Advisory Guidelines of the Financial Supervision Authority

Requirements to the internal capital adequacy assessment process

These Advisory Guidelines were established by Resolution No 66 of the Management Board of the Financial Supervision Authority of 29 November 2007.

1. Competence

According to § 3 of the Financial Supervision Authority Act (hereinafter "FIS"), the Financial Supervision Authority conducts state financial supervision in order to enhance the stability, reliability, transparency and efficiency of the financial sector, to reduce systemic risks and to promote prevention of the abuse of the financial sector for criminal purposes, with a view to protecting the interests of clients and investors by safeguarding their financial resources, and thereby supporting the stability of the Estonian monetary system.

According to FIS § 57 (1), the Financial Supervision Authority has the right to issue advisory Guidelines to explain legislation regulating the activities of the financial sector and to provide guidance to subjects of financial supervision.

2. Purpose and scope

2.1. Purpose

These Guidelines are enforced to credit institutions for interpreting § 63^1 of the Credit Institutions Act and to investment firms for interpreting § 82^2 of the Securities Market Act.

The purpose of these Guidelines is to give guidance to credit institutions and investment firms in developing and implementing the internal capital adequacy assessment process. The Guidelines reflect the understanding of the Financial Supervision Authority as regards best practices for implementing the internal capital adequacy assessment process.

Methodology for calculating regulative minimum capital requirements within the framework of Basel II is more risk-sensitive. Nevertheless, each market participant possesses its own unique risk profile, and the rule-based framework for capital adequacy can thus never encompass the complete risk profile of all market participants. Each market participant is in the best position to assess its own risks. Besides the adherence to regulative minimum capital requirements based on preset methods (Pillar 1), the implementation of Basel II principles envisages therefore also the implementation of the internal capital adequacy assessment process of a credit institution or an investment firm, covering also risks that are not covered by regulative capital requirements.

Internal capital adequacy assessment process (hereinafter "ICAAP") is the main component of Pillar 2. Relevance and reliability of the internal capital adequacy assessment process of a credit institution or an investment firm is evaluated by the Financial Supervision Authority within the framework of supervisory review and evaluation process (hereinafter "SREP"), which is the second essential component of Pillar 2. The Financial Supervision Authority evaluates the sound functioning of internal capital adequacy assessment process in dialogue with a credit institution or an investment firm.

ICAAP should be supported by the implementation of good corporate governance, existence of adequate internal control mechanisms, and particularly the implementation of best practices for risk management. Though the ICAAP focuses on the evaluation of capital need necessary for covering losses caused by the materialization of risks, capital should not be regarded as a substitute for risk management. Adequate capital buffer increases the sustainability of a credit institution or an investment firm and its ability to tolerate risks. Adequately implemented ICAAP raises the awareness of a credit institution or an investment firm of its risk profile, measurement of its risks and capital planning.

There is no single correct methodology for assessing internal capital adequacy – ICAAP is based on methods chosen entirely by a credit institution or an investment firm itself, and the undertaking must be able to prove to the Financial Supervision Authority the validity of its choice and the reliability of exploiting these methods. Implementation of these Guidelines should follow the principle of "comply or explain" which foresees that credit institutions and investment firms must be able to explain to the Financial Supervision Authority the reasons for the failure in implementing or partial implementing of a certain requirement of these Guidelines.

Development of these Guidelines was based on principles of the Committee of European Banking Supervisors' (hereinafter "CEBS") Guidelines on the Application of the Supervisory Review Process under Pillar 2. Principles of the following CEBS's Guidelines: Technical Aspects of Stress Testing under the Supervisory Review Process, Technical Aspects of the Management of Concentration Risk under the Supervisory Review Process, Technical Aspects of the Management of Interest Rate Risk Resulting from Non-trading Activities under the Supervisory Review Process and Guidelines on Outsourcing have also been taken into account. During the development of these Guidelines the Financial Supervision Authority has also considered principles applied by other European supervisory authorities in respect of the internal capital adequacy assessment process.

2.2. Scope

These Guidelines shall be applied to all credit institutions, investment firms and their consolidation groups.

These Guidelines shall be applied following the principle of proportionality – i.e. the application shall be proportionate to the systemic relevance of the respective credit institution or investment firm and with the nature, scope and complexity of its activities.

3. Definitions

Basel II – International Convergence of Capital Measurement and Capital Standards elaborated by the Committee of Banking Supervisors in Basel and transposed in the European Union by directives 2006/48/EC and 2006/29/EC of the European Parliament and of the Council and in Estonia by the Credit Institutions Act and the Securities Market Act.

Diversification – means the spreading of risks, achieved by avoiding a strong positive correlation between risk exposures.

Gap analysis – means an analysis aimed at evaluating the sensitivity of risk exposures to interest rate changes, based on the duration of assets and liabilities and the repricing differences.

Capital – means the set of instruments included in equity capital or liabilities, which a credit institution or an investment firm can use for covering its losses.

Capital adequacy – means the ratio reflecting the coverage of risks related to the activities of a credit institution or an investment firm with own funds.

Capital allocations – means the notional division of capital between various risks, activities or entities, based on certain limits.

Capital plan – means the document describing the capital need of a credit institution or an investment firm, planned capital structure, sources of capital procurement and related costs during a certain period.

Capitalization – means the relative weight of equity capital as compared to liabilities.

Capital need – means the amount of capital necessary for the adequate coverage of risks.

Correlation – means the simultaneous change in the value of two random variables.

Copula – means the function used for transforming several probability distributions with a single variable into a single probability distribution with several variables.

Unexpected loss – means the loss within which the actual loss may exceed the expected loss.

Expected loss – means the average loss calculated on the basis of loss experience that a credit institution or an investment firm expects to suffer during a certain period.

Pillar 1 – means the regulatory part of Basel II framework which lays down procedures and methods for calculating regulative minimum capital requirements for credit risk, market risk and operational risk.

Pillar 2 – means the part of Basel II framework based on principles which lays down requirements to internal assessment of risks and capital adequacy, as well as to the supervision of this assessment.

Procyclicity – means the increase in capital need due to the economic cycle stage.

Regulative capital requirements – means the capital requirement calculated on the basis of the Credit Institutions Act or the Securities Market Act and procedures provided in prudential norms enacted pursuant to these Acts.

Risk – means the potential unexpected change in loss or income or in the value of assets, which can be described by probability distribution.

Risk appetite – means the amount of risk that a credit institution or an investment firm is deliberately willing to accept.

Risk management process – means the set of actions aimed at systematically identifying, evaluating and monitoring risks of a credit institution or an investment firm.

Risk profile – means the unique combination of risks of a credit institution or an investment firm, basing on the nature, scope and complexity of its activities as well as on the environment.

Internal capital adequacy assessment process – means the set of actions aimed at evaluating the risk profile of a credit institution or an investment firm and the respective capital need.

Stress testing – means the analysis aimed at measuring the impact of considerable adverse changes in environmental factors on risks and capital need of a credit institution or an investment firm.

Scenario analysis – means the analysis aimed at evaluating the impact of simultaneous changes in several environmental factors on risks and capital need of a credit institution or an investment firm.

Systematically relevant credit institution or investment firm – means the credit institution or investment firm whose unsatisfactory financial situation (incl. inadequate capitalization or liquidity) may jeopardize the stability of the local financial system (incl. the functioning of payment systems).

Sensitivity analysis – means the analysis aimed at evaluating the impact of a single environmental factor on risks and capital need of a credit institution or an investment firm.

Probability distribution – means the function describing potential values of a random variable and the probability associated with each value.

Confidence level – means the probability that expected results fall within a certain range.

VaR (*Value-at-Risk*) model – means the statistical model estimating the probability distribution of losses or the decrease in value of portfolio at a certain confidence level.

Economic capital model – means the statistical model estimating the capital need for covering unexpected losses on the basis of a probability distribution at a certain confidence level.

Entity – means the structural unit (e.g. department) or business line (e.g. retail banking) of a credit institution or an investment firm or legal entity of a consolidation group (e.g. subsidiary).

4. General requirements

4.1. ICAAP must function in each credit institution or investment firm on a continuous basis.
4.2. ICAAP aims at evaluating individual risk profile and the respective capital need of a credit institution or an investment firm.
4.3. Capital of a credit institution or an investment firm must at all times exceed its aggregated risks.
4.4. A credit institution or an investment firm must be able to prove to the Financial Supervision Authority that their capital is at all times adequate for covering all of their risks.
4.5. A credit institution or an investment firm must be able to prove to the Financial Supervision Authority that all relevant existing and potential risks resulting from their activities and environment are duly covered by ICAAP.
4.6. A credit institution or an investment firm must not accept a certain risk, if their capital is inadequate for covering future losses resulting from the materialization of this risk.
4.7. ICAAP's output is a quantitative estimate of risks of a credit institution or an investment firm and of the amount of capital necessary for covering these risks.
4.8. ICAAP must be a risk-based process – i.e. bigger risk must always lead to the bigger estimate of capital need.
4.9. ICAAP must be proactive and take into account the impact of foreseeable changes in business activities and environment on the risk profile and capital need of a credit institution or an investment firm.
4.10. ICAAP must be an integral part of the daily risk management process of a credit institution or an investment firm.
4.11. ICAAP must be an integral part of the strategic decision making and daily business decision making process of a credit institution or an investment firm.

5. Scope of application

5.1. If a credit institution or an investment firm is the parent undertaking of a consolidation group, this credit institution or investment firm must implement the ICAAP on both solo and consolidated basis.
5.2. Implementation of the ICAAP on consolidated basis implicates that this credit institution or investment firm must, in addition to risks resulting from its own activities, take into account also all those risks resulting from the activities of undertakings belonging to its consolidation group which this credit institution or investment firm covers with its capital.
5.3. If a credit institution or an investment firm is not the parent undertaking of a consolidation group, this credit institution or investment firm must implement the ICAAP on solo basis.

5.4. If both the credit institution or investment firm that is the parent undertaking and the other credit institution or investment firm that is the subsidiary undertaking are both authorized in Estonia, the subsidiary undertaking included to the consolidation group of the parent undertaking must not implement the ICAAP on solo basis.

5.5. Consolidation group of a credit institution or an investment firm must implement uniform methods and procedures of ICAAP.

6. Implementation of proportionality principle

6.1. Methods and procedures used within the framework of ICAAP should be compatible with the systemic relevance, nature, scope and complexity of the activities of a credit institution or an investment firm.

6.2. The greater the systemic relevance, volume, scope and complexity of the activities of a credit institution or an investment firm, the greater must be the complexity and risk sensitivity of methods and procedures implemented by this credit institution or investment firm within the framework of ICAAP.

6.3. Systemic relevance, volume, scope and complexity of the activities of a credit institution or an investment firm are evaluated in the context of local financial markets.

6.4. Methods and procedures for evaluating and managing each single risk must be compatible with the relative importance of this risk in the risk profile of a credit institution or an investment firm.

6.5. The greater the relative importance of each risk in the risk profile of a credit institution or an investment firm the greater must be the complexity and risk sensitivity of methods and procedures implemented by the credit institution or investment firm in respect of this risk within the framework of ICAAP.

6.6. Principle of proportionality is not applied to the management's responsibility.

6.7. For the purpose of these Guidelines, credit institutions with low level of systemic relevance, volume, scope and complexity of activities include credit institutions which market share is relatively small, which activities are not complex and are limited to a limited set of products, which are engaged in no remarkable cross-border activities and which do not use complex methods for calculating regulative capital requirements, i.e. Internal Ratings-Based Approach for credit risk, Advanced Measurement Approach for operational risk or Internal Model-Based Approach to market risk.

6.8. For the purpose of these Guidelines, investment firms are generally regarded as market participants with low level of systemic relevance, volume, scope and complexity of activities.

6.9. Principle of proportionality must be applied in the context of a dialogue between a credit institution or an investment firm and the Financial Supervision Authority.

7. Choice of methods and procedures

7.1. Methods and procedures used within the ICAAP are chosen by a credit institution or an investment firm itself.

7.2. Methods and procedures used within the framework of ICAAP must be compatible with the individual risk profile and environment of a credit institution or an investment firm.

7.3. A credit institution or an investment firm must be able to prove to the Financial Supervision Authority the relevance and compatibility of methods and procedures used within the ICAAP.
7.4. A credit institution or an investment firm must update methods and procedures used within the ICAAP according to changes in their activities or environment.

8. Risk profile and risk appetite

8.1. Risk profile of a credit institution or an investment firm arises from the environment and from the nature, scope and complexity of its activities.
8.2. A credit institution or an investment firm must be able at all times to describe their risk profile by various risks.
8.3. Actual risk profile shows the weight of each risk in the activities of the specific credit institution or investment firm.
8.4. Target risk profile is based on the risk appetite defined by the specific credit institution or investment firm.
8.5. In the context of defining risk appetite, a credit institution or an investment firm must describe the nature and amount of risks they are willing to accept as well as the target rate of return.
8.6. In the context of defining risk appetite, a credit institution or an investment firm must describe the amount of risks they are able to accept as well as the respective regulative restrictions they have to consider, including restrictions in respect of risk concentration.

9. Management's responsibility

9.1. Supervisory board and management board of a credit institution or an investment firm are responsible for ensuring that the risks of this credit institution or investment firm are at all times covered with adequate capital.
9.2. Supervisory board and management board of a credit institution or an investment firm that is the parent undertaking of a consolidation group are responsible for ensuring that the ICAAP covers the whole consolidation group.
9.3. Supervisory board and management board of a credit institution or an investment firm must define the risk appetite and target risk profile of this credit institution or investment firm, based on the strategy.
9.4. Supervisory board and management board of a credit institution or an investment firm must define the target level of internal capital adequacy and approve the capital plan.
9.5. ICAAP must be based on the risk strategy and policies approved by the supervisory board and management board of a credit institution or an investment firm.
9.6. Management board of a credit institution or an investment firm must adopt principles for evaluating the capital need resulting from the actual risk profile and for internal capital allocation, as well as the general structure of ICAAP.
9.7. Management board of a credit institution or an investment firm must approve methods and procedures used within the ICAAP and the respective documents.
9.8. Management board of a credit institution or an investment firm must ensure that the ICAAP forms an integral part of the daily risk management process.

9.9. Management board of a credit institution or an investment firm must ensure that the ICAAP forms an integral part of the strategic decision making and the daily business decision making process.
9.10. Management board of a credit institution or an investment firm is responsible for ensuring the sound functioning of ICAAP.
9.11. Management board of a credit institution or an investment firm must define the responsibility for implementing the ICAAP and adopt for this purpose clear and transparent chains of command and reporting procedures.
9.12. Management board of a credit institution or an investment firm is responsible for ensuring the adequacy of internal controls related to the ICAAP.
9.13. Management board of a credit institution or an investment firm is responsible for ensuring that the separation of functions is appropriate and conflicts of interest are avoided, in order to guarantee the sound functioning of ICAAP.
9.14. Management board of a credit institution or an investment firm is responsible for ensuring that adequate resources have been allocated and, *inter alia,* appropriate qualification of responsible staff guaranteed for the functioning of ICAAP.
9.15. Management board of a credit institution or an investment firm must assess the relevance of methods and procedures used within the ICAAP at least once every year and launch as appropriate their revision or completion process.
9.16. Management board of a credit institution or an investment firm must approve the outcome of ICAAP.

10. Risk identification

10.1. ICAAP must take into account all risks to which a credit institution or an investment firm is or may be exposed during its activities.
10.2. ICAAP must cover both risks which are covered by the regulative minimum capital requirement of Pillar 1, as well as risks which are not covered by this minimum capital requirement.
10.3. As regards the risk identification, a credit institution or an investment firm must take into account the following risks:
1) Risks covered by Pillar 1 (incl. credit risk, market risk and operational risk);
2) Risks partly covered by Pillar 1 (e.g. concentration risk and security risk);
3) Risks covered by Pillar 2 (e.g. interest rate risk of banking book);
4) Environmental risks (e.g. economic cycle risk).
10.4. A credit institution or an investment firm must proceed from their risk profile and risk appetite when they identify their risks within the ICAAP.
10.5. In order to identify all material risks, a credit institution or an investment firm must analyze its environment, products/services offered, its organizational structure, financial situation and strategic plans in respect of new markets and products.
10.6. A credit institution or an investment firm must analyze its historical loss experience and the respective reoccurrence probability when identifying its risks.
10.7. Risk identification must be proactive.
10.8. A credit institution or an investment firm may use risk categories and definitions most suitable for its risk profile when identifying its risks.

10.9. A credit institution or an investment firm must document the identified risk categories and used risk definitions.

10.10. As regards the risk identification, it is advisable to consider, *inter alia,* the existence and relative importance of the following risks in the risk profile of a credit institution an or investment firm (definitions of these risks are presented in the Annex):

1) Credit risk, incl.:
   a) Concentration risk;
   b) Transfer risk;
   c) Country risk;
   d) Security risk;
   e) Securitization risk;
   f) Counterparty default risk in the trading book;
   g) Transfer risk of the trading book;
2) Market risk, incl.:
   a) Interest rate risk, incl.:
      i) Repricing risk;
      ii) Yield curve risk;
      iii) Basis risk;
      iv) Optionality risk;
   b) Currency risk;
   c) Equity risk;
   d) Commodities risk;
3) Operational risk, incl.:
   a) Control and management risk;
   b) Legal risk;
   c) Regulative risk;
   d) Human resource risk;
   e) Information technology risk;
   f) Procedures risk;
   g) Model risk;
4) Liquidity risk, incl.:
   a) Payment risk;
   b) Funding risk;
   c) Market liquidity risk;
5) Other risks, incl.:
   a) Business risk;
   b) Strategic risk;
   c) Reputation risk;
   d) Earnings risk;
   e) Economic cycle risk.

10.11. If the consolidation group of a credit institution or an investment firm includes also an insurer or reinsurer, this credit institution or investment firm must also take into account the specific risks resulting from insurance business that it covers with its capital.

10.12. In the context of risk identification, a credit institution or an investment firm must pay attention to relationship between risks, particularly to the existence of causal link.

10.13. Credit institutions that have a low level of systemic relevance, volume, scope and complexity of activities, and investment firms must pay special attention to concentration

risk, control and management risk, liquidity risk, legal risk, reputation risk and earnings risk.

10.14. Investment firms that accept, mediate or fulfill orders from customers must pay adequate attention to the identification of legal risk and reputation risk in their activities resulting from the obligation to protect customers' interests.

10.15. Investment firms trading on their own account must pay adequate attention to the identification of counterparty default risk in the trading book and liquidity risk in their activities.

10.16. Investment firms offering asset management services must pay adequate attention to legal risk and reputation risk in their activities resulting from the obligation to protect customers' interests.

10.17. A credit institution or an investment firm must define the main control method for each identified risk. The main control method may be one of the following:

1) Risk prevention, i.e. conscious non-acceptance of risk;
2) Risk limitation, i.e. conscious limitation of risk acceptance;
3) Risk mitigation, i.e. diminishing the risk through a guarantee agreement;
4) Risk spreading, i.e. diminishing the risk through the prevention of risk concentrations and strong positive correlations;
5) Risk transference to a third person e.g. through securitization.

11. Risk assessment

11.1. A credit institution or an investment firm must be able to asses the amount of their risks separately by each risk and as an aggregate amount.

11.2. A credit institution or an investment firm must at first assess whether the identified risks are of high, medium or low significance. This assessment must be documented.

11.3. If a credit institution or an investment firm considers the risk to be of low significance, it must be able to justify this to the Financial Supervision Authority.

11.4. A credit institution or an investment firm must define both risks which have to be assessed on a quantitative basis and risks which have to be assessed on a qualitative basis.

11.5. A credit institution or an investment firm must assess all identified risks on a quantitative basis, if possible.

11.6. Quantitative assessment of risks implicates the evaluation of potential loss amount and its occurrence probability.

11.7. A credit institution or an investment firm must pay special attention to risk limitation and mitigation, if risks can be assessed only on a qualitative basis.

11.8. Methods of Pillar 1 for calculating regulative capital requirements can be taken as a basis within the framework of ICAAP.

11.9. While regulative capital requirement do not consider all risks or all dimensions of risks, it is not adequate for implementing the ICAAP to calculate only regulative capital requirements.

11.10. If a credit institution or an investment firm proceed from methods for calculating regulative capital requirements within the framework of ICAAP, they must consider possible underassessment of risks (e.g. underassessment of operational risk when using the Basic Indicator Approach).

11.11. If an investment firm proceed from the fixed costs method when calculating their regulative capital requirements, this method is not appropriate for risk assessment within the ICAAP.

11.12. In case of risk assessment, a credit institution or an investment firm must pay due attention to the correlation of risks and to the existence of causal link.

12. Assessment of credit risk

12.1. Relative importance of credit risk in the risk profile of a credit institution or an investment firm is expressed by the percentage of its loan portfolio in total assets, the amount of its off-balance-sheet transactions bearing the credit risk as well as the characteristics of its counterparties.

12.2. A credit institution or an investment firm may assess the amount of credit risk within the ICAAP on the basis of methods for calculating regulative minimum capital requirements, if they ensure adequate risk sensitivity and consideration of their individual risk profiles.

12.3. If a credit institution applies Internal Ratings-Based Approach for assessing the credit risk, it is advisable to use the output of rating systems also within the ICAAP.

12.4. If a credit institution or an investment firm has received an authorization from the Financial Supervision Authority to use the Internal Ratings-Based Approach for credit risk in the calculation of regulative capital requirements, they may use these same rating systems and statistical models also within the ICAAP and evaluate the actual capital need necessary for covering the credit risk pursuant to the regulative capital requirement.

12.5. If a credit institution or an investment firm uses the Standardized Approach for calculating the regulative capital requirement for credit risk, they may use the Internal Ratings-Based Approach without the respective authorization when they evaluate the amount of credit risk within the ICAAP.

12.6. In case of liquid equity claims which are not included in the trading book and which are subjected to credit risk assessment methods when calculating regulative capital requirements, a credit institution or an investment firm may use market risk assessment methods for risk assessment within the ICAAP.

12.7. In case on non-liquid equity claims which are not included in the trading book, a credit institution or an investment firm may use for risk assessment within the ICAAP relevant methods for assessing the value of an undertaking.

12.8. In the assessment of credit risk, a credit institution or an investment firm must consider the additional risk accompanying guarantee agreements, which arise, *inter alia,* from the legal enforceability of a guarantee agreement and the market risk associated with the realization of security.

12.9. In the assessment of credit risk, a credit institution or an investment firm must consider potential impact of the change of economic cycle on the capital need.

12.10. If lending operations of a credit institution focus on certain type of loans (e.g. corporate loans) or on more sophisticated transactions (e.g. project financing), this may implicate higher credit risk and require the use of more sophisticated and risk-sensitive methods for credit risk assessment, pursuant to the principle of proportionality.

12.11. If a credit institution or an investment firm has a large proportion of gross-border operations, they must pay adequate attention to the assessment of potential country risk and transfer risk when assessing the credit risk.

13. Assessment of concentration risk

13.1. A credit institution or an investment firm must take into account the concentration risk resulting from its trading book as well as from its banking book (credit institution) or other activities (investment firm).

13.2. A credit institution or an investment firm must identify the concentration risk resulting from its risk exposure to a counterparty or connected counterparties, and the concentration risk resulting from risk exposures where the risk is affected by common risk factors or by risk factors which show a strong positive correlation.

13.3. A credit institution or an investment firm must take into account the correlation risk resulting from the limited number of transactions or of counterparties to its risk mitigation transactions and from focusing on certain products, economic sectors or geographic regions.

13.4. If the diversification of loan portfolio of a credit institution is inadequate, it must have more capital than is expected by the regulative capital requirement for credit risk, in order to reflect the concentration risk, as regulative capital requirements have been defined on the basis of well-diversified loan portfolios of major international banks.

13.5. While it may be difficult to evaluate the concentration risk on a quantitative basis, undertakings must pay particular attention to the prevention, limitation, identification and monitoring of concentrations.

13.6. Methods allowing the evaluation of concentration risk include scenario analysis, stress testing and sensitivity analysis.

14. Assessment of market risk

14.1. Percentage of market risk of the risk profile of a credit institution or an investment firm is reflected, *inter alia,* by the volume of its trading book.

14.2. A credit institution or an investment firm must take into account the market risk resulting from its trading book as well as from its banking book (credit institution) or other activities (investment firm).

14.3. A credit institution or an investment firm may assess the amount of market risk within the ICAAP on the basis of methods for calculating regulative capital requirements, if they ensure adequate risk sensitivity and consideration of individual risk profiles.

14.4. If a credit institution or an investment firm use regulative methods for the assessment of market risk within the ICAAP, the methods used must be as risk-sensitive as possible (e.g. method based on modified duration for assessing the interest rate risk).

14.5. If a credit institution or an investment firm has received an authorization from the Financial Supervision Authority to use the VaR model for market risk in the calculation of regulative capital requirements, they may use the same model also within the ICAAP and evaluate the actual capital need necessary for covering the market risk pursuant to the regulative capital requirement.

14.6. If a credit institution or an investment firm has not received an authorization from the Financial Supervision Authority to use the VaR model for calculating the regulative

capital requirement for market risk, they may use the VaR model for the assessment of market risk within the ICAAP without the respective authorization.

14.7. In the assessment of market risk, a credit institution or an investment firm must take into account the market liquidity risk e.g. by extending the assumption of maintenance period used in calculations.

14.8. The greater the difference between the nominal currencies of assets and liabilities of a credit institution or an investment firm (i.e. net open currency position), the more attention must be paid to the assessment of currency risk.

15. Assessment of interest rate risk of banking book/other activities

15.1. In addition to the interest rate risk of its trading book, a credit institution or an investment firm must assess also the interest rate risk resulting from its banking book (credit institution) or other activities (investment firm).

15.2. If instruments that are sensitive to the interest rate risk form a significant part of assets of a credit institution or an investment firm, the undertaking must assess the interest rate risk resulting from its banking book or other activities on a quantitative basis.

15.3. A credit institution or an investment firm may use uniform methods within the ICAAP for the assessment of the interest rate risk of instruments included in the trading books and of those not included in the trading book.

15.4. When a credit institution assesses the interest rate risk of its banking book or an investment firm assesses the interest rate risk of its other activities, it must analyze, *inter alia,* the risk resulting from the difference in the maturity of balance-sheet and off-balance-sheet assets and liabilities, changes in the market value of debt instruments, different risk-sensitivity of risk exposures and hedges, and risk exposures with fixed interest rate.

15.5. When a credit institution assesses the interest rate risk of its banking book or an investment firm assesses the interest rate risk of its other activities, the assessment must be based on gap analysis, stress testing or sensitivity analysis.

15.6. Interest rate sensitivity analysis must cover the sensitivity to interest rate changes, yield curve changes, basis risk and changes in customer behavior.

15.7. High interest rate risk resulting from banking book or other activities implicates the interest rate risk where the result of a standard interest rate stress scenario shows a decrease of over 20% in the economic value of a credit institution or an investment firm. A standard interest rate stress scenario implicates the change of interest rate, i.e. parallel upward and downward shifts in the yield curve, by 200 basis points.

15.8. If a credit institution or an investment firm uses interest-rate-based derivative instruments for risk mitigation, these instruments must be included in the assessment of interest rate risk.

16. Assessment of liquidity risk

16.1. A credit institution or an investment firm must assess under the liquidity risk the short-term liquidity risk and the structural financing risk.

16.2. While the capital is not the most effective instrument for liquidity risk mitigation, attention must be paid primarily to the limitation of liquidity risk through adequate liquidity management.
16.3. A credit institution or investment firm must establish adequate internal indicators and procedures for monitoring the liquidity risk and liquidity management.
16.4. A credit institution or an investment firm must ensure the existence of a business continuity plan covering the acquisition of liquid assets, existence of alternative sources of financing and liquidity.
16.5. A credit institution or an investment firm must use scenario analysis, stress testing and sensitivity analysis for the assessment of liquidity risk. A liquidity risk scenario must cover both internal and environmental risk factors of a credit institution or an investment firm.
16.6. A credit institution or an investment firm must evaluate the impact of deterioration in its macroeconomic environment on its ability to obtain resources.
16.7. A credit institution or an investment firm must take into account refinancing costs in the assessment of liquidity risk.
16.8. If the liquidity management of a credit institution or an investment firm is centrally performed by another undertaking belonging to the same group (parent undertaking), the credit institution or investment firm must be able to prove to the Financial Supervision Authority that there are alternative methods for the liquidation of potential liquidity deficit in case the parent undertaking is for some reason not able to provide adequate resources.
16.9. If a credit institution or an investment firm manages centrally the liquidity of another undertaking belonging to the same group (subsidiary undertaking), the credit institution or investment firm must be able to prove to the Financial Supervision Authority that it is capable of evaluating and performing its obligations as regards the provision of liquidity to its subsidiary undertaking.

17. Assessment of operational risk

17.1. A credit institution or an investment firm may assess the operational risk within the ICAAP under the methods for calculating regulative capital requirements, if they ensure adequate risk sensitivity and consideration of individual risk profiles.
17.2. If a credit institution or an investment firm has received an authorization from the Financial Supervision Authority to use the Advanced Measurement Approach for operational risk in the calculation of regulative capital requirements, they may use these same models also within the ICAAP and evaluate the actual capital need necessary for covering the operational risk pursuant to the regulative capital requirement.
17.3. If a credit institution or an investment firm uses the Basic Indicator Approach or the Standardized Approach for calculating the regulative capital requirement for operational risk, they may use the Advanced Measurement Approach without the respective authorization when they evaluate the amount of operational risk within the ICAAP.
17.4. A credit institution or an investment firm may use a definition of operational risk within the ICAAP that differs from the definition used for calculating regulative capital requirements, if the ICAAP covers all material risks.

17.5. In assessing the capital need for operational risk, a credit institution or an investment firm must analyze the statistics of its loss events, incidents and legal actions related to the operational risk, including frequency and loss amounts, and take into account the impact of possible business and environmental changes on the capital necessary for covering the operational risk.
17.6. Within the ICAAP, it is advisable to use scenario analysis and to assess potential losses and their occurrence probability on a quantitative basis.

18. Assessment of other risks

18.1. A credit institution or an investment firm must assess the amount of all material risks, including those of qualitative nature.
18.2. All risks must be covered with adequate capital also in case where methods for the assessment of qualitative risks are used.
18.3. A credit institution or an investment firm must assess among other risks strategic risk and reputation risk.
18.4. A credit institution or an investment firm must use scenario analysis for the assessment of strategic risk and reputation risk.
18.5. If a credit institution or an investment firm is not able to assess strategic risk or reputation risk on a quantitative basis and uses only qualitative methods, it must be able to prove to the Financial Supervision Authority that the respective risks are covered with adequate capital.
18.6. A credit institution or an investment firm must evaluate the impact of changes in the operating environment on the basis of stress testing, sensitivity analysis or scenario analysis.

19. Using economic capital model in risk assessment

19.1. In case of risks that can be assessed on a quantitative basis, the most advanced and risk-sensitive methods here are statistical methods, including economic capital models.
19.2. A credit institution or an investment firm is not required to apply economic capital models within the ICAAP, though it is advisable for the assessment of material risks in case of major credit institutions.
19.3. As to the implementation of economic capital models, a credit institution or an investment firm must take into account best practices developed on the market and general qualitative requirements enacted in respect of internal models.
19.4. In case an economic capital model is applied within the ICAAP, the statistical reliability must be ensured.
19.5. If a credit institution or an investment firm applies an economic capital model within the ICAAP, this must be strongly integrated to its daily risk management process.
19.6. A credit institution or an investment firm must clearly define the scope and role of the model within the ICAAP when they apply an economic capital model.
19.7. Each input data, definition and assumption used in an economic capital model must be documented.

19.8. A credit institution or an investment firm must take into account the following weaknesses of such models when they apply an economic capital model:
1) Past experience may not be a good basis for forecasting the future;
2) It is generally difficult to achieve a high confidence level;
3) Transparency of models is frequently inadequate;
4) Models are sensitive to the quality of input data;
5) Models are sensitive to assumptions made;
6) Basic data of models are usually derived from around the body of probability distribution, and not from the tail;
7) Behavior of data from the tail of probability distribution differs from the behavior of data from the body of probability distribution;
8) It is difficult to measure correlations empirically.

20. Stress testing

20.1. Stress testing, sensitivity analysis and scenario analysis are proactive methods used within the ICAAP for evaluating the impact of various factors on the capital need of a credit institution or an investment firm.
20.2. A credit institution or an investment firm must implement stress testing procedures within the ICAAP, in order to evaluate in a predictable way the impact of negative changes in environmental factors on their risk profile and capital need.
20.3. Stress testing aims at evaluating the impact of other factors besides normal or expected environmental risks, which may lead to serious undervaluation of risks and capital need.
20.4. A credit institution or an investment firm must perform stress testing as regards material risks at least once every year.
20.5. Stress testing should cover credit risk, interest rate risk of banking book and liquidity risk.
20.6. Methods and outcome of stress testing must be fully documented.
20.7. Management board of a credit institution or an investment firm must be informed about the outcome of stress testing.
20.8. Stress testing scenarios must cover all risks identified by a credit institution or an investment firm as material risks, and their potential synergy.
20.9. Stress testing scenarios must proceed from the risk appetite of a credit institution or an investment firm.
20.10. Stress testing scenarios must reflect exceptional but possible events.
20.11. Stress testing scenarios may be based on historical scenarios, though they must cover also hypothetical scenarios.
20.12. Stress testing scenarios must take into account the impact of macroeconomic environment, including the change of economic cycle stage.
20.13. Stress testing scenarios must cover the probability and various levels of severity of changes in environmental factors.
20.14. Stress testing scenarios must evaluate the impact of strategic decisions.
20.15. Stress testing must include the analysis of potential changes in the income of a credit institution or an investment firm.
20.16. Stress testing scenarios must not consider the impact of negative correlation between risks.

20.17. A credit institution or an investment firm must be able to explain to the Financial Supervision Authority their reasons for the choice of stress testing scenarios.
20.18. If a credit institution or an investment firm uses an economic capital model or other statistical methods for the assessment of a certain risk, they must evaluate during stress testing the impact of model's assumptions on the estimates of risk and capital need.
20.19. Stress testing is particularly important in case of risks that are difficult to evaluate or where models used during quantitative assessment are based on statistically inadequate data.
20.20. If a credit institution or an investment firm is the parent undertaking of a consolidation group, it must perform stress testing on a consolidated basis.

21. Aggregation of risks

21.1. A credit institution or an investment firm must evaluate their risk profile within the ICAAP on an aggregate basis.
21.2. If a credit institution or an investment firm is the parent undertaking of a consolidation group, it must apply the risk aggregation method that covers the whole consolidation group.
21.3. A credit institution or an investment firm must document the risk aggregation method used within the ICAAP.
21.4. In case of aggregation based on regulative capital requirements, a credit institution or an investment firm proceed from regulative capital requirements and supplement them with an additional capital buffer for covering risks that are underestimated during the calculation of regulative capital requirements and risks that are not covered by regulative capital requirements.
21.5. In case of aggregation not based on regulative capital requirements, a credit institution or an investment firm assesses various risks using various methods and then sum up capital need identified for these risks.
21.6. When a credit institution or an investment firm aggregates risks that have been assessed using statistical models, they must use the same confidence level and forecast period in order to ensure comparability.
21.7. A credit institution or an investment firm may take into account correlations between risk exposures, when they aggregate estimates based on statistical models.
21.8. If a credit institution or an investment firm uses statistical models, they may take into account the effect of diversification between risks when they aggregate risks.
21.9. A credit institution or an investment firm may proceed from historic evidence, conservative estimates or macroeconomic data, when they evaluate the correlations.
21.10. A credit institution or an investment firm must be able to explain to the Financial Supervision Authority their reasons for using correlations that are lower than a perfect positive correlation.
21.11. It is not allowed to use negative correlations to aggregate risks.
21.12. A credit institution or an investment firm must take into account the principle that correlations get higher during the recession stage of economic cycle.
21.13. If a credit institution or an investment firm applies statistical models for risk assessment, they may use simulation-based methods or copulas to aggregate risks.

22. Composition of capital

22.1. A credit institution or an investment firm must define which instruments are treated as capital within the ICAAP. This definition must be documented.
22.2. It is advisable to treat regulative own funds as capital within the ICAAP.
22.3. If a credit institution or an investment firm treats as capital within the ICAAP other instruments than those included in regulative own funds, these instruments must be comparable to those included in regulative own funds as far as the ability to cover the loss is concerned.
22.4. If a credit institution or an investment firm treats other instruments than those included in regulative own funds as capital within the ICAAP, they must be able to justify this to the Financial Supervision Authority.
22.5. A credit institution or an investment firm must take into account the suitability of various types of capital for covering various risks.
22.6. A credit institution or an investment firm must take into account the availability, liquidity and regulative treatment of various types of capital instruments.

23. Capital planning

23.1. A credit institution or an investment firm must have a strategy for maintaining the prudent level of capitalization.
23.2. A credit institution or an investment firm must define the minimum level of capitalization necessary for ensuring the sustainability of operations.
23.3. A credit institution or an investment firm must define methods for maintaining the advisable level of capitalization, considering, *inter alia,* the planned growth in loan portfolio or trading book, sources for capital procurement, dividend policy, as well as potential changes in regulative capital requirements due to procyclicity.
23.4. Capital planning must be based on the risk appetite and strategic plans determined by a credit institution or an investment firm.
23.5. During the capital planning process, a credit institution or an investment firm must clearly define the current capital need, expected capital need, advisable level of capitalization and sources for additional capital procurement.
23.6. A credit institution or an investment firm must have an approved capital plan which defines principles for capital planning and responsible persons.
23.7. Capital plan must proactively cover at least two subsequent years.
23.8. During the capital planning process, a credit institution or an investment firm must take into account the cyclicity of economic environment.
23.9. A credit institution or an investment firm must take into account possible obstacles to capital procurement.
23.10. A credit institution or an investment firm must review and update, if necessary, the capital plan at least once every year.
23.11. If strategic plans of a credit institution or an investment firm are amended, the capital plan must be immediately updated.

24. Capital allocation

24.1. A credit institution or an investment firm must determine the limit of each risk in order to use risk-based capital allocation.
24.2. A credit institution or investment firm must not allocate 100% of its capital to cover various risks, but part of the capital must be maintained as a general capital buffer.
24.3. A credit institution or investment firm must allocate capital between various entities by setting specific risk limits for these entities.
24.4. A credit institution or an investment firm must set risk limits for entities which assume risks in their daily operations.
24.5. It is not required to allocate capital designed for covering operational risk, strategic risk and reputation risk between entities.
24.6. Besides setting limits to entities, a credit institution or an investment firm must set also structural risk limits (e.g. loans provided to a certain country or investments made into a certain foreign currency) and volume based risk limits.

25. Internal capital adequacy

25.1. A credit institution or an investment firm must compare aggregated risks with their capital in order to evaluate the adequacy of internal capital.
25.2. A credit institution or an investment firm must define the advisable level of risk coverage, i.e. the capital buffer.
25.3. Besides the coverage of risks with capital, the ICAAP of a credit institution or an investment firm must take into account also an additional capital need arising, *inter alia,* from external rating goals and strategic plans.
25.4. If the assessment of internal capital adequacy for aggregated risks is higher that regulative capital requirements, a credit institution or an investment firm must hold capital to at least the level of internal capital adequacy assessment.
25.5. If the assessment of internal capital adequacy for aggregated risks is lower that regulative capital requirements, a credit institution or an investment firm must hold capital to at least the level of regulative capital requirements.
25.6. If the assessment of aggregated risks made within the ICAAP differs from regulative capital requirements, a credit institution or an investment firm must be able to justify this to the Financial Supervision Authority. Possible justifications for the difference in assessments are, *inter alia,* the following :
    1) A credit institution or an investment firm has a risk appetite that is lower or higher that medium risk appetite;
    2) Using of definitions that deviate from regulative definitions;
    3) Different assumptions for correlations within or between risks.
25.7. Assessment of internal capital adequacy and underlying methods and assumptions must be documented.
25.8. A credit institution or an investment firm must analyze the extent of each material risk that can be mitigated through capital, and other methods and procedures that should be implemented for risk management.

25.9. A credit institution or an investment firm must define a strategy and procedures for reducing the risk and increasing the capital in situations where the assessment of internal capital adequacy falls below the target level.

26. Review and updating of the process of ensuring internal capital adequacy

26.1. ICAAP's suitability for the risk profile of a credit institution or an investment firm must be reviewed and updated, if necessary, at least once every year.
26.2. All new risks emerging from the activities of a credit institution or an investment firm must be identified and included in the ICAAP.
26.3. Reliability and relevance of methods and procedures used within the ICAAP must be regularly reviewed by the internal audit function of a credit institution or an investment firm or by another equivalent independent party.
26.4. If strategic goals, business plan, environment or other factors influencing the ICAAP of a credit institution or an investment firm are changed, the methods and procedures used must be reviewed and updated, if necessary.

27. Outsourcing

27.1. The implementation of ICAAP must not be outsourced as a whole to a third person, including to an undertaking belonging into the same consolidation group.
27.2. Activities and functions of the ICAAP that have been outsourced to a third person must be subjected to requirements equivalent to those that are applied in respect of other activities and functions of the ICAAP.
27.3. The Financial Supervision Authority must be able to exert such a control over a third person to whom an activity or a function of the ICAAP has been outsourced that is equivalent to the control it exerts over the credit institution or investment firm itself.
27.4. Outsourcing of an activity or a function of the ICAAP does not limit the liability of the management of a credit institution or an investment firm.
27.5. If an activity or a function of the ICAAP is outsourced to a third person, the credit institution or investment fund must have access to all relevant information.
27.6. A credit institution or an investment firm must take into account additional risks resulting from the outsourcing of activities or functions of the ICAAP.
27.7. Outsourcing of an activity or a function of the ICAAP to a third person must be governed by a written agreement.
27.8. Apportionment of liability for the functioning of an activity of a function of the ICAAP between a credit institution or an investment firm and a third person must be recorded in writing. A service level agreement should be signed with the third party, if necessary.

28. Requirements for documentation

28.1. ICAAP is based on the risk strategy document of a credit institution or an investment firm where, *inter alia,* risk policies, risk appetite, actual and target risk profiles as well as the organization and principles of risk management are described.

28.2. The functioning of ICAAP must be documented in full.
28.3. All methods and procedures used within the ICAAP must be documented.
28.4. Documents describing methods and procedures used within the ICAAP must describe, *inter alia,* the risk management process, and IT-systems, internal risk definitions, risk assessment methods applied during the risk management process, as well as assumptions made during this process.
28.5. Documents describing the ICAAP must be systematically drafted and stored.
28.6. If methods or procedures are changed, documents describing the ICAAP must be immediately updated.

29. Internal reporting

29.1. Management board of a credit institution or an investment firm must be informed of the assessment of internal capital adequacy on a regular basis.
29.2. A regular reporting form must be introduced for the submission of information with the management board of a credit institution or an investment firm.
29.3. Information on the ICAAP may be submitted to the management board of a credit institution or an investment firm within the framework of general risk reporting.
29.4. Report must include information that is clear, understandable to the target group and accurate.
29.5. Reporting must be made both on *ex ante* (for decision making) and *ex post* (for ex-post evaluation) and, if necessary, also on *ad hoc* basis (in case of extraordinary circumstances).
29.6. All relevant information in respect of the ICAAP must be regularly documented and communicated to relevant persons, including the following information:
1) Amount of risks both as an aggregate and by various risks;
2) Changes in the risk profile as compared to the previous period;
3) Capital available for covering the risks;
4) Internal capital adequacy level;
5) Regulative capital adequacy level;
6) Risk limits for entities and use of these limits;
7) Structural and volume based risk limits and use of these limits;
8) Cases where risk limits have been exceeded;
9) Proposals for action due to the exceeding of risk limits;
10) Results of stress testing and scenario analysis.

30. Reporting to the Financial Supervision Authority

30.1. The Financial Supervision Authority is entitled to have access at any moment to the ICAAP of a credit institution or an investment firm.
30.2. A credit institution or an investment firm must present to the Financial Supervision Authority an annual written report on the implementation and output of the ICAAP.
30.3. Report on the ICAAP submitted with the Financial Supervision Authority must include, *inter alia,* the following information:
1) Risk strategy and risk appetite by risk types;

2) Target risk profile;
3) Actual risk profile and possible change in this profile;
4) Risk definitions;
5) List of identified risks;
6) Description of risk assessment methods by risks;
7) Risk assessment and capital need by risks;
8) Assessment for aggregated risks;
9) Description of risk aggregation methodology;
10) Description of methods and results of stress testing, scenario analysis and sensitivity analysis;
11) Summary of capital composition and capital planning;
12) Risk limits and use of these limits in capital allocation;
13) Target capital adequacy;
14) Comparison of ICAAP's outcome with the regulative capital requirements; justification of differences;
15) Internal control mechanisms applied in respect of ICAAP;
16) Management decisions made on the basis of ICAAP;
17) Results of an independent review of ICAAP;
18) Planned changes in the ICAAP.

30.4. Management board of a credit institution or an investment firm must approve the report on ICAAP and its outcome submitted to the Financial Supervision Authority.

30.5. The report on ICAAP and its outcome must be submitted to the Financial Supervision Authority no later than 31 March of every year as of 31 December of the previous year.

30.6. If significant changes appear in the ICAAP or its outcome, the Financial Supervision Authority must be informed immediately thereafter.

30.7. The Financial Supervision Authority is entitled to require from a credit institution or an investment firm the submission of an *ad hoc* report on the ICAAP.

30.8. The report on ICAAP serves as a basis for a dialogue between a credit institution or an investment firm and the Financial Supervision Authority within the framework of SREP.

31. Implementation provisions

31.1. These Guidelines shall enter into force from 1 January 2008.

31.2. A credit institution or an investment firm must submit to the Financial Supervision Authority the first written report on the implementation and outcome of ICAAP as of 31 December 2008 no later than 31 March 2009.

Annex

Definitions of risks used in these Guidelines

Equity risk – risk resulting from the change in equity prices.

Basis risk – risk resulting from different changes in market base rates.

Funding risk – risk resulting from the uncertainty associated with the procurement of funds.

Information technology risk – risk resulting from inadequately functioning or used IT-systems.

Yield curve risk – risk resulting from the change in the yield curve's slope or shape.

Interest rate risk – risk resulting from the change in interest rates.

Legal risk – risk resulting from the non-conformity with or misinterpretation of legislation, contracts, good practice and standards of ethics.

Commodities risk – risk resulting from the change in commodity prices.

Counterparty default risk in the trading book – risk that the counterparty to a trading book transaction is not capable of performing or willing to perform its contractual obligations.

Transfer risk of the trading book – risk that a credit institution or an investment firm transfers the sold asset or an amount of money, but does not receive the bought asset or an amount of money.

Real estate risk – risk resulting from the change in real estate's market price.

Control and management risk – risk resulting from the inadequacy of applied control mechanism and management methods.

Concentration risk – risk resulting from a large risk exposure to counterparty or connected counterparties whose risk is affected by a common risk factor or where there is a strong positive correlation between risks.

Credit risk – risk that the counterparty to transaction is not capable of performing or willing to perform its contractual obligations.

Liquidity risk – risk that a credit institution or an investment firm is not capable of performing its future obligations in time or in full.

Country risk – risk resulting from the economic, political or social situation of the country where the counterparty is located.

Economic cycle risk – risk resulting from the change of economic cycle stage.

Payment risk – risk resulting from the failure to balance short-term inflows and outflows of money.

Model risk – risk that the used model turns out to be unreliable as it includes wrong assumptions or has an incorrect structure.

Operational risk – risk resulting from the inadequacy or failure of internal processes, people or systems, or from external events.

Optionality risk – risk resulting from options embedded in interest rate instrument contracts, e.g. from the opportunity given to the counterparty to redeem the fixed rate instrument when commercial interest rates change.

Human resource risk – risk resulting from the competence, loyalty and suitability of human resources.

Procedures risk – risk resulting from inadequate procedural rules or from inadequate adherence to procedural rules.

Regulative risk – risk resulting from changes in regulative environment and legislation.

Reputation risk – risk resulting from the loss of reputation in the eyes of customers, business partners, owners, investors or supervisors.

Strategic risk – risk resulting from inadequate strategy or from inadequate implementation of strategy.

Security risk – risk resulting from the security of transaction, including the additional legal risk or security's market price risk.

Earnings risk – the risk that earnings from principal activity drop.

Market liquidity risk – risk resulting from the low liquidity of risk exposures due to inadequate market depth or market disruptions.

Market risk – risk resulting from adverse movements in market prices.

Currency risk – risk resulting from the change in exchange rates.

Securitization risk – risk that the credit risk transfer accompanying the securitization transaction turns out to be smaller than expected.

Business risk – risk that inadequate business decisions or inadequate implementation of these decisions or the change in behavior of environment or customers or inadequate reaction to technological development causes losses or decrease in income.

Transfer risk – risk that a counterparty living abroad is not capable of performing his obligations due to restrictions enacted in his country of residence to the outflow of money.

Repricing risk – risk resulting from different repricing dates of assets and liabilities.