervised entity must have a substantiated and properly documented policy for interest rate risk management in place.

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(7) Depending on the nature and scale of the entity's operations, the policy should include the following guidelines as applicable:

- Methods used for determining economic value
- Principles on the use of dynamic and static calculation techniques
- Methods used for dealing with positions including many different currencies
- Methods used for dealing with basis risk stemming from the use of different reference rates
- Methods used for dealing with zero interest balance sheet items
- Methods used for dealing with different types of deposits
- Methods used for dealing with assets or liabilities subject to optionalities
- Clarification on how and when sensitivity to minor interest rate changes could be used to assess effects of larger interest rate changes and how possible convexity or any nonlinearity due to options could be taken into account without any essential loss of calculation accuracy
- The degree of detail of maturity classifications
- Clarification on whether all future cash flows, or just the capital value of assets, are taken into account.

6.3 Interest rate risk limits

Binding
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(8) Supervised entities shall establish limits for the effects of interest rate changes on net interest income and economic value. These limits shall reflect the nature, scale and complexity of operations. In setting these limits, supervised entities shall take account of all material sources of interest rate risk: re-pricing risk, yield curve risk, basis risk and optionality risk. If a

supervised entity holds major interest rate risk positions denominated in currencies other than the accounting currency, a separate limit must be set for each currency.

6.4 Stress testing for interest rate risk

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(9) In addition to the general principles of stress testing for market risk, supervised entities shall also comply with the principles below concerning stress testing for interest rate risk.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(10) Stress testing shall be set up in such a way that information will be provided on circumstances that would be most vulnerable for the supervised entity's strategies or positions. Therefore, stress testing plans must take account of the nature and scope of the entity's risk taking.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(11) Whenever a major interest rate risk position has been generated, its sensitivity to the following types of changes should be measured:

- Changes in the general level of interest rates
- Changes in the steepness and shape of the yield curve
- Changes in key market interest rate relationships (eg. basis risk)
- Changes in assumptions underlying measurement.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(12) FIN-FSA recommends that also the following types of changes are taken into account in stress scenarios for interest rate risk:

- Changes in the liquidity of major financial markets
- Changes in the volatility of market interest rates.

Justifications
Issued on 16 December 2008
Valid from 1 April 2009

(13) In order to understand and analyse one's risk profile, it is of crucial importance that supervised entities test all assumptions used in stress testing illiquid instruments and instruments where there is no agreed maturity or where it is uncertain whether they will reach maturity.

7 RISK MANAGEMENT REQUIREMENTS IN USING THE FAIR VALUE OPTION[7,8]

Norm
Issued on 16 December 2008
Valid from 1 April 2009

(1) The fair value option may be used by all credit institutions and investment firms which, according to section 146, subsection 6 of the Credit Institutions Act, are obliged to draw up their financial statements or consolidated financial statements in compliance with the International Financial Reporting Standards (IFRS) referred to in chapter 7a, section 1 of the Accounting Act.

Norm
Issued on 16 December 2008
Valid from 1 April 2009

(2) In addition, all credit institutions and investment firms, including their groups, that draw up their financial statements according to the Credit Institutions Act, may pursuant to section 151, subsection 4 of the said Act apply the fair value option at the balance sheet date of their financial statements to credits and comparable financial contracts that are not held with a trading intent and debt securities that are held to maturity. The same applies to non-trading book liabilities or derivatives provided that a decision is made, when the items for the first time are entered into the accounts, on recognising them permanently at fair value. However, an item may be recognised at fair value only if the following conditions are fulfilled:

- The item includes one or more embedded derivatives that otherwise would be recognised separately at fair value in the accounts
- Recognition and measurement at fair value eliminate inconsistency of measurement or recognition
- Recognition and measurement at fair value are based on risk management calculations made at fair value for a number of financial assets, financial liabilities or items including both that constitute an

[7] The Fair Value Option (IAS 39).

[8] The requirements under this section are based on the 'Supervisory guidance on the use of the fair value option for financial instruments' by banks issued the Basel Committee on Banking.

integrated whole.

Norm
Issued on 16 December 2008
Valid from 1 April 2009

(3) According to IAS 39.9(b), the fair value option may be applied in the following cases:

- The contract includes one or more embedded derivatives and the entire hybrid contract falls within the scope of the fair value option available under IAS 39.11 A.The use of the fair value option results in more relevant financial statement information.

Financial statement information is more relevant under the following circumstances:

- It eliminates or significantly reduces a recognition and measurement inconsistency (sometimes referred to as "an accounting mismatch") that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases (for example, if an item among available-for-sale financial assets is financed by a financial liability measured at amortised cost)
- A group of financial assets, financial liabilities or both is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the group is provided internally on that basis to the entity's key management.

Justifications
Issued on 16 December 2008
Valid from 1 April 2009

(4) The use of the fair value option may relate to credit risk management in addition to market risk management.

Norm
Issued on 16 December 2008
Valid from 1 April 2009

(5) In order to use the fair value option, a supervised entity must fulfil the requirements under IAS 39 in terms of both form and content (IAS 39 AG4B–AG4K, AG33A and AG33B).

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(6) Supervised entities are advised to have adequate and comprehensive risk management policies, procedures, systems and valuation principles in place before adopting the fair value option. Hedging and other risk management measures should be established in compliance with sound risk management principles.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(7) A supervised entity should, in using the fair value option, ensure that its risk management policies, procedures and systems fulfil the following requirements:

- The objectives and policies set for risk management are realised and the risk-taking level confirmed by the Board of Directors is adhered to.

- The valuation techniques are appropriate.
- Fair values are reliable.
- Risk management and control principles appropriate for the use of the fair value option are applied and complied with consistently.
- The Board of Directors, CEO and other senior management receive regular information on the use of the fair value option and its effect on the supervised entity's financial position and performance.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(8) A supervised entity should have proper procedures in place for the adoption of the fair value option in respect of new types of items, products or transactions and for monitoring the use of the fair value option.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(9) The fair value option may only be used for items whose fair values can be determined reliably.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(10) A supervised entity should have a function in place, segregated from its risk-taking operations, for monitoring use of the fair value option in compliance with IFRSs and the entity's risk management policies and ensuring that information on the use of the fair value option is published according to requirements.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(11) Internal audit should assess the use of the fair value option on a regular basis.

Recommendation
Issued on 16 December 2008
Valid from 1 April 2009

(12) In taking credit risk, a supervised entity should also observe whether the counterparty uses the fair value option and estimate how this may affect the counterparty's financial performance, equity and key ratios used in credit analysis.

8 MANAGEMENT OF A MORTGAGE BANK'S BALANCE SHEET RISKS

Norm
Issued on 16 December 2008
Valid from 1 April 2009

(1) Pursuant to section 9 a, subsection 1 of the Mortgage Bank Act, a mortgage bank shall ensure that the average residual maturity of outstanding mortgage bonds always is shorter than that of assets posted as collateral in the register referred to in section 10 of the said Act.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(2) The average residual maturity referred to above shall be calculated as the sum of the present values of the residual cash flows weighted by their residual maturities, divided by the sum of the present values of the residual cash flows. The present value shall be calculated by discounting the nominal value of future cash flows to the present time. Derivative contracts shall be taken into account in calculating the average maturity of contracts.

Norm
Issued on 16 December 2008
Valid from 1 April 2009

(3) In addition, a mortgage bank shall, pursuant to section 9 a, subsection 2 of the Mortgage Bank Act, ensure that the total amount of interest payments to be received during any 12-month period on assets that are posted as collateral for mortgage bonds in the register referred to in section 10 of the Mortgage Bank Act always exceeds the total amount of interest to be paid on outstanding mortgage bonds during the same period. In applying this provision, account shall also be taken of any derivative contracts entered into in order to hedge outstanding mortgage bonds and assets posted as collateral for these.

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(4) In calculating future cash flows during any12-month period, future interest cash flows to be paid and received on variable rate contracts may be evaluated using techniques that have been documented in writing and approved by the mortgage bank's Board of Directors. The evaluation of future interest cash flows of variable rate contracts may, for example, be based on the forward/future yield curve derived from the interest rate swap curve. The amount of interest to be received during any 12 month period shall also exceed the amount of interest to be paid during the same period even when

the yield curve used for evaluation of variable rate contracts is adjusted up or down by one percentage point (+/-1% parallel shift).

Binding
Issued on 16 December 2008
Valid from 1 April 2009

(5) A mortgage bank must set up its internal reporting so as to be able at all times to monitor compliance with section 9a of the Mortgage Bank Act and the requirements of this standard. Calculations and reports must be made at least once a month. The Board of Directors of a mortgage bank must receive reports on the management of the bank’s balance sheet risks on a regular basis.

9 REPORTING TO FIN-FSA

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(1) No separate regular reporting obligation to FIN-FSA is attached to the establishment and maintenance of market risk management. However, the supervised entity must submit the information on market risk required in the following reporting standards in the way specified in each relevant standard.

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(2) Reports on interest rate risk on the total balance sheet should be submitted to FIN-FSA in compliance with standard RA4.5, *Reporting of interest rate risk*.

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(3) Derivatives and off-balance sheet commitments should be reported according to standard RA3.1, *Submission of financial statement and accounting information for supervisory purposes*.

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(4) Exchange rate risk should be reported in connection with capital adequacy reporting, i.e. in connection with standard RA4.8 *Reporting of own funds as well as the own funds required to cover credit risk, counterparty risk, market risk and operational risk.*

Application Guideline
Issued on 16 December 2008
Valid from 1 April 2009

(5) In addition, the financial statements and annual reports shall contain information on the supervised entity's market risk strategy and market risk management framework. The details to be found in the financial statements and annual reports are defined in Standard 3.1, *Financial statements and management report*.

10 DEFINITIONS

Issued on 16 December 2008
Valid from 1 April 2009

(1) ***Market risk*** is the possibility of financial loss as a result of changes in the market value of assets. Market risk comprises interest rate risk, exchange rate risk and price fluctuation risk on shares and commodities. In addition to market price fluctuations as such, price volatility and correlation may also have an effect on the performance of market prices. Market risk may arise from exposures on the trading book or banking book.

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(2) ***Interest rate risk*** refers to the impact that the uncertainty associated with future interest rate developments has on a supervised entity's business operations. The impact of interest rate risk is reflected as (a) income risk that measures the effects of interest rate changes on net interest income and (b) changes in economic values.

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(3) The ***trading book*** consists of all positions in financial instruments and commodities held either with trading intent or in order to hedge other elements of the trading book. Positions held with trading intent are those held intentionally for short-term resale and/or with the intention of benefiting from actual or expected short-term price differences or locking in risk-free yields. Positions held with trading intent include proprietary positions and positions arising from client servicing and market making.[9]

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(4) All positions other than those included in the trading book are regarded as ***non-trading book positions***. The non-trading book is also called **banking book**. The non-trading book positions of a credit institution consist of positions relating to lending and long-term investments. The non-trading book positions of an investment firm include normal assets and investments relating to business activities.

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[9] *Article 11(1) and (2) of Directive 2006/49/EC.*

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Valid from 1 April 2009

(5) **Other senior management** includes persons that in addition to the board of directors and the CEO (Chief Executive Officer) actually manage the activities of the supervised entity. For example, the manager of an important business line of the supervised entity may be such a person. Together with the board of directors and the CEO, the members of other senior management constitute the senior management of the supervised entity.

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(6) ***Basis risk*** refers to an interest rate mismatch between the asset whose price is to be hedged and the asset underlying the hedging instrument.

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(7) ***Net income risk*** is the potential effect of an interest rate change on net interest income.

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(8) ***Embedded derivatives*** refer to an embedded derivative as defined in IAS 39.10.

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Valid from 1 April 2009

(9) ***Stress testing*** is a risk management tool used to evaluate the potential impact on an operator´s financial standing of unlikely, although plausible, events or movements in a set of financial variables.

11 FURTHER DETAILS

Please find the necessary contact information in the list of persons responsible for standards provided on the FSA website. For further information, please contact:

- Market and Operational Risk, tel. +358 10 831 5207

12 OBSOLETE GUIDELINES AND REGULATIONS

Issued on 16 December 2008
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(1) This standard renders the following regulation, guideline and interpretation obsolete:

- Mortgage banks' management of balance sheet risks (Regulation 105.15)
- General guideline on the risk management of derivatives: the parts pertaining to market risk management (Guideline 105.12)
- FSA interpretation on non market price transactions (Interpretation 1/2003).