PÉNZÜGYI SZERVEZETEK ÁLLAMI FELÜGYELETE
HUNGARIAN FINANCIAL SUPERVISORY AUTHORITY

The Supervisory Review Process (SRP)

Guidelines

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PÉNZÜGYI SZERVEZETEK
ÁLLAMI FELÜGYELETE
HUNGARIAN FINANCIAL
SUPERVISORY AUTHORITY

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Abbreviations

AIRB	Advanced Internal Rating Based Approach
AMA	Advanced Measurement Approach
ALCO	Asset Liability Committee
ASA	Alternative Standardised Approach
BCM	Business Continuity Management
BIA	Basic Indicator Approach
CEBS	Committee of European Banking Supervisors
CCP	Central Counterparty
CRCU	Credit Risk Control Unit
CRD	Capital Requirements Directive
DVP	Delivery versus Payment
EAD	Exposure at default
EBA	European Banking Authority
FIRB	Foundation Internal Rating Based Approach
ICAAP	Internal Capital Adequacy Assessment Process
IRB	Internal Rating Based Approach
LGD	Loss given default
PD	Probability of default
SD	Settlement day
the SREP	Supervisory Review and Evaluation Process
RVP	Receive versus Payment
TSA	The Standardised Approach
VAR	Value at Risk

Introduction

According to international and Hungarian regulations, the review process in the broad sense represents the control and evaluation by the Supervisory Authority of business processes, risk profiles and capital position of credit institutions under Pillar 2. The practice and methodology of the review are determined by the national supervisors independently and within relatively broad legal frameworks while following the effective rules, the general standards and guidelines of the European supervisory community. Since the review extends to the overall operation and all risks of the supervised institutions – in line with the complexity of the activities conducted by financial institutions – it is a considerably complex and multifaceted review process.

The above facts explain why the Hungarian Financial Supervisory Authority (Supervisory Authority, English acronym: HFSA) considers it necessary to provide information for supervised institutions about the characteristics, possible consequences and methodological expectations of the review. These methodological guidelines intend to offer assistance to institutions so that the review process can be planned and made predictable. This assistance can considerably facilitate the establishment of prudent operational conditions and compliance with regulatory expectations.

The methodological guidelines, applied earlier for Pillar 2 review, have been substantially revised, a revision warranted by three main factors. On the one hand, in the recent past serious changes have taken place both in the domestic and international economic and regulatory environment, in risk management practices and in supervisory activities as well, changes that made it necessary to review a considerable part of the earlier guidelines. Qualitative changes have been brought about in the relationship between the Supervisory Authority and the supervised institutions by the global financial crisis, by the domestic spread of advanced risk management methods, by changes in the supervisory regulatory framework as well as by the setting up of international supervisory colleges.

On the other hand, in recent years the supervisory community has gradually re-evaluated the significance of Pillar 2 processes, and recognised the fact that the long-term prudent and predictable operation of institutions can be exclusively safeguarded by high-quality and extensive risk measurement and management procedures, because a high level of available own funds in itself does not guarantee total security. By offering the present Guidelines and in line with the above, the Supervisory Authority wishes to emphasise that the Pillar 2 review is not an independent process, rather it is an integral and outstandingly important part of institution supervision. Since the prudential approach is expected to gain further prominence, in addition to compliance with specific legal provisions, reviews concentrating on the spirit of regulation are likely to become increasingly dominant elements of supervisory contact keeping.

The updating of the Guidelines is also justified by a third factor, i.e. based on the experience of past reviews, the Supervisory Authority has developed efficient rules of procedure, a consistent methodology and a well-established standpoint concerning some components of the review. In accordance with the above, the present Guidelines formulate itemised requirements – among others – for a wide range of risk types, for the consideration of external factors, for the calculation of solvency capital and for compliance with Pillar 1 minimum requirements. The more precise and more detailed formulation of expectations is hoped to improve the information and risk awareness of supervised institutions and is expected to contribute to smooth reviews.

The Guidelines are made up of three parts and (together with the Introduction) are divided into ten chapters. The first part contains four chapters which present the following:

- the scope of the Pillar 2 review,
- the component parts of the process, its role in the supervisory practice as well as its general principles,
- the review grades presented via institutional categories, and
- the framework and process of supervisory evaluation concerning the internal capital calculation of institutions.

The more extensive second part of the Guidelines presents the content of the complex Pillar 2 review activity:

- supervisory evaluation of internal capital adequacy procedures,
- examining compliance with regulatory minimum requirements, and
- other Pillar 2 supervisory tasks.

The third part of the Guidelines describes the supervisory review process for small institutions (simplified SREP process) with a separate chapter dedicated to the special features characterising the review process for investment firms.

PÉNZÜGYI SZERVEZETEK
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Part I –
The review process and its general principles

I. Scope of the supervisory review process

The internal capital calculation and the supervisory review process apply to **all institutions that fall under the CRD scope:**

- **Commercial banks**
- **Specialised credit institutions**
- **Co-operative credit institutions**
- **Investment firms**
- **Financial enterprises under consolidated supervision in view of their parent company under consolidated supervision**

The review process under the CRD applies, at a consolidated level, to all credit institutions, investment firms registered in the member states of the European Union. The CRD obliges both the supervised institutions and the supervisory authorities to develop group-level business and supervisory procedures and to carry them out and evaluate their internal capital adequacy procedures at a group level.

For institutions and groups of institutions it means that they must coordinate their internal governance processes and risk management procedures within the group, whereas internal capital calculation must be performed in a uniform framework and based on a uniform methodology extended to all the group members. Likewise, in the course of the review, the supervisory authorities also conduct a group-level evaluation and determine, at a consolidated level, the volume of the economic capital requirements.

The complexity of the supervisory procedure significantly increases in the case of international banking groups with associated companies registered in the member states of the European Union. In such cases, consolidated supervision is performed by the competent authorities of the parent company's member state as a so-called „home" supervision, whereas the competent authorities of the member states concerned are responsible for the review of the associated companies in their capacity as so-called „host" supervisors. In order to avoid unnecessary duplications and to ensure efficient supervision, the European authorities have committed themselves to establishing and maintaining a coordination and co-operation framework system which is responsible for information exchange and division of tasks among the supervisors of the member states.

Since 2011 co-operation among national supervisors have become more intensive and efficient because according to Directive 2009/111/EC of the European Union, the review process of international banking groups is conducted in the form of a joint risk assessment with the participation of the competent supervisors. The central institutions of the joint assessment are the so-called supervisory colleges, in which the competent authorities performing the supervision of the given banking group jointly assess the risk exposure and control of the group members headed by the consolidating supervisor. The joint assessment is concluded by a so-called joint decision in which the supervisory college makes a decision concerning Pillar 2 capital adequacy,

and at the same time, specifies the volume of regulatory capital necessary to maintain at consolidated and individual levels.[1]

[1] Further details concerning the joint risk assessment of supervisory colleges are set forth in Section 146 of Act CXII of 1996 on Credit Institutions and Financial Enterprises (ACI) and in EBA Guidelines 39 (CEBS [2010b]). The present Guidelines discuss the question in detail under Chapter IV in which the SREP process is presented. This subject is also dealt with in Annex No. 4.

II. Structure and principles of the supervisory review process

In this chapter the structure and basic principles of the supervisory review process[2] (SRP) are presented which the national supervisors falling under the uniform jurisdiction of the European Union consider binding. Accordingly, the review process is designed to ensure that the supervised institutions have adequate risk management systems and also have sufficient capital to cover all material risks deriving from their business activities. The SRP is also designed to strengthen the relationship between the risk exposure of institutions and their capital positions, and to improve the quality of risk awareness and risk management procedures. In this sense, SRP represents an integral part of the prudential supervisory activity.

The Pillar 2 review process – according to the definition of the Basel Committee – contains four generally accepted principles. These are the following:

- Supervised institutions are able to assess their capital requirement based on their risk profile, and they also have a strategy aimed at maintaining their capital level.

- Supervisors regularly examine and are at all times able to determine the internal capital adequacy and capital strategy of institutions and the institution's ability to monitor and meet regulatory requirements.

- Supervisors expect institutions to have at all times a capital level higher than the prescribed minimum requirements, i.e. higher than the Pillar 1 capital adequacy threshold and the one set in the course of the review.

- If supervisors find that the institutions' processes and capital adequacy are inadequate or not guaranteed, they can intervene into the institutions' operation by applying suitable and timely adjustment measures.

It is evident that the above principles of the SRP set obligations for both the institutions and the supervisory authorities. The codified source of these obligations are the following: Directive 2006/48/EC of the European Parliament and of the Council (hereinafter referred to as the Directive or the CRD), in which Articles 22 and 123 apply to the institutions' internal capital adequacy process, whereas Articles 124, 136 and 145 deal with binding rules for the supervisors. Although the Directive specifies only the most general framework of the review process, the main structure of the SRP can be drawn up based on the articles cited above.

II.1. Four chief components of the review process

The review process is a symmetrical one in the sense that within the review process both the supervised institutions and the supervisors perform a dual task: on the one hand, they conduct continuous risk assessment, while on the other hand, they evaluate the capital adequacy procedures at regular intervals. The supervisory review in the broad sense thus contains the

[2] Section 145/A of Act CXII of 1996 on Credit Institutions and Financial Enterprises (hereinafter ACI)

following four chief activities, of which the first two set binding requirements for supervised institutions, while the latter two are mandatory for the Supervisory Authority. The SRP process is illustrated by the following chart:

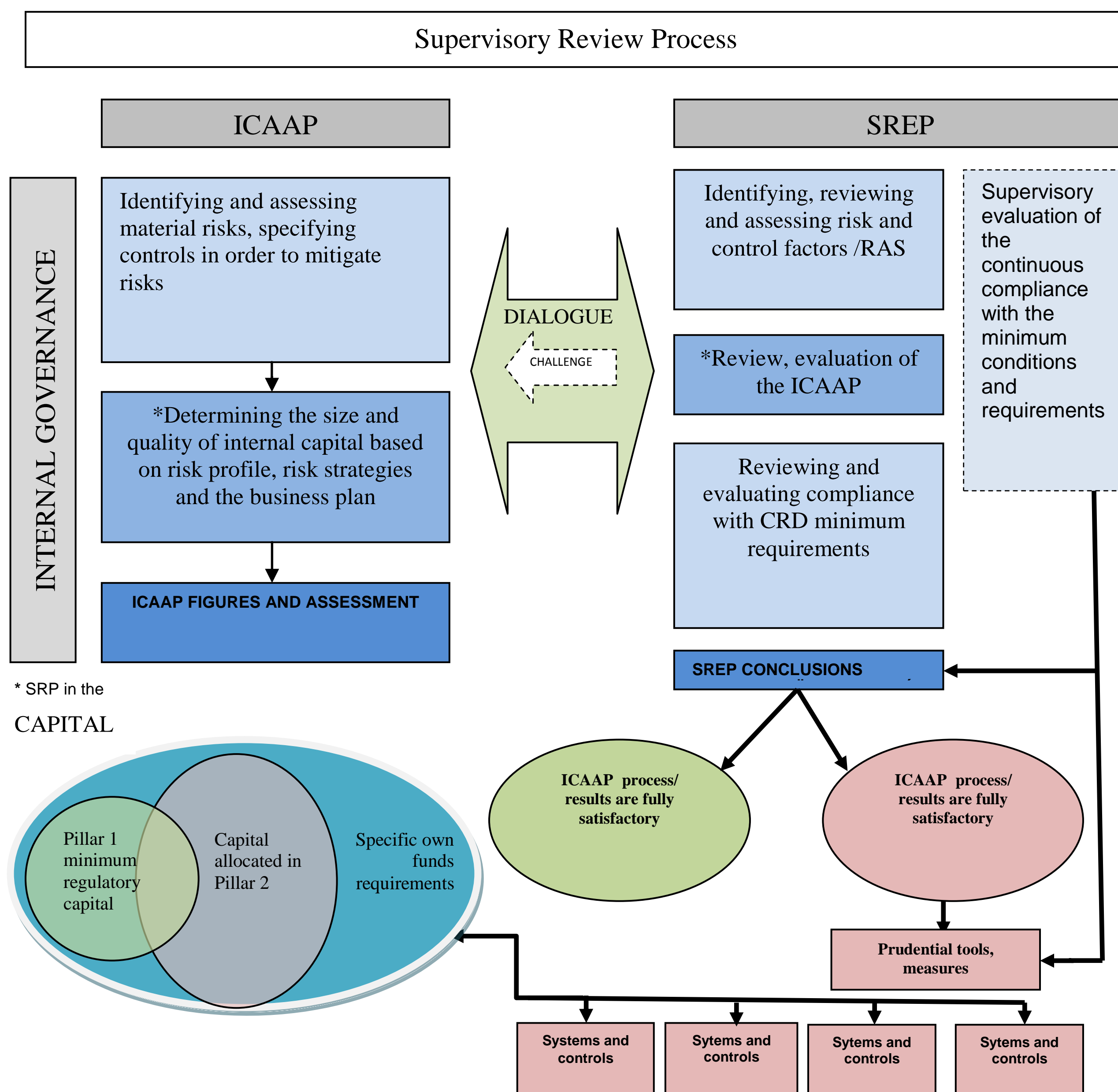

Figure 1

II.1.1 Internal governance

Internal governance is a general collective term for objectives, processes, procedures and rules which have an effect on the efficient, predictable and secure operation of a given institution. Responsible internal governance is assured in a financial organisation by developing and

operating an appropriate organisational structure, organisation, structure of the management body and by exercising management and supervision functions. Responsible internal governance is to be interpreted as a part of responsible corporate governance, the first being a narrower term in the sense that it does not cover the relationship with the owners and other partners of institutions. Responsibility for internal governance is placed by the provisions of CRD on the management bodies of institutions (decision-making, executive and supervisory bodies). Their task is to formulate adequate business and organisational strategies and to develop efficient and comprehensive internal control functions. Members of the management bodies must be fully knowledgeable about the complexity of the institution's activities and its risk profile. In accordance with them, the institution must have suitable risk mitigation tools and adequate capital level.

Although there are a number of legal regulations concerning the adequate operation of institutional processes, nevertheless internal governance - interpreted as part of the Pillar 2 review – contains all activities and processes that have prudential significance, i.e. activities and processes conducted independently by institutions in the interest of their own prudent operations.

II.1.2 Internal Capital Adequacy Assessment Process (ICAAP)

Pursuant to Section 76/K of Act CXII of 1996 (hereinafter referred to as ACI), supervised institutions are obliged to assess the appropriateness of their capital calculation processes as part of their internal governance activity at least with an annual frequency. This is the process, i.e. the Internal Capital Adequacy Assessment Process (ICAAP), in which institutions conduct, with regular frequency, a full-scale assessment of the quality of their internal governance, they analyse in detail the extent and characteristics of their risk exposure as well as determine the conditions under which their business activity can be continued in a prudent manner. The institutions present the conclusions of their ICAAP results to the supervisors, thereby demonstrating that

- the expert and management bodies of the institution identify, assess and monitor the accepted risks in an appropriate manner,
- the available capital level of the institution is in harmony with the risk profile,
- the institution continuously improves its risk management systems based on the available internal, sectoral and supervisory experience.

It is the duty of the institutions to develop a methodology for the Internal Capital Adequacy Assessment Process. In its ICAAP Guidelines (HFSA [2010a]), the Supervisory Authority describes in detail the possible approaches and its expectations connected with them.

II.1.3 Risk Assessment System

The Risk Assessment System[3] (RAS) is an internal tool for supervisors to continuously monitor changes in risks based on information received from the institutions and especially based on the SREP experience. This system also facilitates the efficient use of supervisory resources as well as communication among national supervisors, moreover, it also serves as a tool to determine the focal points of supervisory investigations.

Institutions are classified into categories by the domestic supervisory risk assessment - which relies on a uniform methodology and which treats each and every supervised institution under the same principle - according to two dimensions: based on the impact on the financial system and on the probability of the risk events taking place. Impact rating is performed according to sectors and to types of institutions, whereas risk rating uses a scale of four grades for assessing the level of inherent risks and the quality of risk control. Since risk assessment goes beyond the individual risk types (e.g. credit risk, market risk) and extends to the general domains of the institutions' operation (e.g. profitability, business strategy), its results can be utilised in a differentiated manner to take supervisory measures (e.g. capital add-on requirement). The system of risk analyses conducted by the supervisory colleges for banking groups is presented in Annex No. 4.

II.1.4 Supervisory Review and Evaluation Process (SREP)

The Supervisory Review and Evaluation Process (SREP) is the most important mandatory element of SRP for supervisory authorities. In the course of the review[4] that is conducted with annual regularity, the HFSA – in addition to processing the ICAAP – makes a judgement on all the material exposures of institutions, on their overall risk profile, on the quality of internal governance and risk management as well as on the available risk mitigating factors and loss-bearing elements.
Consequently, the SREP is not limited merely to assessing the ICAAP, rather it contains a number of supervisory investigations of prudential nature which are reasonable to be carried out in Pillar 2.

Despite the differences among institutions – e.g. differences in risk profile, activities, market positions –the Supervisory Authority wishes to use a consistent and balanced approach in the course of the SREP. Due to the multitude of qualitative and quantitative factors of capital adequacy, this approach cannot be translated into simple rules, nevertheless the present Guidelines attempt to provide a clear description of the particular supervisory expectations and methodology applied in the course of the SREP.

When the review is concluded, the Supervisory Authority – either independently or in co-operation with other national supervisors concerned – defines the risk management tasks of institutions, specifies the extent of Pillar 2 capital adequacy and the necessary level of regulatory

[3] Further information can be obtained the homepage of the Supervisory Authority about the HFSA's risk assessment system, more generally, about the risk-based supervision methodology in the document titled Information on the risk-based supervision methodology.
[4] Pursuant to Section 145/A of Act CXII of 1996 on Credit Institutions and Financial Enterprises (hereinafter ACI).

capital to be sustained at all times. As a result of the Pillar 2 review, the level of regulatory – in other words Pillar 1 – capital (interpreted in a narrow sense) is also defined. In the case of institutions that pursue complex market activities, their internal capital adequacy processes are assessed in a detailed SREP report.

II.2. Main principles of the review process

The above described elements of the review process make up a well-founded and balanced system which is built on some general principles. These principles apply to the review process as a whole and exert a palpable impact on supervisory procedures in most areas of institution supervision.

The principle of proportionality

Based on the requirements and definitions of the CDR, the principle of proportionality applies to the review process as a whole and to all institutions falling under its scope. It means that the extent and depth of supervisory expectations must be proportionate to the type, size, activities and risk exposure of the given institution. Since a very large circle of institutions fall under the scope of CRD, both the supervised institutions and the supervisors must exhibit flexibility and discretion when applying the relevant legal provisions. In the framework of the SRP - as a rule of thumb - it is the institutions that are obliged to demonstrate to the supervisors that the methodology chosen by them covers all material risks and captures them in an appropriately sophisticated way.

The practical application of the principle of proportionality means that there may be significant differences from institution to institution in the depth and horizon of the supervisory review process and in the nature of the dialogue conducted with the institution as well as in its form and intensity. In the case of institutions which pursue simple business activities and exert a weak impact on the market system, and which are characterised by a limited international and market presence, the SRP review can be performed simply by using a uniform method of questionnaires, case-by-case management consultations or by a SREP conducted within the framework of comprehensive investigations. On the other hand, in the case of groups of institutions which have a significant market share and conduct complex activities, it is justified to carry out an independent review process that covers individual characteristic features and to maintain an intensive ICAAP-SREP dialogue.

The primacy of risk management over capital generation

The main function of the Pillar 2 review process is to become fully aware of institutions' risk processes and to identify their material risk exposures as accurately as possible. Based on the above factors, it is possible to define the capital level that can assure solvent operation. As a result of the process, both the supervised institutions and the supervisors can acquire a precise picture about the risk profile of institutions which is unquestionably the token for well-established and efficient business and regulatory decisions.

As a consequence of the above, the main objective of the review process is to raise risk awareness and to consolidate process regulation rather than to make an additional increase in the capital requirement under Pillar 2. In the course of the review, the Supervisory Authority intends to firmly apply the above principle through it policy on capital generation: the prescription - within the review - of an additional capital coverage which is higher than the ICAAP capital requirement is considered as a consequential and involuntary measure which counterbalances the institutions' deficiencies in risk measurement and risk management.

Consequently, the calculated economic capital requirement of institutions, which conduct properly regulated, sophisticated and full-scale risk measurement and operate in the spirit of risk awareness, is accepted by the Supervisory Authority in Pillar as a SREP capital requirement. In the case of deficiencies revealed in the risk management system, an additional capital requirement level is established which inevitably serves as an incentive for the institution affected to develop more advanced internal capital adequacy procedures, or in a general sense, a more advanced risk management system.

Continuous improvement of risk methods and expectations

It is the HFSA's firm opinion that under the constantly changing financial, economic and risk conditions, the applied business processes and risk methods need continuous improvement in order to ensure the prudent operation of institutions. The supervised institutions consequently need to regularly reconsider the appropriateness of their risk management processes and capital calculation methods. This need is highlighted by the fact that even the most advanced sectoral and regulatory methods have undergone further improvement in the recent past and are likely to follow suit in the foreseeable future as well, a tendency as a result of which supervisory expectations will also continue to become deeper and more extensive.

In the field of internal capital adequacy procedures, the HFSA expects institutions to make two adjustments: on the one hand, adjustment to the prevailing market and risk conditions, on the other hand, continuous improvements in line with industry standards and regulatory expectations. In actual practice, it means that the appropriateness of approaches and levels judged adequate in previous reviews is not automatically relevant in the present.

The equality and complementary nature of the two pillars of the review

The method of capital requirement calculation and the size of the capital necessary for prudent operation are defined by the legal regulations concerning Pillar 1 in a cogent manner, based on uniform methodology. Due to the diversity of institutions, the capital required cannot necessarily be adjusted to the actual risk exposure in the regulatory pillar[5], that is why supervisory activity cannot be limited to examining compliance with regulatory minimum requirements. The Pillar 2 review process – among others – is aimed at ensuring that, in addition to formal legal compliance, the risk profile and capital adequacy of institutions may also be assessed from economic point of view in order to guarantee prudent operation.

The equality and complementary nature of the two pillars of capital calculation derive directly from the regulatory concept according to which the management of risks covered under Pillars 1

[5] Henceforth the terms Pillar 1 and regulatory pillar are used as synonyms.

and 2 bear the same importance. Nevertheless, while in Pillar 1 mandatory risk measurement solutions are prescribed for a well-defined group of risks, in Pillar 2 the risk-based approach can be used by institutions for all material risks in a free or dispositive way. As a result, in Pillar 1 the Supervisory Authority lays the emphasis on compliance with legal requirements, whereas in the course of Pillar 2 review the Supervisory Authority principally focuses on the quality, reliability and completeness of internal capital calculation processes.

It is exactly the above differences that justify the independent nature of the two pillars, but they also shed light on their mutual interdependence. Risk management experience collected and methods developed in one of the two pillars (e.g. rating systems applied for credit risk models, parameter estimates) can be utilised almost without exception in the other pillar, too. Partly due to such considerations, the HFSA believes that the investigation of certain Pillar 1 areas which require sophisticated methodology (e.g. validated advanced methods or the annual review of the elements of solvency capital) need to be carried out in Pillar 2 as a part of the SREP.

In addition to the above principles, the following general principles – developed by CEBS [6] - are accepted and applied by the Supervisory Authority in the course of the review process:

1. The supervisory review process represents an integral part of the general risk-based supervision methodology.
2. The SREP is to be used for each group member[7].
3. The SREP must cover the total scope of activities of institutions.
4. The SREP must be comprehensive and be extended to every detail (extensive): it must cover each and every material risk of the institution, it must also include the investigation of internal governance.
5. The SREP represents a part of the review of the institution's internal capital adequacy assessment process (ICAAP).
6. The SREP represents a part of the investigation as to whether the institution satisfies the CRD minimum requirements.[8]
7. The SREP must reveal potential problems and material risks, as well as deficiencies in control and risk management characteristic of the institution. As a consequence of the process, the picture must show whether the final result calculated on the basis of the institution's ICAAP is found to be reliable by the HFSA.
8. In the course of the SREP the supervisor obtains assurance whether it is necessary to initiate any supervisory measure.
9. The institution concerned is to be informed about the result of the SREP.
10. The Supervisory Review Process must be conducted annually in order to make sure that the assessment should be up-to-date and should reflect current external and internal conditions.

[6] CEBS GL 03 – Guidelines on Supervisory Review Process
[7] Internal capital calculation applies to all institutions falling under the scope of the CRD, whereas the ICAAP-SREP also extends to financial enterprises falling under consolidated supervision in respect of the consolidated supervision of their parent company.
[8] Within the framework of the supervisory review process, the supervisor must obtain assurance with regard to the requirements for methods applied in calculating the minimum capital requirements and to the control and risk management requirements that when institutions apply advanced methods (credit risk – IRB, operational risk – AMA) they satisfy the requirements set out in Hungarian laws both upon launching such methods and continuously after that. , t.

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III. SREP grades and categories of supervised institutions

The frequency, extent, the level of details of the review and evaluation are defined by the Supervisory Authority based on the size, the importance of activity, nature, the order of magnitude and complexity of credit institutions and investments firms with the stipulation that the review and evaluation must be performed at least once a year. Three SREP grades are differentiated according to the depth of the review process and to the intensity of the dialogue conducted with the institution:

- Simplified SREP for small and medium-sized institutions – review using questionnaires and not including an on-site phase
- Standard SREP for small and medium-sized institutions – review conducted in the course of comprehensive investigations
- Complex SREP for systemically important financial institutions

When the review methods are chosen, essentially two different categories of institutions are distinguished:

- systemically important financial institutions in which always a complex SREP is conducted
- other institutions that do not fall into this category - small and medium-sized institutions in which the supervisory review is conducted by the HFSA in the course of comprehensive investigations mandatory in 3 to 5 years (standard SREP), and in which in the years between comprehensive investigations the review is performed by questionnaires (simplified SREP).

Simplified SREP for small and medium-sized institutions

A simplified review using questionnaires is conducted by the Supervisory Authority in institutions which are characterised by a simple structure of activity, which have a small market share and do not have a significant international activity. The risk profile of such institutions is transparent, they have a weak impact on systemic risk, and do not apply advanced methods for measuring their risks. They are typically investment firms, specialised credit institutions and co-operative credit institutions. Some smaller banks also belong to this institutional category.

In the case of small and medium-sized institutions, compliance with the requirements of the CRD and domestic laws are ensured by the Supervisory Authority in Pillar 2 within the scope of a simplified process. Because of the large number of such institutions, the simplified SREP is primarily made up of a questionnaire survey whose results are typically processed based on the information provided by the institution via mandatory date report to the HFSA and on lessons drawn from past investigations. The SREP questionnaire covers all important aspects of the institution's operation, and performs assessment along four main risk categories (external environment, corporate governance, market presence, business processes and capital). Because of the diverse structure of activities and relevant regulation, a separate questionnaire is available for credit institutions and investment firms. The questionnaires are shown in Annex No. 3.

Standard SREP for small and medium-sized institutions

The review of small and medium-sized institutions is not always performed in the form of questionnaires, because if in a given review period the legal provisions require a comprehensive on-site investigation for certain members of this group of institutions, then the HFSA is to conduct a Pillar 2 review within this framework in each and every case.

Due to the nature of the on-site review conducted within the framework of a comprehensive investigation, it offers a more in-depth and more detailed review than the review conducted annually by questionnaires, and it also offers an opportunity to examine information provided by questionnaires in previous years as well as to directly judge the practice of risk management and the extent of risks. Comprehensive investigations are conducted according to the provisions of the HFSA Act[9] in every 3 to 5 years in the institutions affected. In the years between the comprehensive investigations a simplified review by questionnaires is performed by the HFSA annually.

Complex SREP for systemically important financial institutions

As a rule of thumb, institutions and groups of institutions which have a balance sheet total of more than HUF 500 billion and are classified into the strong or above medium risk impact category are considered by the Supervisory Authority as systemically important financial institutions. These institutions are characterised by complex financial activities, significant market share, active international relations as well as the application of advanced risk management and risk measurement methods. Due to their central role which they play in financial mediation, their solvent and prudent operation may be of crucial importance from the aspect of the Hungarian financial system as a whole.

Due to the size and systemic importance of these financial institutions and because of the information asymmetries arising from their complexity and advanced institutional procedures, the Supervisory Authority regards the Pillar 2 review an indispensible element of prudential supervisory policy in this particular circle of institutions. In accordance with the above, the Supervisory Authority expects economic capital calculations to be carried out by using the most advanced industry standards and by applying highly sophisticated methods. Owing to the complexity of the risk profile and to the sophisticated risk measurement techniques, the uncertainty of risk exposure – which is attributable to methodological and information deficiencies in the ICAAP – cannot be substantially reduced in this particular circle of institutions even if supervisory control calculations are carried out within the framework of the SREP. This may result in a significant additional increase of capital requirement.

The activity of these institutions is evaluated within a complex review, which typically relies on an intensive dialogue, on-site presence of several weeks and regular top management and expert consultations. The participation in the review process of national supervisory authorities of other EU member states is now almost always a common practice: their presence in the on-site investigation phase is somewhat less frequent, whereas their presence in the international supervisory colleges is now quite general in the course of joint risk assessment and decision-making.

[9] Act CLVIII of 2010 on the Hungarian Financial Supervisory Authority.

The timing of the complex SREP is accommodated to the home supervisor's procedures, it is carried out annually with the same intensity, consequently, in this group of institutions it is conducted separately from the comprehensive investigations.

IV. SREP process

In this chapter the most important element of Pillar 2 review, namely, the process and form of complex supervisory evaluation on the internal capital adequacy procedures, is presented in a detailed way. Procedures for standard SREP described in this chapter are to be interpreted with a view to proportionality considerations, and whenever there is a difference between the practices of the two SREP grades, it is separately indicated. The simplified supervisory review process is discussed in a separate chapter.

The Supervisory Authority maintains its right to make use of the opportunity to conduct the SREP partially, for given risk(s), in one or in a number of institutions. In harmony with the SREP principles, the annual review does not necessary mean that a comprehensive review process is carried out. In the course of the review, the impact of significant changes is to be evaluated based on on-site visits, on on-site and off-site investigations in the subject period as well as on information gathered from other sources. Nevertheless, it may also occur that in the course of continuous supervision, the Supervisory Authority becomes aware of a change whose nature and magnitude warrant the launch of a comprehensive review process in the given institution despite the fact that it was not planned in advance (it may even take place in between two annual SREP reviews).

The review process is to be developed and carried out prudently in coordination with the partner supervisors and with the supervised institutions in order to ensure that the guidelines (CEBS [2006a]) issued by the European Banking Authority (EBA) are adhered to in practice especially concerning the SREP principles and functions.

The SREP process has recently been significantly modified as a result of two factors. One of them is the increasingly in-depth co-operation among national supervisors, the establishment of supervisory colleges and the introduction of the joint decision process, a factor that exerted an equally important impact on the timing, process, assessment methods and legal consequences of the SREP in the case of international groups of institutions. The other factor that contributed to changes in the review process is the HFSA's experience which shows that in a number of previous cases institutions were not properly informed and that institutions demanded more information concerning the Pillar 2 supervisory procedures.

In the following pages the SREP process is presented with a special emphasis on the above-mentioned new forms of the review process and information provision by the HFSA.

IV.1 Preparation of the SREP

The relevant Hungarian and European laws stipulate that the SREP is to be carried out annually. The Supervisory Authority in coordination with partner supervisors and with supervised institutions establishes, in advance, the annual timetable of the supervisory evaluation at the end of the year preceding the current year in order to assure the successful and efficient administration of the process. The SREP Timetable serves the purpose of describing the supervisory expectations vis-a-vis institutions in a uniform framework for the given review round

(i.e. for all the reviews of the given year). The SREP Timetable contains the following information:

- the deadline for completing the ICAAP and the reference date for quantifying the internal capital requirements,
- a list of the mandatory components of the ICAAP documentation as well as the deadline for submitting the documentation to the Supervisory Authority,
- the timing, duration and phases for conducting the SREP according to groups of institutions,
- a list of supervisory stress tests to be carried out as well as their detailed methodology,
- additional capital requirements concerning portfolios which are deemed risky,
- any other special supervisory expectations valid for the given review round.

The general supervisory expectations for the internal capital adequacy assessment process is accessible in the ICAAP Guidelines on the homepage of the HFSA in the future too, whereas the SREP Timetable exclusively applies to the review of the year concerned (complex SREP) and contains periodic characteristics and focal points. The prior information sent on the scheduled examinations enables institutions to possess proper knowledge and foresight about the HFSA's expectations and to prepare themselves for the supervisory dialogue and to carry out their internal capital calculation procedures at an appropriately high quality level.

IV.2 Collection of the ICAAP documentation

In each and every review round the Supervisory Authority expects institutions to submit an official ICAAP documentation approved by the top management.[10] The content of the documentation must conform to the expectations set out in the ICAAP Guidelines of the Supervisory Authority. In respect of the ICAAP documentation, the Supervisory Authority has the following expectations:

- it must contain the ICAAP guidelines of the institution concerned, in which the implemented approaches are presented with precise references to each and every element of the ICAAP documentation;
- it must contain the mandatory elements described in the prior information sent to institutions;
- it must contain the so-called the SREP Review Form properly filled in, containing the results of capital calculation according to risk types;
- the available information and documents must clearly indicate what the institution concerned considers as the elements of the ICAAP;
- all data and calculations annexed to the documentation must apply to the reference period specified by the HFSA.

[10] Only the ICAAP methodological guidelines of institutions together with the related regulation (risk-taking policy, remuneration policy) are required by the Supervisory Authority with the stipulation that top management approval is mandatory. However, in an ideal case, the total ICAAP documentation submitted to the Supervisory Authority has such qualification.

In the case of standard and complex SREP, the on-site investigation phase in itself as well as the personalised nature and the intensity of the dialogue conducted with the institution may warrant the necessity to provide the Supervisory Authority with further information.

IV.3 Supervisory evaluation of internal capital adequacy – ICAAP-SREP dialogue

The internal and supervisory evaluations of Pillar 2 capital adequacy are closely linked together, because the Supervisory Authority conducts a dialogue with each and every supervised institution in a formal manner on the extent of the economic capital requirements. The first step is to submit the ICAAP documentation to the HFSA, whereas most of this work covers the processing and discussing of internal capital adequacy procedures with the involvement of institutions. The work is concluded by the HFSA's formulating its final standpoint on the ICAAP of institutions. The intensity of the dialogue primarily depends on the complexity of the given institution's activity and on the extent of differences between the two parties' assessment. In actual practice it means that in the case of complex institutions with strong effect the collection and processing of the ICAAP documentation are followed by a customised on-site coordination of several weeks conducted by the Supervisory Authority. In the case of standard SREP, the SREP carried out in the framework of a comprehensive investigation is adjusted in its extent and intensity to the procedures of comprehensive investigations.

The ICAAP-SREP dialogue is aimed at ensuring the full implementation of general supervisory expectations when economic capital is calculated. In the spirit of methodological freedom, the Supervisory Authority accepts all consistent, well-founded and sufficiently conservative internal capital calculation approaches, however, in order to guarantee the consistency of the review process, it acts in line with the previously elaborated methodology. The structure of the dialogue is based on the „building blocks" approach, i.e. certain elements of the capital calculation interpreted in the broad sense (e.g. risk types, capital elements, external factors, business processes, etc.) are relatively well-defined and are mostly assessed separately from each other. Certain elements of the methodology have been established in the guidelines published by the supervisory and institution protection systems, other elements are crystallised only during the gradual development of relations among institutions as a result of practical solutions and in procedural traditions.

IV.4 Risk mitigation measures and the determination of economic capital requirements

In the course of the review, parallel with the ICAAP assessment, the Supervisory Authority also fulfils other prudential tasks specified as parts of the SREP. These tasks primarily include the following: periodically checking the advanced capital calculation methods based on validated internal qualification of Pillar 1 capital requirement calculations, carrying out investigations that are deemed outstandingly important in the review round (e.g. risky portfolios, supervisory stress tests), reviewing business operation areas to be evaluated in Pillar 2 (e.g. internal governance,

remuneration policy). The expectations in relation to the above elements are specified in the ICAAP Guidelines issued for supervised institutions and in the documents annexed hereto.

When the content element of the SREP process is completed – during complex SREP in each and every case, in the case of standard review performed as part of the comprehensive investigation for small and medium-sized institutions – the Supervisory Authority draws up an evaluation report (in the case of a standard SREP it is a part of a comprehensive investigation report[11]). The evaluation report contains in detail the HFSA's findings concerning the economic capital calculation and internal capital adequacy of the supervised institution, the required risk mitigation measures as well as the SREP capital requirements which the HFSA deems justified. The investigation report is forwarded by the HFSA to the supervised institution which has the opportunity to give opinion on it with a short, agreed timeframe. The HFSA takes into consideration the opinion of the institution when it formulates its final report and takes a decision on the related supervisory measures. It is, however, not in a position to take into consideration the newly proposed methodological changes and possible initiatives aimed at a partial repeated implementation of the ICAAP.

Joint risk assessment and decision[12]

In the case of international banking groups which fall under the jurisdiction of several EU supervisory authorities, which are registered and operate in the European Economic Area, the final assessment of risks, the discussion of the applied methods and the concept of capital, as well as the determination of economic capital requirements are done within the framework of the international supervisory colleges. The institutional frames of international supervisory co-operation are regulated by Article 129 of the CRD and by Directive 2009/111/EC of the European Parliament and of the Council, whereas the operational functioning of supervisory colleges together with joint risk assessment and decision are set out in detail in Guidelines 34 and 39 of EBA (CEBS [2010i], CEBS [2010b]).
In the first step of the joint risk assessment and decision (JRAD), when the evaluation phase of the SREP is concluded, the competent national supervisors interpret the results of risk assessment, the conclusions of the ICAAP review as well as the fulfilment of the CRD minimum requirements in a uniform structure elaborated by the international supervisory community, and then they forward such to the consolidating supervisor. In templates that serve as a basis of joint assessment the individual risk types and the individual ICAAP processes are evaluated on a scale of 1 through 4, whereas compliance with CRD requirements is presented in a descriptive manner.

As the second main step of the JRAD the content of the uniform evaluation templates are summarised and synthesised by the consolidating supervisor on the level of the total group, and based on the above, the college dialogue is led and moderated by the consolidating supervisor with the participation of each and every competent supervisor. In the course of this dialogue, every important aspect of risk assessment, ICAAP methodologies and CRD minimum requirements are addressed and discussed, as a result of which the risk characteristics and capital adequacy of each group member and the group as a whole are jointly assessed by the college members based on a uniform methodology in a comparative manner.

[11] In the chapter on Capital by annexing the SREP evaluation form.
[12] For more details see Annex No. 4.

If there is full consensus among the college member, JRAD is concluded by an evaluation report produced by the consolidating supervisor with the consent of partner supervisors, a report that contains also the joint decisions on capital adequacy. The report prepared is then forwarded by the consolidating supervisor to all partner supervisors concerned and to the group leader institution.

If the supervisors fail to reach a consensus, members of the college may conduct coordination with EBA. If in the course of this procedure the authorities fail to take a joint decision within four months, decision on the adequacy of the group's solvency capital and additional capital requirement (in view of the risk analysis of associated companies and opinion of partner supervisors) is taken by the consolidating supervisor, whereas in the case of local institutions decision is taken by the host supervisors.

IV.5 Closing of SREP

As a general rule, the Pillar 2 review process is closed with a review report, SREP Review Form produced for the institution, or by the forwarding of a so-called prudential letter (if the participating parties have a consensus or an agreement).[13]
The prudential letter is a unique tool of the Supervisory Authority which states the minimum level of Pillar 2 capital adequacy relying on and referring to the content of the evaluation report.

The prudential letter contains the following:

- executive summary,
- risk assessment for the main risk categories,
- the capital deemed necessary based on the SREP,
- risk mitigating measures, expected status.

In the case of complex SREP, Pillar 2 capital adequacy is determined in proportion to the Pillar 1 capital requirement, in percentage form, with respect to the relation between the solvency capital levels available in the two pillars. In the case of non-complex SREP, Pillar 2 capital requirement is specified by the Supervisory Authority in the percentage of the Pillar 1 capital requirement.

The results of the SREP process must be documented in the SREP Review Form[14].
A resolution is issued if in the course of a SREP review a condition that warrants the use of supervisory measures occurs (in particular, if the institution fails to meet the supervisory expectations).

The introduction of supervisory measures is justified, in particular, by the following conditions:

- the supervised institution does not accept either the risk mitigating measures deemed necessary by the HFSA or the specified level of the SREP capital requirement

[13] In the case of small and medium-sized institutions – with a special view to the large number of such institutions – an investigation report is only generated if the SREP review is carried out within the scope of a comprehensive investigation.
[14] See Annex No 2.

- the HFSA requests/sets an obligation for institutions to contribute additional capital if the HFSA believes that the capital adequacy is not guaranteed according to the legal provisions.

- in the case of capital shortage of significant extent, the HFSA may oblige institutions to consolidate their corporate governance and risk management systems, to review their policies on impairment loss and provisioning and to limit their scope of activities and their operational conditions.

The supervisory measures for credit institutions are summarised in Table 1:

CASES OF MANDATORY APPLICATION OF MEASURES BASED AND SUPERVISORY REVIEW AND EVALUATION	CASES OF DISCRETIONARY APPLICATION OF MEASURES
In the event of any material breach of the legal provisions[15]	
1 The legal title of the measures *(Paragraph a) of Subsection (6) of Section 151)* The Authority shall take the necessary sanctions or exceptional measures if, according to the findings of the supervisory review and evaluation carried out under Section 145/A, the own funds held by credit institutions **is insufficient to ensure sound management and coverage of their risks.** **2 The legal title of the measures** (*Section 152/A*) If, according to the findings of the supervisory review and evaluation, the economic value of a credit institution (assets and liabilities, off-balance-sheet items, net cash flow at current value) declines by more than twenty percent of its own funds as a result of the change in interest rates as specified in Paragraph h) of Subsection (2) of Section 145/A, relative to its economic value calculated without the effects of the interest rate changes, the Authority shall take the measures necessary. **3 The legal title of the measures** (*Paragraph c)1 of Subsection (2) of Section 151*) The Authority – taking into account the available data and information – **shall take the necessary measure** if the own funds of the financial institution **is less than seventy-five percent** of the capital requirements specified for credit institutions in Subsections (1)-(2) of Section 76. **Necessary measures** (*Paragraph b) 9 of Subsection (2) of Section 153*) The Authority shall oblige financial institution to comply with the additional capital requirement prescribed under Subsection (2) of Section 76, however, the additional capital charge of the credit institution may not be higher than the capital requirement specified in Subsection (1) of Section 76. In the course of applying the above measure when **the extent of the additional capital requirement is established by the Supervisory Authority, it shall consider the following**: ▪ the qualitative and quantitative aspects of the credit institution's internal capital adequacy assessment process, ▪ the adequacy of the credit institution's governance and risk management systems, and ▪ the results of the supervisory review carried out at the credit institution.(*Subsection (2a) of Section 153*)	**The legal title of the measures** The Supervisory Authority **shall consider the necessity of the measure** if the financial institution or its top executive violates the ACI, the legal provisions on successful, reliable and independent ownership and on prudent operation, as well as the legal provisions on cash flow, and also if it fails to carry out its activities with due care, and in particular, if its own funds fail to reach the **capital requirements specified in Subsections (1)-(2) of Section 76 for credit institutions**. **Applicable measures** (*Paragraph e) 1 of Subsection (1) of Section 151)* Each and every measure specified in Subsection (1) of Section 153 of ACI can be applied, and in particular, the Supervisory Authority may oblige the financial institution to elaborate and execute an action plan as well as to prescribe extraordinary data supply obligation.
2 In the event of a serious breach of the legal provisions	

[15] The prescriptions of ACI as well as legal regulations on prudent operation and legal regulations on cash flow, excluding the Decree of MNB (National Bank of Hungary - NBH) on Payment Services Activities.

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1 The legal title of the measures (*Paragraph a) of Subsection (6) of Section 151*) The Authority shall take the necessary sanctions or exceptional measures if, according to the findings of the supervisory review and evaluation carried out under Section 145/A, the own funds held by credit institutions **is insufficient to ensure sound management and coverage of their risks.**. **2 The legal title of the measures** (*Paragraph a)1, Subsection (3) of Section 151*) The Supervisory Authority **shall take the necessary sanctions or and exceptional measures** if the own funds of the financial institution **is less than sixty percent** of the capital requirements specified for credit institutions in Subsections (1)-(2) of Section 76. <u>**Exceptional measures**</u> (*Paragraph a 3) of Subsection (1) of Section 157*) The Authority shall apply measures specified under Paragraph 1/B. Furthermore, it may prescribe as an e**xceptional measure**[16] compliance with a capital requirement exceeding the limit specified in Subsections (1)-(2) of Section 76, which may not be higher than the value of capital requirement specified in Subsection (1) of Section 76, in respect of the financial services performed by the financial institution and the exposure of the financial institution.	
3 Based on supervisory review and evaluation	

[16] If the Supervisory Authority applies an exceptional measure, provisions of Section 158 of ACI shall be taken into account according to which:
Upon receipt of the notification about the application of an exceptional measure, the credit institution's board of directors shall take immediate action to ensure that

a) the deposits and other receivables of the owners due from the credit institution are blocked,
b) all loans provided to companies in their sphere of interests are suspended,
c) no financial services involving exposures to the owners are rendered.

If the measures listed hereabove have been implemented, the owners may not claim set-offs from the credit institution. The board of directors of the credit institution shall keep the restrictions listed hereabove in effect until the owners terminate the cause for taking the measures or the liquidation of the credit institution is ordered by the court.
If simultaneously with the exceptional measures, the Supervisory Authority calls upon the owner of the financial institution to take the necessary measure, the owners shall be exempted from the legal consequences related to the notification only if they announced to the Authority the sale of their shares in writing at least sixty days prior to receiving the notification.

1 The legal title of the measures (*Paragraph a) of, Subsection (6) of Section 151*) The Authority shall take the necessary sanctions or exceptional measures if, according to the findings of the supervisory review and evaluation carried out under Section 145/A, the own funds held by credit institutions **is insufficient to ensure sound management and coverage of their risks**. **2 The legal title of the measures** (*Section 152/A*) If, according to the findings of the supervisory review and evaluation, **the economic value of a credit institution** (assets and liabilities, off-balance-sheet items, net cash flow at current value) **declines by more than twenty percent of its own funds as a result of the change in interest rates as specified in Paragraph h) of Subsection (2) of Section 145/A, relative to its economic value calculated without the effects of the interest rate changes,** the Supervisory Authority **shall take the measures necessary.** **<u>Adequate measures</u>** The Authority applies the measures specified under Paragraphs 1/B and 2/B.	

The supervisory measures for investment firms are summarised in Table 2:

CASES OF MANDATORY APPLICATION OF MEASURES BASED AND SUPERVISORY REVIEW AND EVALUATION	CASES OF DISCRETIONARY APPLICATION OF MEASURES
1 Based on supervisory review and evaluation **The legal title of the measures** (*Section 163 of AIFCD*) If, according to the findings of the supervisory review and evaluation, **the economic value of an investment firm** (assets and liabilities, off-balance-sheet items, net cash flow at current value) **declines by more than twenty percent of its own funds as a result of the change in interest rates** as specified in Paragraph i) of Subsection (2) of Section 162, **relative to its economic value calculated without the effects of the interest rate changes,** the Authority **shall take the measures necessary.** **<u>Adequate measures</u>** The Authority orders the investment firm to comply with the additional capital requirement prescribed under Subsection (5) of Section 105; however, the additional capital requirement of the investment firm may not be higher than double that of the capital requirement specified in Subsection (2) of Section 105 (*Paragraph t) of Subsection (1) of Section 164 of AIFCD*) When applying the above measure, the **Authority shall consider the following aspects in determining the extent of the** additional capital requirement: - the qualitative and quantitative aspects of the internal capital adequacy assessment process of the investment firm, - the adequacy of the governance and risk management systems of the investment firm, and - the results of the supervisory review carried out at the investment firm. (*Subsection (4) of Section 164 of AIFCD*)	The Authority shall have powers to take the following measures in the event of any breach of the obligations laid down in the AIFCD: issue an official warning to investment firms, to executive employees and owners of investment firms, in particular, in the event of any infringement of or non-compliance with the relevant statutory provisions, internal policies prescribed in AIFCD and the Authority's resolution for compliance with the said provisions, or - if necessary - shall order compliance within the prescribed deadline; shall instruct an investment firm to draw up a reorganization plan within the prescribed deadline and to submit it to the Authority, as well as order an investment firm to disclose specific data or information, and may apply the measure according to Paragraph 1. B) (*Paragraphs a), f), g) and t) of Subsection (1) of Section 164 of AIFCD*)

In the case of the joint risk assessment and decision (JRAD) which regulates the review of international groups of institutions, the SREP is concluded by a joint decision on Pillar 2 capital adequacy by the consolidating supervisor issued with the consensus of the college members. The joint decision comes into force directly in the form accepted under the legal system of the given „home" supervisory country under the jurisdiction of the national supervisory authorities affected provided the joint decision is taken within four months of submitting to the supervisors the report which was drawn up by the consolidating supervisor and which contains group level risk assessment.[17] Additionally, a prudential letter is sent by the consolidating supervisor to the top management of the banking group and by the partner supervisors concerned to the associated companies under their competence in which letter information is provided about the results of the joint risk assessment, about the prescribed minimum level of regulatory capital and about the relevant risk mitigating measures.

The delivery of a prudential letter or the issuance of a resolution represents in all cases the closing of the SREP. Nevertheless, there are two reasons which may lead to the continuations of the supervisory dialogue for the institution in the given review round. On the one hand, the SREP report may typically describe a number of risk management and methodological expectations whose deadline for implementation may precede the commencement of the following review. Checking their implementations requires in many cases continuous communication between the Supervisory Authority and the institutions in Pillar 2. On the other hand, in especially justified and exceptional cases, the institutions themselves may initiate the interim review of the prescribed capital ratio. One such typical case is when profound changes take place in the institution's market position, business activity, risk profile or risk management system that result in considerable changes in the extent of its economic capital requirement in relation to its regulatory capital requirement.

The supervisory measure must be monitored following the closing of the annual the SREP, i.e. the implementation of the prescribed tasks, the maintenance of additional capital levels, the actual implementation of possible adds-on, as well as compliance with the deadlines must be examined. The monitoring of capital levels is carried out based on data provision, whereas in the implementation of other prescribed tasks is reviewed either within the next the SREP or at a specific date set during the closing of the SREP.

Annual evaluation of complex SREP reviews

In order to provide a more detailed information and more efficient orientation for institutions and in order to strengthen the consistency of the SREP among institutions, the Supervisory Authority produces and publishes a summary report following every review round. This so-called SREP Evaluation presents, in a general and summarising way, the results of review processes for the last year according to categories of institutions and risk types, it also presents the relationship of Pillars 1 and 2 ICAAP and SREP capital requirements, the results of supervisory stress test, the structure of risky portfolios, the main problems experienced during the reviews as well as the general methodological considerations aimed at improving internal capital calculation processes.

[17] In the opposite case, it is the duty of the individual partner supervisors in member state competence to issue a resolution about the capital adequacy of the institution.

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Part II – The content and methodology of the review

V. ICAAP review

As described above, the Supervisory Authority conducts diverse activities in the course of the SREP, one of the most important parts of this work is the supervisory evaluation of the institutions' internal capital adequacy procedures. During the internal capital adequacy assessment processes institutions quantify the justified level of their economic capital requirement on a group level within a uniform framework, in a regulated manner, based on their risk exposures and institutional processes. The Supervisory Authority offers institutions a broad freedom of choice for selecting the methods for carrying out the ICAAP, and it counts on institutions' initiatives and self-recognition. As a result, the assessment of internal capital adequacy can be performed in a number of different forms and approaches and in quite diverse quality. The HFSA – adjusting to the diversity of institution – is usually ready to accept all consistent, sufficiently conservative methods which are in harmony with the activities and risks of the given institution and comply with professional standards.

The full and complete performance of prudential supervision demands the Supervisory Authority to make sure that expectations for methodological sophistication and the spread of best practices in the sector gradually prevail in the SREP framework. For this reason, the review places special emphasis on efforts designed to completely eliminate differences in sophistication of the ICAAP, to take account of the full circle of risks, to strengthen the role of the applied methods in business processes as well as to further improve the quality of risk management.

In the interest of accomplishing the above objectives, the Supervisory Authority takes deliberate and consistent efforts. In addition to providing detailed information to institutions and performing the SREP with high-quality methodology, these efforts are primarily reflected in developing a carefully weighed Pillar 2 capital generation policy and in its consistent application. In this respect, the Supervisory Authority stresses especially the following aspects:

- in the case of institutions which are properly regulated from every aspect, which conduct sophisticated and full-scale risk measurement and which operate with risk awareness, the economic capital requirement calculated by the institution complies with the SREP capital requirements;
- in the case of deficiencies detected in process regulation, in risk measurement and management, which may have an impact on the extent of potential losses or on their reliable quantification, the HFSA may impose additional capital requirement within the SREP;[18]
- in the above cases, the HFSA takes deliberate efforts to ensure that the SREP capital requirement of the institution (together with the prescribed additional capital) should exceed the level of economic capital requirement which would have been established as a result of the ICAAP if risks were taken into account fully in a transparent and appropriately prudent way.

In the following pages of this chapter expectations set for internal capital calculations are outlined, and the individual evaluation of material risks as well as the supervisory methodology

[18] Parallel with this, the HFSA may obviously instruct the institution to review its risk measurement and risk management methods.

and the internal management of available own funds are described with a view to external factors. The chapter is concluded by some closing comment.

V.1. General questions of internal capital calculation

Before the special supervisory expectations on the individual areas of ICAAP are outlined, it is necessary to clarify some general questions of internal capital calculation.

Risk methodology and capital requirements

The free choice of methodology ensures for institutions to adjust their internal capital adequacy procedures to their business processes and risk profile. For each and every risk type the Supervisory Authority exclusively accepts only consistent, sophisticated and appropriately conservative approaches, however, in addition to the above, it expects in the case of Pillar 1 risk types that methods using more sophisticated risk measurement techniques than the ones employed in the regulatory pillar should be used in Pillar 2.[19] In the case of standard Pillar 1 methods, this requirement is to be interpreted as an application of the risk sensitive approach, whereas in the case of validated Pillar 1 methods – on top of the prescribed minimum stress tests set in legal provisions – this means that capital requirements are to be more profoundly supported by sensitivity analyses, stability tests and alternative models. Nevertheless, the Supervisory Authority regards the validated Pillar 1 risk sensitive methods as well-performing capital calculation methods and uses them as a point of reference in weighing alternative capital calculation methods.

Because of the risk exposure and the diversity of methodologies, it is not an easy task to judge the appropriateness of the chosen solutions, and to a certain extent, it is based on necessary expert judgement, estimates and subjective evaluation as well as on comparisons with other supervised institutions. In certain cases, the ICAAP methodology is evidently wrong or unreliable which makes the precise establishment of risk exposure even more difficult. In such cases, the Supervisory Authority intends to take the risks into account in a comprehensive and conservative manner by means of alternative calculations based on sensible proposals. In such cases, however, (due to the lack of necessary information) there is generally only possibility for approximative procedures.

Furthermore, if the staff of the Supervisory Authority finds that the risks have been calculated with excessive caution, and as a consequence, internal capital requirements have been significantly overestimated, they call the attention of the given institution to that fact. If the source of the overestimated capital requirement is clearly identifiable (e.g. a higher confidence level was applied), while the level of capital requirement calculated with due care can still be reliably quantified, then the Supervisory Authority regards the latter as the guiding element within the SREP, and specifies the SREP capital requirement at a level lower than calculated in the ICAAP.

[19] This expectation does not apply for small institutions.

Group approach

Internal capital calculations must be carried out by the supervised institutions at group level. In the case of large credit institutions, certain factors (cost efficiency, business policy and/or methodology) may justify the use of certain centralised solutions which are not necessarily capable of considering the risk exposure of each and every group member in a properly nuanced or sophisticated manner. Based on past review experience, this is a rather frequent phenomenon which directly affects the supervisory activity in Hungary in two different respects.

On the one hand, the Hungarian associated companies of international banking groups apply, almost without exception, the centralised methodology applicable for the group as a whole within the ICAAP. The solutions thus formulated are very diverse in every respect and are adjusted to and rely on the needs of the associated companies and partner supervisors to a very different extent. The Supervisory Authority expects the following vis-the-vis institutions which fall under host supervision and which apply Pillar 2 international group-level methodology:

- they are expected to become active participants in developing the ICAAP processes, i.e. they are expected to have a thorough knowledge of methods and calculations used by the parent institution, to learn its weaknesses and deficiencies, to endeavour to correct them as well as to develop their methodology. As far as possible, they are also expected to harmonise their risk measurement procedures and business practices;
- they are expected to be able to identify local-level characteristic risks and to demonstrate the sufficient level of allocated capital requirement by using alternative local-level calculations which may be independent from the central methodology if it is presumed to have deficiencies.

The other aspect of potential problems deriving from the use of group-level methods is visible in relation to Hungarian sub-portfolios. In such cases, group leading institutions fail to present with proper depth and details the market processes and risk exposures of local group members (e.g. investment firms and leasing companies, fund managers, pension funds). The Supervisory Authority expects these institutions to be able to substantiate – by possibly using local-level risk calculation - the applicability and adequacy of the relevant components of group-level methodology even for group members which conduct particular activities or have a special risk profile.

The selection of security level

Institutions have the opportunity to determine the security level – in other words: risk appetite – different from the one applied in Pillar 1 for their internal capital adequacy procedures. This requirement is mostly linked to the credit risk probability levels – typically exceeding 99.9 % - which belong to certain classification rating of the external credit rating institutions. This may however be also the result of a decision independent from the above.

As a rule of thumb, the Supervisory Authority follows the procedures below within the SREP:

- in the case of Pillar 1 risks (credit, operational and market risks), the Supervisory Authority does not accept a risk probability level that is lower than the confidence level of internal models and advanced methods applied in the regulatory pillar, and
- in the case of Pillar 2 risks, a level that is lower than the 99.9% confidence level.

If the institution (e.g. due to the uniform methodology used at group level) conducts the internal capital calculation at a probability level lower than the above, the Supervisory Authority expects the risk exposure to be recalculated to reach the above-specified security level. Institutions which apply a probability level higher than the prescribed one are also expected to follow suit, because it significantly improves comparability with Pillar 1 values.

Selection of risk time horizon

The selection of time horizon is also an important factor from the perspective of the risk extents. It may be justified to choose different time periods both for the individual institutions and for the individual risk types due to the differences in the institution's market position, risk management practices and liquidity characteristics of assets. While in the case of – for instance – market and liquidity risks, the actual time period is typically very short (days or weeks), in the case of certain long-term exposures and portfolio segments (e.g. project credits or insurance-type products), the time horizon may even extend to several years.

As a rule of thumb, in accordance with the ICAAP Guidelines, the Supervisory Authority sets the economic capital requirements for the period of one year. Institutions may deviate from this requirement with sound reasons, nevertheless, their risk exposure must also be determined with the time horizon of one year in every case.

Use of the selected capital calculation methods for business purposes

According to the HFSA's standpoint, the actual adequacy and reliability of the Pillar 2 capital calculation methods are best demonstrated if they play a real role in the risk management system of institutions, and if their results are utilised in business processes (e.g.. capital planning, performance evaluation, pricing, provisioning, credit rating, capital allocation). As a consequence of the above, the Supervisory Authority expects institutions to make efforts at all times to approximate their Pillar 2 capital calculation methods with their actual business processes. In accordance with the use test expectation, institutions are required to demonstrate at all times their calculated risk exposure in their business applications and in their risk management practice based on actually used approaches regardless whether the given institution uses alternative capital calculation methods different from the above within the ICAAP.

In respect of use tests, two further considerations are worth mentioning. On the other hand, supervised institutions often make use of the services of external business consultancy firms in order to formulate, develop and operate high-quality risk measurement techniques and capital calculation models. In such cases, the supervised institution is expected to become a real „master" of the methods concerned, in other words, to have thorough knowledge about them and to be able to maintain, develop and operate them independently. On the other hand, the Supervisory Authority emphasises that the institution should actually carry out the risk mitigation

measures prescribed in the course of previous reviews and that they should be implemented in the business and risk management processes in order to meet the use test expectation.

If the Supervisory Authority concludes that an institution failed to meet the above-cited use test expectations, then – in harmony with the importance and uncertainty of the relevant risk factors – it may prescribe additional capital requirements within the SREP either for one specific risk type or for the total capital requirement. In the case of apparent non-compliance with supervisory instructions formulated as a result of previous reviews, the extent of the capital adds-on prescribed (under this legal title) is proportionate to the severity of the default. If non-compliance occurs repeatedly or on multiple counts, the additionally prescribed capital requirement exceeds 10 percent of the total economic capital requirement.

V.2. Evaluation of material risks

The pivotal points of the supervisory evaluation on possible risk methodologies within the ICAAP are addressed below. In accordance with the ICAAP Guidelines, the Supervisory Authority emphasises that the list of risks enumerated in them cannot be regarded either as an exclusive or a complete one, consequently, the institution has the option to develop and define its risk structure based on its own characteristics. It is an essential expectation of the HFSA that all risks, which are considered material, should be consistently taken into account. Although the HFSA takes the risk structure of the institution as the point of departure in the course of developing the SREP, it expects its horizon to be extended to all risks listed in the ICAAP Guidelines, covered under Pillar 1, not fully covered under Pillar 1 and covered under Pillar 2. The supervisory expectations for the individual risk types are discussed below.

V.2.1 Credit risk

Credit risks represent the most important risks for credit institutions falling under the scope of the CDR and constitute the majority of the total risk exposure. Accordingly, the HFSA stresses that credit risk factors should be fully identified and adequately taken into account, and the credit risk capital requirement should be defined in a prudent manner.

It can be stated that in the recent years there has been a continuous improvement in the institutions' risk awareness, and credit risk methods applied in Pillar 2 have been considerably developed and fine-tuned. In order to encourage the spread of such favourable tendencies in an increasingly wide range of institutions, the Supervisory Authority summarises the lessons of previous reviews in the present Guidelines and – by formulating supervisory expectations in a detailed and precise way – it provides guidance and assistance to each and every institution for successfully conducting the internal credit risk capital calculation based on advanced methods.

With respect to the importance and complexity of credit risks, in parallel with the above, automatic additional capital requirements are prescribed for institutions which fall under the complex SREP and do not use risk sensitive methods based on internal ratings and calculations in Pillar 2. The HFSA justifies the additional capital requirement by citing potential risks attributable to an assessment of risk exposure conducted without sufficient depth and

sophistication, potential risks whose presumed extent is specified at a minimum 25 percent for institutions falling under the complex SREP.

The evaluation methodology followed by the Supervisory Authority in the course of Pillar 2 reviews cannot be precisely defined because of the complexity of lending processes and capital calculations as well as due to the multitude of possible consistent and prudent approaches. Nevertheless, the general aspects associated with each element and area of credit risk models are clearly identifiable and they represent the necessary preconditions for prudent consideration. Below, these subjects are elaborated in summary.

Assumptions of the credit risk model

Advanced capital calculation models attribute credit quality changes to some underlying factor, whereas the starting point for capital requirement is determined by the stressed loss which is associated with the excessive swing of the above factor and which is subject to portfolio characteristics. The IRB model authorised in the regulatory pillar operates with the systemic risk factor, whereas the sensitivity which expresses changes generated by the default of transactions in this factor is defined by the correlation coefficient set out in legal provisions. Conversely, in the most widely used Pillar 2 credit risk models institutions have the opportunity to identify the risk factors, their number and their parallel movements as well as to select the nature and strength of their impact on credit quality. In the Creditrisk+ model, for instance, the sensitivity to underlying factor(s) is represented by the spread of the probability of default (PD), while in the portfolio models based on the multifactor Merton model, it is defined by factor weights and asset correlations.[20]

Institutions using the IRB model in Pillar 2 are expected, in general, by the HFSA to meet minimum requirements set for IRB methods validated by the CRD. If the given institution calculates capital requirement by using the Pillar 1 standard method, the HFSA expects it to demonstrate the full scale of exposures covered by the IRB model, and also to report the possible discrepancies from the regulatory pillar when exposures are taken into account. If the institution concerned applies the very same IRB method in Pillar 1, then the possible most precise identification of the potential weaknesses and sensitive elements of the applied model is considered by the HFSA as the most important Pillar 2 task concerning credit risk.

In the case of institutions applying an approach different from the IRB model in Pillar 2, the Supervisory Authority has the following expectations:

- With regard to the selected underlying risk factor or factors they should demonstrate the close parallel movement of both the external factors which in reality define the credit quality of the institution's exposures and the time series of default rates. This is because if factors, largely independent from default processes, are chosen the underestimation of risk exposures cannot be avoided even by the use of higher asset correlations.

- In the absence of a sufficient quantity of data, calibrating the sensitivity of credit quality to the risk factor is a very difficult task, and it is indispensible to use expert estimates.

[20] The operation of these models is well described, among others, in BCBS [1999], BCBS [2005], Credit Suisse Financial Products [1997], Gupton et al. [1997], Janecskó [2002], Janecskó [2004], Wilson [1997a], Wilson [1997b].

The prudent approach must be followed with a consideration to statistical uncertainties which is especially justified by the instability of asset correlations experienced in stress periods. Since the sensitivity of defaults – e.g. the relative spread of PDs in the Creditrisk+ model or the asset correlation in the Merton portfolio model – can easily be made congruent to the correlation coefficient of the IRB model in the case of single-sector approaches, the Supervisory Authority expects institutions to carry out such comparisons. [21]

- In the case of multi-sector models which operate with more than one systemic risk factor, the definition of relations between factors as well as the sensitivity (factor weights) to certain factors of the transactions often proves to be the delicate task. In the case of selecting observable factors, the capturing of the joint distribution of risk factors in a prudent way can be challenged due to the instability of empirical correlations, whereas in the case of latent factors, it can be challenged due to the modelling difficulties of decomposition. As a result of the above, in the case of applying multifactor models, the Supervisory Authority has the following expectations from institutions:
    - on top of the risk characteristics of transactions, institutions should also use some other group formation features (e.g. sectoral rating in the corporate portfolio, exchange rate risk in retail models) in modelling;
    - they should be able to quantify the diversification impact created by model assumptions, i.e. even in the case of the complete parallel movement of risk factors the extent of stressed loss should be specified.

- Institutions should demonstrate the completeness of exposures covered under the Pillar 2 model, highlighting in detail deviations from the regulatory pillar and their justification. In addition to the above, the Supervisory Authority has the following expectations from institutions which use the IRB method validated in Pillar 1:
    - with regard to parameters which do not have an influence on the mechanism of the Pillar 2 credit risk model - exposure at default (EAD), loss given default, (LGD) and credit conversion factor (CCF) – they should quantify the impacts of deviation from Pillar 1;
    - they should enable the comparison of the parameters used in the two types of methodology (EAD, PD, LGD, maturity factor, etc.) with the capital calculation results (risk-weighted asset value, expected loss, capital requirement) either at transaction level or at least at the level of rating models and/or rating categories.

Estimating the probability of default

Most of the credit risk capital models define the possible largest extent of losses in view of the general risk characteristics of portfolio elements. One of the most important risk indicators is the transactions' probability of default, which can be conditional or unconditional: the first expresses

[21] It is an empirical fact in connection with the spread of default rates that sensitivity to the state of the economy decreases with the growth of the probability of default. As a result of the above, it may be practical to select different relative spreads in the individual PD bands.

the credit quality status for a given point of time and/or for an environmental condition, while the latter reflects the extent of the transactions' general or „fundamental" default risk.[22]

It may be practical to use conditional PDs for certain applications (e.g. pricing, provisioning), whereas the input variables of well-known capital calculation models represent unconditional probabilities of default, i.e. average PDs of transactions which span over long-term, economic cycles. The estimation of PDs is adequate only if institutions

- define the extent of the PD based on a sufficiently long, multiannual time series and on unambiguous definition of default;
- conduct not only a simple averaging of historical default data, but ensure that the span over cycles is also taken into account (by applying adequate weighting);
- counterbalance the statistical uncertainty of estimation by means of conservative adjustments and forward-looking approach.

In addition, the Supervisory Authority expects from institutions that the PD estimation should be conducted based on detailed methodology as laid down in the ICAAP documentation – similarly to annual back-testing and recalibration – rather than based on ad hoc solutions and procedures. If the data used during the estimation do not meet the requirements of the PD definition (e.g. the use of NPL ratios), then the assumptions used in the course of the estimation should be substantiated in detail.

Estimating the loss rate

The loss given default is a risk characteristic of identical importance with the probability of default. According to the HFSA's view, in LGD estimates - unlike in PD estimates - the use of expected values in unfavourable (so-called downturn) situations represents the logically consistent solution rather than the use of long-term averages. Since in respect of several portfolio segments, the majority of Hungarian institutions do not have sufficient data of losses which would reflect actual returns in order to have reliable statistical estimates for LGD, they must often rely on conservative expert assumptions. In the course of the above, special attention should be paid to the following:

- The observed characteristics and distribution of the status of transactions following default must be used for the estimates (e.g. recovery, sale of receivables and collaterals, closure). In order to appropriately estimate the downturn it is not sufficient to project past trends, rather the characteristics of the period since the breakout of the crisis as well as the possible changes in the conditions of returns must also be thoroughly considered.

- It does not suffice to deal exclusively with closed transactions since in the numerous portfolios most of the transactions at default at some time in the past are still waiting for closure or sale at present. In the case of unclosed exposures, the estimation should also consider the fact that in transactions that are in default for a long time cannot be expected to yield the rate and outcome of returns which transactions closed with

[22] The technical literature often refers to the conditional, short-term probability of default as PIT (point-in-time) PD as opposed to the long-term, average TTC (through-the-cycle) PD.

relative speed produce. Therefore, the HFSA expects that the default characteristics of closed and unclosed transactions should be compared.

- In the case of the application of non-linear capital functions in the PD (such as the IRB model), the Supervisory Authority challenges the approach which interprets the recovery or restructuring of non-performing transactions as a recovery which influences LGD. This is underlined by the fact that such transactions represent a high share within the portfolio – due to the non-linearity of the capital function according to PD – which may result in the underestimation of capital requirements. In such cases, the Supervisory Authority considers it expedient to disregard the impact of the above-mentioned „technical" defaults in the course of LGD estimation and to modify the definition of default in medium and long term.[23]

- If the LGD estimation is not based on actual recovery data, it does not suffice to conduct an exclusive overview of coverage levels in a direct way (e.g. an overview which compares exposures with the liquidation value of collaterals). In such situations, the Supervisory Authority believes that the reliable and expedient method is to jointly and item-by-item take into account collateral values, external environmental impacts (e.g. exchange rate devaluation) and coverage levels (LTV). In the absence of the above, the Supervisory Authority also accepts simulation methods which utilise empirical distributions characterising the coverage level for the given portfolio.

Similarly to PD estimation, institutions must record in the ICAAP documentation the detailed methodology of LGD estimation and its review timetable which is expected to be carried out with at least an annual regularity. Furthermore, the Supervisory Authority expects institutions to also analyse the relationship between recoveries expected in the course of LGD estimation and group formation characteristics of the exposure (e.g. the size of the exposure, the extent of delay, the time length of collection or the extent of collection costs).

Items in default, expected losses and impairments

Items in default represent an important part of risk exposure. The advanced methods with the point of departure in performing portfolios – from IRB calculations to the models cited above – usually do not assign any capital requirement to such items. According to regulatory logic, coverage for losses generated by items in default – similarly to the expected losses of live portfolios – should be provided through impairments and provisioning.[24] If the expected losses on the total portfolio calculated on the basis of risk parameters exceed the extent of impairment, the difference between the two is recognised as the factor which increases capital requirements and reduces own funds. Another important aspect in terms of provisioning is that the Supervisory Authority has strong reservations about accepting as a prudent practice the accounting of the expected losses of live portfolios against future income.[25]

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[23] In capital calculation it may be justified to proportionately reduce the input PDs in line with the absence of correction affecting LGD.
[24] See the applicable provisions of Annex No. 5 of Act CXII of 1996 (ACI) and Government Decree 196/2007 on the Management of Credit Risk and the Calculation of Credit Risk Capital Requirement (Hungarian acronym: Hkr).
[25] This subject matter is addressed in detail in connection with the available own funds in section V.4.

The Supervisory Authority investigates the level of impairment and provisioning primarily from prudential point of view during the review. If the legal provisions are adhered to, it deems the lower level of provisioning acceptable if it is counterbalanced by capital. At the same time, it expects institutions to assess in Pillar 2 the risks of items in defaults and to demonstrate in their respect the sufficient extent of losses recognised and provisioning made.

The Supervisory Authority, at the same time, would welcome if in developing their impairment and provisioning procedures institutions were to take into account the value of credit risk parameters, empirical recovery rates and the expected changes in the economic, market and legal environment. This is underlined by the fact that – unlike in the regulatory pillar - in Pillar 2 the mutual accounting (netting) of impairment surpluses and deficits shown in the individual portfolio segments is subject to deliberation and is not automatically authorised. In such cases, the Supervisory Authority deliberates why and to what extent the accounting of impairment surpluses is justified to cover the expected losses of other portfolios.

Shareholdings and property investments

In order to fully take into account exposures, it is also required to assess the risks of shares. This assessment cannot be based solely on their book values, but also the extent of risk corresponding to the characteristics of the given shareholding should also be used. If, for instance, behind shareholdings there is a property portfolio which generates revenue or which is to be sold, its risks should also be included in the economic capital calculation usually applied for such portfolio elements or collaterals.

On top of the above, in respect of risk measurement methods applied for shareholdings the relevant provisions of Government Decree 196/2007 may not be disregarded. Especially with regard to simple weighting methods, the Supervisory Authority emphasises the importance of the following:

- The realisation of the risk weight (according to Paragraph 34) and the expected loss value (according to Paragraph 40) relating to shares traded at the stock exchange and to securities representing shareholdings (investment units) is acceptable only if the application of preferential weighting to exposures is justified by the high ratio of public ownership and by the turnover.
- When the risk parameters of direct investments and shareholdings are chosen, the provisions of Paragraph 50 are deemed as guidance, and any deviations from them must be explained by the institutions in each and every case.

Special lending exposures

With regard to special lending exposures (SL) – typically project loans – the Supervisory Authority expects institutions to act with due care and with sufficient information because of the specific characteristics of SLs. Consequently, institutions

- should be aware of the specific characteristics of such exposures and of their risk characteristics in sufficient depth as well as item-by-item,
- should formulate and consistently apply the segmentation principles,

- should - in their internal parameter estimation procedures - pay proper attention to the uncertainties of estimation attributable to the typically small number of such exposures and to their low representation in rating categories.

The Supervisory Authority deems the slotting method to be the guidance for portfolios with fewer than one-hundred elements, the method which was developed for special lending transactions and which takes into account credit quality by means of simple weighting. The Supervisory Authority expects the institutions to report any deviation from the above. In case of an appropriate number of exposures and sufficient data provision, the Supervisory Authority regards as the task of institutions the analysis of the applicability of approaches more sophisticated than the slotting method.

Managing off-balance sheet items

The requirement to fully take into account credit exposures also applies to the proper management of off-balance sheet items. The Supervisory Authority encourages all institutions to carry out their own internal parameter estimation, whereas in the absence of the above the guiding principle is to use sectoral experience and credit conversion factors included in the original Basel regulation. When the risk sensitive internal method is applied, the expectation is to use an approach which takes into account the empirical experience which indicates that with the growth of default probability the probability of drawdowns against credit facilities is also up. Irrespective of the chosen approach, the HFSA finds it necessary to get to know the institutions' analyses as to what extent off-balance sheet exposures were drawn down until the date of the defaults.

Partner risks

Based on the experience of the Supervisory Authority, some banks do not consider partner risks as an organic part of credit risks. Accordingly, for instance, banks employing the IRB approach do not treat direct lending and partner risk exposures together with the same method, and they weight partner risk exposures by using the standard method without giving any particular reason even for clients which have banking book exposures and a valid rating. An even more typical solution, a remnant of former legal provisions, is the failure to handle trading and banking book exposures in a consistent manner. This is an issue the Supervisory Authority intends to focus on in the future, and it wants to place more stress on the investigation of conditions under which the impact of netting can be applied in capital calculations.

The calculation of credit risk capital requirements

When internal rating based credit risk models are used, Pillar 2 capital requirements are principally calculated as the unexpected loss (UL) of performing portfolios based on through-the-cycle (TTC) or downturn risk parameters, on the exposure characteristics of the credit portfolio and on the underlying assumptions of the capital calculation model. The outcome of the capital calculation model can only be automatically translated into the credit risk capital requirement if the expected loss (EL) of the portfolio is fully covered by setting up impairment or provisioning. Since the extent of justified provisioning is characteristically qualified by means of conditional, short-term (point-in-time, PIT) PDs and LGDs, the two values usually differ (the difference may be attributable to other causes, too). It would be logical to incorporate the difference between

impairment and EL (expected loss of the portfolio) in the capital requirement[26], but since the CRD stipulates the appropriate correction of the available capital[27], for IRB banks (where the available capital is ab ovo calculated in Pillar 1) it would be illogical to deviate from it.

V.2.2 Operational risk

When measuring operational risks, institutions almost exclusively follow one of the following two simple sectoral practices: they calculate capital requirements (the so-called Basic Indicator Approach (BIA) and the standardised (TSA) method) in the considerably risk-insensitive manner based on the guiding indicator adjusted to the results of operations, or alternatively, they quantify, in a considerably more sophisticated and risk-sensitive way, the extent of capital coverage (so-called advanced measurement approach (AMA)) by using the probability distribution of possible losses. The HFSA's experience shows that in the domain of risk awareness and risk management there is a qualitative difference in favour of institutions which use the advanced method primarily because the loss distribution-based approach requires the detailed and comprehensive assessment of the institution's operation and processes. As a consequence, the Supervisory Authority expects institutions falling under the complex SREP to carefully assess their operational profile and risks in Pillar 2 and based on the above, to make every effort to meet the regulatory expectations set for validated advanced methods at least in the fields of loss data collection, scenario analysis, risk control and the definition of loss distribution.

When advanced operational risk models are used, the Supervisory Authority primarily requires the possible fullest compliance with the relevant provisions of ACI and Government Decree 200/2007 (VII. 30.), the relevant recommendations of the Basel Committee on Banking Supervision (BCBS [2001], BCBS [2003]), and especially with the revised guidelines of the European Banking Authority (CEBS [2010d], EBA [2012]). Based on the HFSA's previous experience, institutions should in particular pay attention to the following:

- in the case of group-level capital calculations, the institution should also assess its own (individual) risk exposure, and should be aware of the sensitivity of capital requirements to changes in the input variables of the model;
- the completeness and representative nature of loss data used in capital calculations as well as the adequacy of the applied scenario parameters and the adequacy of fitted functions should also be demonstrated;
- operational risk losses associated with lending are used for processing, whereas their statistical characteristics are presented to the Supervisory Authority;
- the information (loss data, self-assessment results, stress tests, KRI indicators, etc.) for calculating internal capital requirement is used in risk management to mitigate risk exposure;
- in order to reduce operational risk exposure relating to financial market trading activities, institutions should develop appropriate governance and procedural rules set out in the relevant EBA consultation documents (CP35) and recommendation (CEBS

[26] The requirement to counterbalance impairment shortage by more capital and impairment surplus by less capital
[27] To reduce with the shortage of impairment and to increase (with a certain portion of) impairment surplus

[2010d]) as well as data recoding protocols, assessment characteristics, incentive and control mechanisms.

Since in the advanced methods of operational risks data management, process organisation and control functions are at least as important as the specification of the applied capital calculation model, the Supervisory Authority accepts the result of the advanced method as the capital requirement only on condition that the institution demonstrated a well-founded and high-quality performance in the areas listed above. In order to accomplish it the following must be ensured:

- the completeness, consistency and closed nature of data collection,
- regularly processing and interpreting the characteristics of internal and external loss data and the results generated by self-assessment and scenario analysis, as well as based on the above, formulating and implementing the appropriate risk mitigating measures, and
- efficiently representing the interests of operational risk management function - in addition to its executive role - in top management decision-making.

V.2.3 Market risk

The mapping of market risks within the ICAAP, in an ideal case, is carried out by means of the risk sensitive internal method. This is justified by the principle nature and function of the credit institution's activity as well as by the complex relationship of market risk factors and their high dimensions. In line with this, the Supervisory Authority requires within the framework of the SREP that all institutions which have a material trading portfolio should assess their risk exposures proportionately to the complexity of the portfolio by using historical or mathematical-statistical methods with regard to all material risk factors. In the absence of the above, the Supervisory Authority prescribes an additional capital requirement adjusted to the given exposure profile for institutions falling under the complex SREP to cover market risks recorded in trading and banking books.

In conformity with the philosophy of internal capital calculation, the Supervisory Authority does not specify the concrete method of implementation, it allows institutions to freely choose from among variance-covariance-based, historical or simulation-based approaches. In addition to enforcing the principle of proportionality – in line with the relevant recommendations of the Basel Committee on Banking Supervisions (BCBS[2009s]) – the Supervisory Authority is ready to fully accept the handling of market risks in Pillar 2 for institutions falling under the complex SREP with the following conditions:

- daily and local level measurements should be complemented with back-testings in which the relationship between the extent of risks generated by the model and the actual historical value changes in the portfolio is subsequently compared;
- internal trading and exposure taking limits should be in line with the institution's risk appetite and with the sophistication of its risk measurement system;
- daily risk measurement should be complemented with periodic stress testing programs which should extend to the examination of changes in all relevant risk factors;
- the market risk database should be continuously updated and the extent of the shocks applied should be re-evaluated;

- the set of market risk factors used in modelling should extend to the inherent risks of the trading book position, in particular, to
    - the relevant risk factors,
    - non-linear characteristics of derivative products,
    - characteristics deriving from the structure of the yield curve,
    - risks deriving from the volatility of foreign exchange rates and asset prices,
    - sovereign risk factors,
    - concentration risks;
- in the case of the application of empirical correlations between risk factors, assumption of normality as well as the consideration of the holding period by means of scaling (e.g. by the square root of time), the appropriateness of the applied method is demonstrated;
- if positional exposures are identified by means of economic methods (e.g. NPV method) differing from the accounting approach, the two different types of exposure concepts are compared and elaborated in detail;
- the institution should also have an indicator expressing the „stressed risk value".

In previous reviews the HFSA often found that the group of risk factors, the extent of stress testing and the risk methods applied in market stress tests, which supplemented capital calculations, were insufficient. The HFSA believes that it is especially wrong to pursue the stress-testing practice exclusively based on parallel yield curve shifts, the practice which neglects a significant proportion of risks. In such cases, the HFSA may require the institutions to quantify the output impact of scenarios which were developed by themselves. In the case of calculations which are non-transparent or inconsistent and difficult to evaluate, the HFSA may set additional capital requirements in consideration of risk limits.

V.2.4 Risks not fully covered under Pillar 1

Risks not fully covered under Pillar 1 consist of derivative risks organically connected with the main Pillar 1 risk types. The method of taking them into account is mostly defined by the methodology chosen for the key risks, consequently, the Supervisory Authority can evaluate its adequacy only in the context and light of Pillar 1 methods.

Model risks

The Supervisory Authority regards all risks deriving from the inherent uncertainty of capital calculation procedures or from their negligent application as material risks, including the standard methods, models based on validated internal ratings or widely used sectoral approaches applied by institutions. Thus, in managing model risks the task of institutions are the following:

- to be fully aware of the mechanism of the applied and alternative approaches as well as with their general characteristics and characteristics specific to them, and to be able to justify their choice;
- to make every effort to precisely map and support risk exposures by using sensitivity analyses and stress tests,
- to counterbalance the possible capital reducing effect of model errors by using adequately conservative parameters;

- to continuously monitor model outputs, their conformity with reality and to apply immediate adjustments on detecting problems.

When risk exposure is assessed with an insufficiently supported model, with the lack of prudence or with unjustified simplification – in the absence of the required conservatism and monitoring - the Supervisory Authority imposes a model risk capital requirement within the SREP by carefully considering the results of alternative approaches.

Residual risks

Residual risks are risks associated with the significant devaluation or limited applicability of collaterals covering credit exposures. It is also closely connected with the approach used in loss rate estimations because in sufficiently conservative LGD estimations the residual risk is already directly reflected in the credit risk capital requirement.

The Supervisory Authority is capable of assessing the method of considering residual risks and their capital requirements only partly in view of the methodology of LGD estimation. There are however other supervisory expectations concerning residual risks which represent an obligation even for institutions which apply highly conservative loss rates. These expectations are the following:

- Institutions should go beyond the statistics-oriented approach of LGD estimation in assessing residual risks, they should also take into account and analyse in detail the risk factors which may be responsible for the possible future devaluation or limited applicability of collaterals.
- They should conduct regular analyses about returns on collaterals and quantify the potential losses attributable to the devaluation and limited applicability of collaterals.
- They should prepare the detailed methodology for the review of collateral value discounts and provisioning rules.

Securitisation risks

It is necessary to assess and manage in Pillar 2 all risks deriving from securitisation transactions undertaken by institutions as the party who assumes risk, as the party who transfers risk or as sponsor. The relevant EBA recommendation (CEBS [2010c]) provides the guidance for the above method which is at the same time the point of departure for supervisory evaluation.

The Supervisory Authority expects institutions within the SREP to allow access to all of their securitised positions irrespective of materiality, as well as to demonstrate the regular monitoring of portfolio risks supporting securitisation. In order to establish the relevant risk weights and capital requirements, the Supervisory Authority acts with consideration to the quality of the process, to its results, to the business function of securitised positions and to the identical interests of entities sharing the risk.

V.2.5 Risks covered in Pillar 2

Although Pillar 2 risks organically complement the main risk types, they are to a certain extent independent from risks covered under Pillar 1, and represent an independent aspect of risk exposures. The capital calculation and risk management methods applied to cover such risk types may be substantially different in respect of their quality and the level of formalisation. Detailed industry standards specify how to take into account certain risks in a prudent way, in other cases, individual and ad hoc solutions are typically dominant.

Concentration risks

The concentration of exposures is an important risk factor because the underlying assumptions used in capital calculations for not fully diversified individual and partial risks may often be mistaken leading to the underestimation of risk capital requirements. In the case of even the relatively moderate sectoral concentration or concentration according to product types, the real capital requirement may be underestimated by as much as 20-40 percent by using the IRB method which assumes complete granularity of the portfolio when assessing credit risks (see e.g. BCBS [2006]).

It is a very complex task to identify and take into account concentration in a prudent way because the concentration of exposures may occur in a number of different dimensions (connected with individual transactions, according to geographical, sectoral or product types, associated with denominations, within or among risks, etc.). A wide range of risk management methods have been developed in the sector, however, each and every one of them can be challenged: the concentration limits, for instance, tend to disregard the parallel movement of underlying risk factors and the widely used concentration indices (e.g. the Herfindahl-Hirschman Index) generally neglect the diverse risk characteristics of the portfolio elements.

The guidelines of the international supervisory community (CEBS[2010e]) point out that concentration risks cannot solely be interpreted as a derivative element of credit risks, but they need to be assessed and managed in respect of most risk types. Consequently, the Supervisory Authority expects institutions to assess and manage concentration risks in respect of the widest possible range of risks in line with the above-cited EBA Guidelines by means of the possible broadest set of tools (sound and effective limit system, regular concentration analysis, stress tests and alternative model calculations, and – in justified cases – intervention into the processes, etc.). Understandably, most of the professional literature deals with the domain of credit risks where widely accepted methods are available to determine the capital requirement deriving from concentration.[28]

The Supervisory Authority starts with the presumption of materiality for concentration risks in terms of each and every institution, and the burden of proof is imposed on the institution to provide evidence otherwise. The HFSA determines the capital requirements of concentration risks with a view to the assumptions of the applied capital calculation models, to the consistent application of the aforementioned methods and to their quantified results. In the absence of the above, the HFSA quantifies the reasonable extent of economic capital requirement with regard to

[28] See, for instance, the study of Gordy – Lütkebohmert [2007] concerning the calculation of granularity adjustments.

the distribution and characteristics of exposures to Pillar 2 risk methods applied and by means of sensitivity analyses and simulation techniques.

Country risks

Country risks cover all risks associated with lending which derive from economic, regulatory, political or social events occurring outside Hungary and which represent a potential loss for the creditor. In this sense, this term is much broader than the sovereign risk expressing the solvency of sovereign governments, because country risks also include certain forms of transfer risks and collective debtor risks.

The Supervisory Authority expects institutions with material exposures outside Hungary to manage such risks by applying the effective limit system specified in rules and regulations, and also to cover them by the appropriate calibration of capital calculation model parameters or by additional capital generation which rely on the results of suitable stress tests. In the absence of the above, starting from the weight-based approach set out in the ICAAP Guidelines, the Supervisory Authority prescribes additional capital requirement in the SREP based on other conservative methods in justified cases.

For international banking groups it is not always possible to clearly define which exposures can be regarded as relevant from country risk point of view. As a rule of thumb, the Supervisory Authority states that

- in its capacity as „host" supervisor, it does not accept exposures vis-the-vis debtors in Hungary with foreign currency denominated loans as falling under county risks;
- in its capacity as consolidating supervisor, it accepts as relevant, from country risk point of view, the exposures assumed by associated companies of Hungarian institutions registered abroad vis-avis their debtors with foreign currency denominated loans.

Interest rate risks in the banking book

The Supervisory Authority considers interest rate risks in the banking book as material Pillar 2 risks for all institutions and expects them to quantify such by appropriate methods. In the course of determining risk exposures – according to the ICAAP Guidelines and the relevant recommendations of EBA (CEBS [2006c]) – they should assess the re-pricing risk, the base risk, the yield curve and option risks, whereas in each and every case - in addition to income effects - output impacts should also be evaluated.

As far as the HFSA's methodological expectations are concerned, its guidelines are the same as the ones described under market risks, in particular, in respect of the importance of stress tests, their sophistication and the extent of additional capital generation. If the supervisory expectations are not satisfied in this regard, the HFSA may request institutions to examine the effects of additional scenarios or risk factors within the SREP.

When the Supervisory Authority determines the calculated capital requirement, it takes its result as a point of departure, but it may also consider the method of taking into how other Pillar 2 risks are taken into account (e.g. the risk of the business environment) and the assumptions used for calculating available own funds (e.g. interim profit).

Liquidity risks

Adequate liquidity means that institutions are able to meet their financial obligations and to finance the placement of their funds without considerable losses. The basic activity of institutions is focused on cash flow transformation as a result of which they are inherently exposed to liquidity risks. For this reason, the Supervisory Authority includes liquidity risks in each and every case in material risks which are to be mandatorily managed under Pillar 2. Furthermore, the Supervisory Authority expects institutions at all times to make every effort to develop the diversified liability portfolio and to actively manage their financing dependence.

Following the outbreak of the crisis, considerable attention was focused on the liquidity issues of credit institutions both in the supervisory community and in the financial professional literature, and significant steps were taken to measure and manage liquidity risks in the areas of general principles of risk management (BCBS [2008a]) and of indicators effectively applicable in regulation (BCBS [2010], CEBS [2009a], CEBS [2010h]). The Basel III regulatory framework system, which comes into force gradually from 2012, assigns special priority to the issue of liquidity, whereas the Supervisory Authority addresses with this topic in its methodological guidelines (HFSA [2010b]). Mention should also be made of the fact that a law was enacted, with effect from 16 January 2012, on the monitoring of and reporting to the authorities of certain cash flow and liquidity indicators.[29]

The Supervisory Authority expects institutions to be fully aware of the documents referred to above and of essential regulatory changes as well as to adjust themselves to them particularly with regard to the Basel III liquidity indicators. Within the framework of the SREP, evaluation is conducted to find out to what extent institutions succeeded in fully assessing the relevant risk factors from liquidity point of view and based on it, to what extent they accomplished the goal of managing risk exposure in the reliable way

- by setting appropriately effective limits ,
- by developing and monitoring appropriate indicators and forecast indicators,
- by conducting survival analyses, maturity match analyses, calculation of counterbalancing capacity, methods based on liquidity-at-risk and by applying other stress tests (together with the detailed presentation of their background conditions),
- by preparing financing plans and emergency scenarios,
- by actively managing securities, collaterals and daily liquidity positions,
- by process regulation, by holding liquidity buffers and/or by raising capital.

Liquidity risk is typically a type of risk not covered by capital, but in the event of a significant level of liquidity risks and in the event of deficiencies in the risk management system, the Supervisory Authority - keeping in mind the principle of proportionality and in addition to prescribing measures designed to improve risk management procedures - may consider the possibility of additional capital generation.

[29] Decree 3/2012. (I. 12.) of the National Bank of Hungary on the amendment of Decree No. 14/2011. (X. 13.) of the National Bank of Hungary on the scope of information to be supplied for the central bank information system, on the scope of data suppliers and on the method and deadline of data supply.

Settlement risks

Settlement risk refer to the type of risk in which settlements via transfer systems are made in an unexpected way, thus, it is closely related to lending and liquidity risks. Directive 2006/49/EC of the European Parliament and of the Council interprets settlement risks in the regulatory pillar in a very narrow sense – applying only to the price difference of securities transactions. However, the definition the Supervisory Authority uses in Pillar 2 (in the ICAAP Guidelines) interprets settlement risks as the aggregate of credit and liquidity risks emerging in the settlement of transactions, risks which are subject to the characteristics of the settlement system of the securities market. The above includes risks carried by the non-contractual settlement of all OTC transactions both for securities and foreign exchange transactions. They also include the exposures of transactions settled by netting long-term derivative products which finance securities, exposures which emerge in the course of stock exchange or OTC settlements.

Within the settlement risk it is desirable to define the risk of contractual value by credit risk tools, whereas the risk of replacement costs is supposed to be determined by liquidity and market risk tools, then to capture them in a uniform concept.[30] In the absence of an internal methodology for settlement risks, the Supervisory Authority determines the risk capital requirement based on the institution's clearing house turnover in a specific proportion thereof.

Strategic or business risks

Strategic risks are risks which affect the capital or profitability and are attributable to changes in the business environment, to erroneous business or strategic decisions, to developing risky business models or to changes in the business and regulatory environment or in neglecting them.

The Supervisory Authority regards strategic or business risks as material ones for all institutions. Although the quantification of the risk capital requirement is most frequently done by using the value at risk (VaR) method, which is built on the volatility of factors affecting net results. The Supervisory Authority considers approaches of such nature unsuitable for determining risk exposure because of the dominance of the statistical approach and due to the absence of a forward-looking philosophy and background narrative. Instead, it expects the institutions themselves to try to identify their own relevant characteristics and their business environment from the perspective of risks while applying the well-known methods of corporate economics and strategic management (e.g. SWOT analysis, Porter's five forces model, etc.). Institutions are also expected to study the possible consequences of unfavourable strategic and adjustment processes relying on suitable stress scenarios and to quantify the resulting potential losses.

Reputation risks

Reputation risks are risks which directly affect the capital or profitability and originate in unfavourable opinion about the financial institution held by consumers, business partners, shareholders, investors or the authorities and are reflected in the deterioration of the institution's

[30] In addition to the above, the HFSA also finds it acceptable from theoretical point of view if the settlement risk is identified and quantified on the basis of operational risk loss events, but it expects, in each and every case, the examination of the underlying credit risk and market factors that give rise to the loss.

external judgement.

As a part of measuring reputation risks, the Supervisory Authority sets two requirements for institutions. On the one hand, during the supervisory dialogue institutions should give account of their most important institutional characteristics which carry (or alternatively, reduce) potential reputation risks. Such characteristics may, among others, be the following:

- reprehensible and public resolutions, measures issued and sanctions imposed by the Supervisory Authority, Hungarian Competition Authority or by the National Tax and Customs Administration,
- the general statistical characteristics of the number, the subject matter and the management of customer complaints received,
- pending and closed criminal and civil litigation proceedings, and
- the institution's most important social and charity activities.

The Supervisory Authority also expects institutions to study item-by-item the possible crisis situations (e.g. unfavourable media reaction, etc.) which carry direct reputation risks, their potential consequences and they should also demonstrate, with reference to appropriate institutional processes (e.g. media monitoring) and action plans, the likelihood of efficiently observing and handling them.

According to the Supervisory Authority, it is more feasible to cover reputation risks by efficient processes then by capital. In the event of questionable institutional practices, the Supervisory Authority may require provisional additional capital generation until process regulation is established in order to cover losses that originate from the previous practice and can no longer be mitigated.

V.3. Taking account of external factors

Stress tests

As set out in the ICAAP Guidelines, the Supervisory Authority interprets stress tests as a term expressing a comprehensive set of tools and procedures. The large degree of freedom and flexibility in stress testing as an approach is especially useful for two different reasons. On the one hand, the capital calculation methodology geared to considering the individual risk types independently does not in reality offer an opportunity to examine the interaction of risks. In Hungarian context, it primarily (not exclusively) means that the mutual interdependence of credit risks and exchange rate risks, market and liquidity risks, most recently sovereign risks can only be captured within a comprehensive stress test which supplements the individual risk methods. On the other hand, the capital calculation procedures for individual risks may - due to their nature - apply restrictive and simplifying assumptions (e.g. relating to independence, normality) which result in the considerable underestimation of actual risk exposures.

Recently, in addition to practical experience, there has been some theoretical research (e.g. BIS [2012]) which verified the limited applicability of stress tests to fulfil the role of early warning. Despite the above, stress tests represent substantial building blocks for institutions to prepare themselves for risk-conscious operations and for possible crisis situations. Consequently, the

Supervisory Authority expects every supervised institution within the SREP to have a thorough knowledge about the guidelines on stress testing (BCBS [2009b], CEBS [2010f]) published by the international supervisory community, about the quantified impact of changes in the most significant environmental factors on the institution's position and about the main shortcomings of the methods applied in capital calculations. In addition, the Supervisory Authority also requires that institutions falling under the complex SREP should develop stress tests with a professional sophistication similar to the key risk types and that the tests should represent an organic element of economic capital calculations. The Supervisory Authority's opinion is that it can only be accomplished if

- the individual stress tests raise unambiguous questions, they have a rational concept and their methodology is developed with the recognition that the capital requirement of most risk types represents in itself a potential loss associated with an extreme stress situation;
- one of the key elements of stress tests is the model which determines the transmission (i.e. its impact on the institution) of external environmental shocks which is developed by methodological sophistication and by utilising both past experience and (if possible) basic portfolio data;
- the individual stress tests enable the joint capture of credit and exchange rate risks and the investigation of market and liquidity risks in a uniform framework;
- stress tests – if possible – take into account feedbacks (e.g. institutional reactions, risk mitigation steps) and secondary effects (e.g. risks spill-over, risk evasion possibilities);
- stress tests also extend to mapping shortcomings in the individual capital calculation methods applied within the framework of economic capital calculations, and if possible, they indicate the capital requirement sensitivity linked to the individual risk types for the purpose of changing the methodology and applied assumptions.

The Supervisory Authority views stress testing primarily as a diagnostic tool because the capital requirement of most risk types is ab ovo the coverage of a possible extreme loss. In line with the above, the Supervisory Authority does not require institutions to recognise the results of the stress tests as a risk capital requirement in all cases. It expects, however, capital generation of sufficient extent in the following cases:

- if the stress tests for model assumptions performed in connection with the individual risk types indicate a large degree of sensitivity of the risk capital requirement;
- if stress analyses aimed at jointly taking into account several risk types (e.g. examining credit and foreign exchange risks in a uniform methodological framework) indicate a concentration of risk exposures (exceeding the total sum of risk elements);
- if the value of the given indicator exceeds the designated threshold value in the case of a stress testing methodology which serves a procyclical capital generation policy and influences the level of capital requirement based on the value of indicator variables.

With a view to the importance of the appropriate survey of risk exposures, the Supervisory Authority may additionally raise the Pillar 2 capital requirement – by a minimum 10 percent of the total regulatory capital requirement – for institutions falling under the framework of the complex SREP in the absence of significant deficiencies experienced in stress tests.

Profitability and capital planning

The role of profitability and capital planning is to provide a picture about the institution's position even in a dynamic perspective, particularly with a view to risk conditions and to the expected development of capital adequacy in the near future.

The institution's profitability investigation is an inseparable part of assessing the capital position. In addition to the various revenue generating capacities, the prudential significance of certain risk factors (e.g. strategic risk), the justified level of provisioning and the institution's optimal reaction to crisis situations may substantially differ. Since the level of profitability is closely connected with the risk exposure and portfolio quality of the institution, the Supervisory Authority expects the institution to develop and to consistently apply risk sensitive profitability indicators (e.g. RAROC) within framework of the ICAAP.

Capital planning outlines the expected medium-term development of the capital position in line with the level of profitability as well as with business and risk processes. During the supervisory review the Supervisory Authority expects that the capital plan presented should equally address regulatory and economic capital adequacy and to describe the expected development of the capital position and capital adequacy at least in the content of two scenarios (the most probable and an adverse scenario). If the probable future capital requirement can be guaranteed only by external fundraising, the institution must have well-founded and specific concepts about it.

An appropriately prepared capital planning usually relies to a large extent on the Pillar 2 risk methodology applied and, in particular, on the results of stress tests for quantifying the external environmental impacts. According to the HFSA's opinion, one of the important risk management tasks of institutions is to conduct the risk-based assessment of the result items and to utilise in capital planning the knowledge acquired about the individual risk types. This is particularly important because in the process of planning the results, the risks which are treated within the ICAAP item-by-item (e.g. interest results are parallelly moved by both market and credit risks) are in a certain sense taken into account instinctively in a uniform concept.

If the Supervisory Authority detects deficiencies and problems during the SREP about profitability and dynamic capital adequacy – due to their close connection and mutual interaction – it considers a most suitable way of intervention. This may mean an instruction to reduce the risk exposure in a regulated way rather than the requirement to make an additional increase of capital requirement or to effect fundraising.

V.4. Available own funds

In line with the ICAAP Guidelines, institutions have the option to define their concept of available own funds within Pillar 2 independently and different from the regulatory capital. Internal own funds may deviate from the Pillar 1 concept of capital both in respect of the scope of capital elements taken into account and of their evaluation methods. In addition, the Supervisory Authority has the following expectations:

- the solutions employed in Pillar 2 should be prudent and compatible with the general concept of the capital definition;
- the elements of own funds should be reliably measurable, stable, durable and usable to cover (either during operations or in a possible liquidation process) losses without any limitation.

The complexity of developing an appropriate concept of capital is indicated by the fact that the accounting capital and result concepts applied in Pillar 1 do not satisfy in many respects some of the above-cited criteria. Another source of difficulty is the problem that some of the aforementioned criteria can only be met to the detriment of the others, and certain capital elements can only be used for covering certain risk types. For the above reasons, the Supervisory Authority expects institutions that have an independent concept of Pillar 2 own funds to document in detail deviations from the concept of regulatory capital, to demonstrate the justification of the chosen solutions and to present the risk characteristics and loss absorption capacity of the capital elements not included in Pillar 1.

The Supervisory Authority judges the acceptability of the chosen concept of capital based on the Pillar 1 prudential principles (e.g. permanent availability, loss-bearing capacity, the flexibility of payments) and on effective laws. The Supervisory Authority, however, may in Pillar 2 define a narrower or broader scope of recognisable capital elements based on certain economic considerations. The narrow concept of capital may primarily influence the use of instruments or capital elements whose inclusion in own funds is unquestionable according to the laws in force, but may be regarded as challengeable from prudential point of view.[31] In the opinion of the HFSA the actually available capital is justified under Pillar 2. According to the HFSA mutual shareholdings of financial institutions shall be deducted from the own funds under Pillar 2. As the legislation may not necessarily extend to every detail of the regulation, the Supervisory Authority examines in every case in Pillar 2 compliance with the basic principles and, in justified cases, it does not exclude the possibility of applying instruments which are not identified by the legislation in force (e.g. prudential filters created by the reduction of accounting reserve elements). This may include such elements of the available own funds which do not belong to the financial instruments and /or do not fall under the scope of real assessment (e.g. real estates). In such cases, their inclusion in own funds is examined by the Supervisory Authority item-by-item and, in justified cases, the difference in favour of the book value against the fair value is taken into account as an element reducing capital in Pillar 2.

The broad definition of the concept of capital is usually formulated in accordance with the general philosophy of economic capital calculation because the broader scope of covered risks and the more sophisticated risk management methods can also ensure the priority of prudential criteria in this way. The acceptability of planned revenues for the following year to cover the expected losses of the live portfolio is a typical case of the broader sense of the internal concept of capital. Based on the expected loss-bearing capacity of the capital elements, it is justifiably required that the realisation of the included instruments should be easily measurable and

[31] Since, understandably, such cases prove to be questionable not only when applied in Pillar 2, the Supervisory Authority makes efforts to drive back such cases also in Pillar 1 by employing the available instruments, including – if necessary – by changing the regulation or by proposing changes. (E.g. the deduction from the own funds of securities which can be offset against own funds, repurchased, but not withdrawn, which aspect was not regulated earlier but was incorporated in ACI in 2010.)

predictable even in a possible crisis situation which excludes the unconditional acceptability of future revenues for the following year to cover the expected losses of the credit portfolio. The Supervisory Authority is to weigh in this question several factors which are characteristic of the institution's risk profile and operational model. In addition, prudential criteria may permit that stable capital elements – whose value is independent of inherent risks - which do not fulfil the legal conditions (e.g.: not recognised subordinated loan capital which is under amortisation or cannot be offset because of the limits, but available until repayment) also constitute a part of the internally defined concept of capital.

According to the Supervisory Authority, in addition to the „basic" elements which provide direct access, in theory, the „ancillary" capital elements whose mobilisation is limited, as well as the supplementary capital elements whose loss-bearing capacity is limited to liquidation are also acceptable as parts of the available internal own funds. However, in the practice of the reviews, some firm standpoints have been crystallised in connection with the offsetting of the above elements. In view of the typical institutional procedures, they are summarised below:

- The validation of assets not yet realised (typically evaluation reserves) needs time and/or expenses, consequently, they can be taken into account as part of own funds only with an appropriate discount.

- Institutions most frequently employ the offsetting of expected results of the given year against economic own funds. In this respect, the Supervisory Authority takes a very cautious approach: since in a serious crisis situation, with the decline of the portfolio quality the results are also down in a planned way. As a result, in forward-looking calculations of the business results only their extent reduced with the stressed default impacts is acceptable.[32] A further condition of the eligibility is to ensure that the planning of capital and the results should be based on back-tested forecasts which are regularly updated in the business processes and which are appropriately stressed and systematic. When the Supervisory Authority evaluates the offsetting of the above items, it also takes into account the management and capital coverage of other Pillar 2 risks (e.g. strategic risk).

- Some institutions take the accounting concept of capital set out in IFRS as a starting point for internal capital calculations (in line with group-level expectations), which due to its high level accumulated profit reserves is typically higher than the value of own funds calculated according to the Hungarian accounting standards and is consistent with the IFRS-based economic capital calculations reported to the group. The Supervisory Authority does not rule out the acceptability of such concept of the internal capital, but – since the scope of information available for the HFSA is not always adequate or sufficient – in the present situation it regards acceptability as a limited one, or alternatively, subject to more criteria than usual.[33]

[32] It is important to note that this is not exclusively limited to credit risk stressing of interest revenues because certain items of the income are typically connected to risks specified in Pillar 1 and Pillar 2 in an indirect and hardly quantifiable way. Based on such considerations, the Supervisory Authority does not authorise the offsetting of the results of financial transactions and extraordinary results even if the result is positive if they are not covered by the capital requirement.

[33] This topic needs to be reviewed once the reports of entities under consolidated supervision to the HFSA are placed on IFRS basis.

- Banks which employ the IRB method must deduct the difference – if the impairment loss does not reach the expected loss of the credit portfolio – from the available own funds as a rule of thumb (see V.1.1 for the Capital requirement calculation of credit risks).

- Under Section 83 of ACI, in the regulatory pillar, in the event of investment and shareholding limit overruns, own funds are to be reduced by the amount of the overruns. Such deductions may be disregarded in Pillar 2 only on condition that the moderate level of the associated risk is demonstrated.

V.5. Determination of economic capital requirements

Although the determination of economic capital requirements is far from being the most important element of the review process, the SREP fulfils its function in addressing economic capital requirements as defined by the Supervisory Authority (or supervisory community). This consists of two steps:

- The Supervisory Authority specifies the nominal HUF value of the total SREP capital requirement by aggregating the capital requirements of the risk elements.

- As a result, the ratio of the SREP and the regulatory capital requirement (the so-called SREP ratio) is established in a percentage figure with a view to the extent of own funds available in Pillar 2. The calculation method of the SREP ratio is outlined in the formula:

$$\text{SREP ratio} = \frac{(\text{SREP capital requirement})}{(\text{Pillar 1 capital requirement})} / \frac{(\text{SREP own funds})}{(\text{Pillar 1 own funds})}$$

Based on the above formula, the SREP ratio can be interpreted in relation to the Pillar 1 capital requirement. Consequently, in fact, it represents the second minimum level of regulatory capital adequacy – the minimum level which also applies to the concept of Pillar 1 own funds. The Supervisory Authority in each and every case expects the institutions' capital adequacy to be above the threshold value of the specified percentage number (8% * SREP ratio).

The lower limit of the permitted value range of the SREP ratio is set at a 100 percent level vi-a-vis the regulatory capital requirement. In practical terms it means that the Supervisory Authority would not approve - even for prudential reasons – an economic capital requirement lower than the regulatory capital requirement even if it were proposed by the calculation methods of the SREP ratio. It is important to stress that the acceptability limits, which were valid earlier for Pillar 1 risk types[34], are no longer in place, in other words, in the individual risk types there is

[34] The former SREP Guidelines did not (or only in a very limited extent) permit the acceptance of a risk capital requirement lower than the regulatory capital requirement in the SREP. The HFSA believes that the complete execution of economic capital calculation and the development of Pillar 2 risk methodologies are better served by an approach which eliminates the above differentiated handling of the risk types.

nothing to restrict the full acceptance by the HFSA of the results of the prudent risk capital calculation in the SREP.

Institutions are obliged to continuously maintain the final SREP ratio thus obtained until the next review. Since the Pillar 2 capital adequacy requirement set in this manner assumes the time-related stability of the above factors which influence the SREP ratio, any considerable change in any of these factors will warrant reporting them to the HFSA, in which case, the recalculation of the SREP ratio may be justified.

V.6. Other considerations

Risk aggregation and the consideration of diversification effects

If risk factors do not exhibit a fully parallel movement it may very well occur that the aggregate of risk elements exceeds the total risk exposure both within the individual risk types and also between risk types. It raises the possibility of diversification which in this context means the (downward) adjustment of the risk elements' aggregate and their harmonisation with the actual risks. The less the risks of portfolio elements are interrelated, the more separated the extent built on the elements of the total risk exposure and the extent captured in the uniform approach will be. Consequently, in theory, the realisation of some diversification benefit opens up.

The Supervisory Authority in Pillar 2 permits institutions to employ all the possible risk aggregation methods starting from simple aggregation (which neglects the diversification benefit) through partial consideration (e.g. set diversification ratio, variance-covariance matrix or copulas) to modelling risk factors within a uniform framework. This permissive attitude is certainly justified by the fact that sound, methodologically sophisticated and comprehensive internal capital calculations are only compatible with more refined risk aggregation solutions, because the Pillars 1 and 1 risk types handled separately are inherently closely interrelated with each other.

It must also be stressed that while the justification for implementing the diversification effect is theoretically unquestionable, its actual quantification is tremendously difficult. This is explained partly by the sensitivity of results on model assumptions and partly – as shown by events in the recent past - by the atypical and unpredictable behaviour of risk factors experienced in crisis situations. The probability of overestimating the diversification benefit is very high because the financial crisis of the recent years highlighted an anti-diversification tendency and the significance and reality of risk concentration.

As a result, the Supervisory Authority – in line with the relevant recommendations of EBA (CEBS[2010g]) – does not rule out, within the framework of the SREP, the possibility of considering the diversification benefit, but in each and every case it carefully and individually weighs its appropriateness. The Supervisory Authority deems it necessary for Pillar 1 risks to limit the diversification effect permitted between risks to an extent of maximum 10 percent, whereas for Pillar 2 risk types it does not regard any limitation justified or useful.

Understandably, it is the institution's task to develop and present its diversification policy with methodological sophistication, whereas in the case of the absence or insufficiency of such a policy, the total exposure is determined by the simple aggregation of risk elements.

Allocation of capital

Banks which employ large and advanced risk measurement and incentive systems usually apply – in general, for the purpose of measuring performance – the widely used solution which breaks down the above-determined total requirement according to organisation units and/or activities. Within this process the possible diversification benefit is distributed among institutions.

The Supervisory Authority regards the linkage between the allocation of capital and the purpose of measuring performance as some form of control of capital calculation. The Supervisory Authority formulates expectations for the allocation procedure only if this is used to determine the capital requirement of an independently supervised institution or group of institutions. In such cases, the harmony between the level of allocated capital and the institution's risk exposures needs to be demonstrated. If the Supervisory Authority finds that the allocated capital level of the institution (e.g. due to concentration of risks) is unjustifiably low and that the coverage of potential losses is not guaranteed, it may issue an order within the SREP to modify the capital allocation procedure.

VI. Examination of compliance with the regulatory minimum requirements

Pursuant to Article 124 of the CRD, the competent supervisors must review with annual regularity the regulations and procedures established by credit institutions aimed at compliance with the requirements of the Directive. The aforementioned review extends to all aspects of the institution's operation regulated by law because it includes the investigation of the minimum capital requirements for credit, operational and market risks, the derivative risks of lending (e.g. concentration risk, residual risks), administrative limitations (e.g. investment limits, large risk limits) as well as the examination of compliance with corporate governance and disclosure requirements.

The examination of compliance with the regulatory minimum requirements is done within annual Pillar 2 reviews. This is justified by the overlap between regulatory and review expectations and by the close interrelation and interdependence of the applied adequacy procedures. In respect of compliance of the CRD minimum requirements, the review primarily concentrates on areas in which regular data reporting to and contact keeping with the HFSA do not necessarily ensure compliance with the regulatory expectations.

Such methodologically sophisticated areas – in particular, advanced methods based on Pillar 1 validated internal rating - are typically examined within the SREP. Since these methods must be reviewed by institutions with annual regularity and with due care, Pillar 2 supervisory reviews are in reality designed to examine the appropriateness and adequacy of the aforementioned internal validations and compliance with tasks set upon the issuance of the validation authorisation with a specified future deadline.

With regard to credit risks, in the case of institutions applying the IRB method the Supervisory Authority examines, in particular, the appropriateness of the following factors:

- the maintenance of portfolio data,
- the calculation of risk-weighted exposure values,
- the level of the applied risk parameters (PD, LGD, maturity value, credit conversion factor, expected loss),
- back-tested performance of rating systems,
- categorisation of exposure risks,
- changes in the rating and capital calculation processes.

With regard to operational risks, the Supervisory Authority primarily examines the scope of information used (internal and external data, scenario analysis, factors related to the business environment and self-assessment), the adequacy of procedures employed in modelling loss distribution. With regard to market risks, the HFSA assesses - in line with the recommendations of the Basel Committee on Banking Supervision (BCBS [2009a]) - the sophistication of the applied VaR model and the scope of significant risk factors at institutions which use authorised internal models. In addition to the above, random tests are conducted for all Pillar 1 risk types to examine the correctness of the data recorded in the mandatory supervisory data reporting tables and in public reports on risks.

The above-cited advanced methods are considerably complex and formalised, nevertheless, several elements of these methods inevitably rely on expert assumptions and subjective considerations. As a consequence of this, the supervisory evaluation of the internal models applied by institutions is never explicit so – in the case of the comparability of models used in the different pillars – the HFSA has the opportunity to freely deliberate whether it wants to set conservative capital requirements in Pillar 1 or Pillar 2 in the case of an intervention which requires an additional coverage of capital. As a rule of thumb, the HFSA follows the practice of increasing the regulatory capital requirement in relatively simple and easily quantifiable cases (e.g. the underestimation of credit risk parameters, the low level of impairment recognised, etc.). On the other hand, if the deficiencies are less concrete and more difficult to quantify or remedy (e.g. the deterioration of the performance of the credit rating system, risk factors neglected in operational or market risk models), the Supervisory Authority principally intervenes by increasing the SREP capital requirement.

VII. Examination of other supervisory requirements under Pillar 2

Internal governance, risk management system and risk strategy

In addition to the above-outlined elements of internal capital calculation, the Supervisory Authority also evaluates the institutions' internal governance and risk management systems within the framework of the SREP. Although the valid forms of continuous supervision of institutions provide a considerable level of information in the areas mentioned above, nevertheless, it is necessary to adjust the institutions' risk assessment in these areas to the SREP due to the intensive contacts kept in the review process, to the extensive documentation supplementing internal capital calculation and to the diverse experience gathered in the course of on-site investigations and personal interviews. The result of the evaluation may have an impact on the extent of Pillar 2 capital requirements defined at the closure of the SREP.

In the above-described phase of the supervisory review the HFSA examines compliance with the relevant provisions on the institutions' prudent operations set out in the ACI. In addition, the HFSA outlines some criteria typically characteristic of Pillar 2 which – with the exception of small institutions – also represent the focal point of the review.

Internal governance

One of the most important criteria of the appropriate internal governance system is the explicit and consistent determination of the scope of responsibilities and competences within institutions. With regard to economic capital calculations, the criteria of internal governance are the following:

- the development and execution of internal capital adequacy procedures are conducted by the responsible organisational unit which operates under the risk manager and which is independent from other business areas,
- during the internal capital adequacy procedures the institution's risk management experience is accessible and is thus utilised, whereas knowledge gained in the course of the ICAAP is integrated in a similar way into the activities of the business and risk management units,
- the supervisory requirements and expectations set out within the framework of the SREP can be implemented until the following review with the participation of the business and risk management units.

Another critical requirement set for the internal governance system is associated with the responsibilities of the institution's board of directors, top management and control bodies. They bear full responsibility for all business and risk-taking processes even in the case of the possible delegation of the business functions. With regard to economic capital calculations, the institution's executive officers have the following responsibilities:

- to appoint the organisational unit responsible for the development and execution of the ICAAP,
- to approve the valid framework system of the ICAAP in their independent internal regulations,
- to have adequate knowledge about the main objectives, methods and processes of the internal capital adequacy procedure and the review process,

- to act in their decision-making with due consideration to the institution's economic capital position.

The third critical point of the internal governance system is to ensure wide-scale implementation of the institution's documented internal rules and the appropriate operation of the control functions. With regard to the ICAAP, it means that

- the significant features and methods of the internal capital adequacy procedures are set out – among the internal rules and regulations – in the ICAAP Guidelines, an independent document issued with top management approval,
- the internal capital calculation methods and processes are annually audited by the internal audit unit (or possibly by an external auditor),
- the internal reports and information prepared for the management provide detailed and regular insight into process, methods and results of economic capital calculations.

If the Supervisory Authority finds serious deficiencies in any of the above requirements it imposes an additional capital coverage within the framework of the SREP in addition to prescribing appropriate risk mitigation measures.

Risk management system and risk strategy

The risk management system must be developed and operated in line with the requirements of the CRD and the provisions of ACI and with a view to the relevant recommendations of EBA[35]. Institutions should pay special attention to the characteristics of internal governance, organisational structure, reporting and documentation processes, to the questions of risk appetite and tolerance and to the quality of risk management.

The institution's top management and the organisation unit responsible for integrated risk management shoulder heavy responsibility for the proper operation of the risk management system, because primarily it is their task to ensure the mutual accommodation of each and every element of risk measurement and risk management. Based on the lessons learnt from prudential investigations, the HFSA – in the case of a number of institutions – deems it necessary to increase the staff of the central risk management units and the distribution of different, concentrated competences and responsibilities among several staff members due to the increase of regulatory requirement.

The institution's risk strategy and risk-taking policy are also important elements of the risk management system. The Supervisory Authority expects institutions to ensure the actual determination of the daily practice of risk management by high-quality risk management principles outlined in their risk strategies. In other words, in an ideal case, based on the examination of the applied risk management tools and procedures, the Supervisory Authority should have a clear picture about the priorities and focal points of risk management set out at strategic level.

One of the focal points of the SREP review is to decide how the rules of procedure for the internal evaluation of capital adequacy relate to the institution's activity, to its risk profile and to

[35] EBA [2011]: Guidelines on Internal Governance (GL44)

its risk management system as a whole. In the light of the reviews conducted in the recent years, the Supervisory Authority finds that the ICAAP processes often do not represent even in the best institutions an integral part of the risk management system, consequently, they often do not meet the HFSA's expectations from methodological and integration points of view.

In the event the Supervisory Authority finds that institutions under the complex SREP have serious deficiencies in their risk management system or their internal capital adequacy processes are of disproportionately inferior quality, it may set additional capital requirements in line with the extent of risks attributable to them.

Remuneration policy

The Directive 2010/76/EU of the European Parliament and of the Council (CRD III) states that the systemic problems caused in the recent years by the excessive risk-taking of the financial sector are partly attributable to a wrong remuneration system employed in certain institutions. The above Directive adds new requirements to those of Directive 2006/48/EC stipulating that with regard to employees whose professional activity exerts a significant impact on how the risk profile is shaped, institutions should establish and maintain remuneration policies and procedures in accordance with efficient risk management.

Within the framework of the SREP, the Supervisory Authority evaluates the institutions' compliance with the aforementioned EU Directives, with the recommendations contained in EBA's relevant consultation document (CEBS [2010a]), as well as with the provisions of the relevant Government Decree[36] and the HFSA's recommendations (HFSA [2011]). In the course of the evaluation, the HFSA assesses to what extent the remuneration policy is accommodated to the institution's activity, internal organisation, market position and risk profile, and to what extent the remuneration policy encourages risk-taking which exceeds the institution's risk tolerance capacity. The employees of the Supervisory Authority review within the SREP the institution's remuneration policy and practice based on publicly available information set in Pillar 3, and if they find that the relevant requirements are violated, they take the necessary measures in line with their powers set out in the legal provisions.

Prioritised treatment of risky portfolios

The crisis of the recent years has highlighted the need for Hungarian and international supervisory authorities performing micro and macro-prudential supervision to pursue an „active" regulatory policy and to actively participate in shaping the market and risk processes which are critical for the safe operation of the financial sector. The Supervisory Authority believes that one of the focal points of prudential supervision is to recognise and limit risks at an early stage whose emergence in large volumes and at a mass scale leads to systemic problems that cannot be eliminated and covered in the financial mediatory system.

Due to its specific approach, the supervisory review process is expressly able to prevent in time the emergence of risks that are undesirable from macro-prudential aspect by developing an

[36] Government Decree No.131/2011. (VII. 18.) on the application of remuneration policies with regard to the features arising from the size, nature and scope of activities, and legal form of credit institutions and investment enterprises.

appropriate system of incentives. A useful tool for this since 2008 is the prioritised treatment of risky portfolios which helps year after year to identify risk exposure types which, according to the HFSA’s assessment, give rise to particular concern. The HFSA expects, within the framework of the SREP, the maintenance of additional capital for risky portfolios whose form and scope of application depend on the nature of the risk concerned, whereas its extent is subject to the HFSA’s discretionary decision. The requirement of additional capital is typically a forward-looking one and applies only to certain parts of the institutions’ portfolio which mostly develop following the HSFA’s disclosure and often after the grace period expires.

In conformity with the amended CRD coming into force in early 2011 – regulating Pillar 3 international home-host cooperation and joint decision – and with the associated EBA Guidelines[37], the determination and review of risky portfolios officially represent an integral part of the SREP since January 2012. As a consequence, the scope and management method of risky portfolios, which are relevant for certain groups of institutions, may change in line with the annual review rounds and are announced in the annual review timetable mentioned earlier.

The main objective of the additional capital requirements for risky portfolios is to prevent the further growth of the portfolios concerned by making them more expensive for institutions. Within the framework of the SREP the possible supervisory adjustments are also implemented assigned to the individual risk types.

Supervisory stress tests

As part of the prudential supervisory activity, the Supervisory Authority performs stress tests also based on its own methodology which, by way of their uniform approach, are able to provide comparative information about the risk position of the institutions concerned. Participation in the announced stress tests is regarded by the HFSA as part of the institutions’ Pillar 2 stress testing obligation despite the fact that the timing of their expected calculations for the above purpose may differ from the timetable of the review.

The processing and evaluation of supervisory stress tests also belong to the SREP process. Nevertheless, it does not mean that they also belong to internal capital adequacy processes, in other words, institutions are still obliged to perform the stressing of their own risk methodologies and capital position in the course of the ICAAP. Naturally, the lessons and results of the supervisory stress tests can be utilised by institutions for this purpose, but are not sufficient in themselves.

[37] CEBS [2010b]: Guidelines for the Joint Assessment of the Elements Covered by the Supervisory Review and Evaluation Process (SREP) and the Joint Decision regarding the Capital Adequacy of Cross-Border Groups (GL39)

VIII. Supervisory review process for small institutions (credit institutions)

In accordance with the ICAAP Guidelines, the Supervisory Authority intends to employ the principle of proportionality in the SREP process, too. With regard to the application of the principle of proportionality, small institutions are those that are defined as such in the ICAAP Guidelines.[38] The application of the principle of proportionality does not mean that the Supervisory Authority would not require compliance for small institutions with the requirements set by the CRD and the Hungarian regulation, nevertheless, the HFSA follows a simplified method to review the level of adequacy for small institutions.

The HFSA annually conducts a simplified review with questionnaires for small institutions and a review of higher intensity in the scope of comprehensive investigations with a regularity of 3 to 5 years. (Annex No. 3 describes the questionnaires for small institutions.) This method can ensure that all the information necessary for the HFSA to make decisions in the course of the SREP are efficiently collected and processed despite the large number of small institutions.

The questionnaire survey is conducted by the Supervisory Authority annually, its results are compared to the data provided by on-site and off-site inspections which help to identify institutions against which some supervisory measure is deemed necessary within the framework of the SREP.

In accordance with the SREP philosophy, the main objective of the supervisory review is to ensure for small institutions a risk-conscious operation and efficient prudential supervision rather than the imposing of additional capital generation. Nevertheless, if the HFSA finds that, based on internal or external characteristics of the institution, its Pillar 1 or ICAAP capital requirements are not in conformity with the risks assumed, it may – similarly to large institutions – set an additional capital requirement. Due to the limited possibilities of tailor-made assessments, the extent of additional capital requirement is calculated in a pre-regulated way with a view to the relative frequency rate of the HFSA's risk categories: high (category 1), medium (category 2) and low (category 3). For the purpose of guidance the typical presence of low, medium and high risks results in an additional capital requirement of 33, 66 and 100 percent, respectively, of the regulatory capital requirement, but the actual final figure is mostly subject to further assessment.

The definition of additional capital requirement is not the only tool for measures taken within the framework of the SREP. Other tools may include requests for risk reduction, requests for the improvement of the quality of risk management, for the modification of internal regulation, or for organisational change, the proposal for internal education and training, the hiring of a new manager or expert.

[38] Small institutions can be considered the ones which conform to the majority of the characteristics listed below:
Their activity is not complex, it is only aimed at a well-defined range of products / they have a relatively small market share / They do not apply – as approved by the HFSA – advanced methods for the calculation of the capital requirements for credit, operational or market risks / they provide their services primarily in the territory of Hungary and do not perform significant cross-borders services / they qualify themselves as small institutions. The final decision is taken by the HFSA as to whether an institution can be treated as a small institution.

Within the framework of the SREP the Supervisory Authority reviews all small institutions; however, it does not intend to prescribe an additional specific capital requirement for each institution.

Within the framework of the SREP, a supervisory measure must be taken or an additional capital requirement should be prescribed for the institution if any of the situations listed below exists, if this is accompanied by a deficient internal control system, if riskare insufficiently covered by capital, and if, in general, prudent operation is not guaranteed:

- the institution operates under conditions that are riskier than the average (e.g. geographical environment, higher-risk clients)
- any of its indicators shows a higher risk level (e.g. bad asset quality, operational losses, liquidity difficulties, high interest rate risk, concentration risk, etc.),
- the Supervisory Authority or any other external review reveals a management, risk management or internal control problem,
- recent frauds, abuses or operational problems have been revealed that jeopardise long-term operation,
- the institution is engaged in an activity that is not typical for small institutions (e.g. cross-border services, trading of advanced derivative instruments, purchase of foreign securities),
- the institution launches new activities or penetrates new markets which will presumably have a significant impact on its operation,
- in contrast with its strategic objectives, the institution loses a significant market share in its scope of operation, the number of its clients and volume of its business fall to a level that jeopardises further operation,
- the financial terms and conditions the institution offers significantly differ from the usual market terms and conditions,
- the institution fails to comply with fundamental procedures specified in supervisory recommendations and methodological guidelines which threatens prudent operation,
- the institution lacks management knowledge, expertise, or technical or IT conditions that would be indispensable for the activities it is engaged in or for the risks implied therein,
- trust by its partners, clients towards the institution has declined,
- the institution’s strategy cannot be regarded well-founded due to the expected macro-economic and sector-specific conditions and to the institution’s financial position and management,
- the quality of the ICAAP applied by the institution is not adequate,
- the institution does not perform sensitivity analyses or stress tests to determine the growth rate of its material risks in significant economic recessions and to define the volume of capital needed to cover such risks.
- the ownership relations of the institution do not make efficient owner control possible,
- the co-operative credit institution with a registered capital below HUF 2 billion is not member of an integration (voluntary institution protection fund) or is a member in an integration with weak or medium protection capacity.

In order to ensure that the Supervisory Authority can assess how strong or weak the protection role of the individual integrations is, it has developed a methodology for the rating of integrations which is attached to this document in Annex No. 5.

When the capital requirement is determined, the results of the quarterly monitoring must be taken into account and information obtained during on-site and off-site reviews must be used as well as the requirements relating to risk portfolios must be evaluated in respect of the institution.

If the institution finds that it needs a higher capital requirement during the application of the ICAAP, and the Supervisory Authority does not prescribe additional capital requirement above that sum, the HFSA will regard the higher capital requirement calculated by the institution as the capital requirement in Pillar 2.

Supervisory measures

Typical supervisory measures, including the requirement of additional capital with regard to small institutions and in line with the various risk categories

In line with the ICAAP Guidelines, the HFSA examines the need for supervisory measures or additional capital requirement according to the following risk categories or groups:

I. **Environment**
- External risks

II. **Corporate governance**
- Exercising of the ownership rights
- Strategic risks
- Internal governance
- Internal control system

III. **Market presence**
- Products and services
- Client risks
- Unauthorised activities
- Unfair market manipulation

IV. **Business processes and capital**
- Credit risk
- Risky portfolios
- Market risk
- Operational risk
- Interest rate risk in the non-trading book
- Liquidity risk
- Capital and profitability
- Concentrations risk (individual clients, geographical)
- Other risks

The effective Hungarian legal regulations specify the maximum additional capital requirement that can be prescribed within the framework of the SREP as a percentage of the capital

requirement calculated according to Pillar 1. The SREP capital requirement may not be higher than the double of the capital requirement specified in Subsection (1) of Section 76.

The relations between the deficiencies revealed at small institutions and the supervisory measures to be taken within the framework of the SREP are shown in Table 2. The HFSA provides the table, the categorisation of deficiencies and the percentage of the additional capital requirement as a starting point. In reality, other aspects may arise and be considered.

Based on their significance, the revealed deficiencies and problems are classified into three categories. Category I indicates the most serious, while Category III indicates minor deficiencies. If only Category III problems are revealed at an institution, the HFSA will not necessarily prescribe additional capital requirement, or the amount thereof will not exceed 33% of the capital requirement calculated in Pillar 1. The more Category III type deficiencies are revealed, the closer the value will be to 33%.

If Category II problems are detected, the additional capital requirement prescribed by the HFSA will be between 0 and 66% of the capital requirement calculated in Pillar 1, whereas in the case of Category I, it will be between 0 and 100 % depending again on the number and category of other deficiencies that emerged in the institution’s operation.

If the given problem or deficiency is eliminated, it will take be taken into account by the HFSA during the next SREP. In justified cases, when there are such changes in the institution’s market position, business activity, risk profile or risk management system that significantly influence internal capital requirement, the institution may take steps for interim review of the prescribed capital ratio, or the Supervisory Authority may decide to conduct an interim SREP.

Table 3: Supervisory responses to detected deficiencies

Risk category/risk element	Detected deficiency, problem	Supervisory measure	Problem category	Primary sources of information
		I Environment		
1 External factors	**1.1** Operating under above-the-average risk conditions; negative impacts of macro-economic cycles	Request for the diversification of activities	II	Data supply, questionnaire, supervisory investigations
	1.2 High geographic concentration risk	Closer attention to risk management	III	Questionnaire, supervisory investigation, sector analysis
	1.3 No membership in any institution protection organisation	Prescription of at least a 50 % additional capital requirement to cover this risk. Closer attention during the supervision of institutions	I	Questionnaire, data supply
	1.4 Membership in an institution protection organisation with weak protection capacity	Prescription of at least a 33 % additional capital requirement to cover this risk. Closer attention during the supervision of institutions	I	Questionnaire, data supply
	1.5 Membership in an institution protection organisation with medium protection capacity	Prescription of at least a 20 % additional capital requirement to cover this risk. Closer attention during the supervision of institutions.	I	Questionnaire, data supply
	1.6 Membership in an institution protection organisation with strong protection capacity but not satisfying the requirements on close integration set in the CRD	Prescription of a 0 to 20% additional capital requirement.	II	Questionnaire, data supply
		II Corporate governance		
1 Exercising ownership rights	**1.1** Lack or weakness of owner's control	Request for stronger owner's control	III	Data supply, supervisory investigation

2 Strategic risk	**2.1** The institution's strategy is not well-established	Request for changing the strategy	II	Supervisory investigation, data supply
	2.2 The owners' dividend policy does not provide for the necessary internal capital increase	Call the owner's attention to the potential problems	II	Data supply, questionnaire
	2.3 Deterioration of trust (reputation risk)	Closer supervisory monitoring of activities	I	Supervisory investigation, market information, questionnaire
3 Internal governance	**3.1** Deficiencies in the executive officer's capacities and expertise	Request for the elimination of deficiencies and order for training and further training	I	Investigations by the Supervisory Authority and other organisation, and lessons of prudential discussions.
	3.2 Problems related to the qualification and professional experience of executives out of the scope of the HFSA	Request for professional further training	III	Questionnaire, supervisory investigation
	3.3 Non-compliance with former HFSA resolutions	Order for compliance with HFSA resolutions, penalty	I	Supervisory investigation, questionnaire
	3.4 Non- compliance with HFSA recommendations and methodological guidelines	Call attention to compliance with recommendations and guidelines	II	Supervisory investigation
	3.5 Disregarding other HFSA notifications (e.g. management letter, CEO circular)	Closer monitoring of compliance with supervisory notifications	II	Supervisory investigation, questionnaire
4 Internal control system	**4.1** The HFSA or other of external inspection reveals management/control, risk management or internal control problems	Obligation for the rectification of risk management and control deficiencies	I	Investigation documents of the Supervisory Authority and other organisations
	4.2 Substantial deficiencies in the market risk management and control systems	Obligation for the rectification of risk management and control deficiencies	I	Supervisory investigation, data supply
III Market presence				
1 Products and services	**1.1** Services and products offered by the institution are non-marketable and do not satisfy market/clients needs	Request for the modification of the product and service range	II	Investigation documents of the Supervisory Authority and other organisations, data supply
	1.2 Performance of activities not typical for small institutions	More intensive supervisory monitoring of the activities	III	Questionnaire, supervisory investigation, data supply
	1.3. New types of activities, markets	More intensive supervisory monitoring of the new activities and markets	III	Data supply, supervisory investigation, questionnaire

	1.4 Falling market share/growth rate below the sector average	Request for the modification of the business policy	III	Supervisory investigation, questionnaire, data supply, HFSA analyses
2 Client risks	**2.1** The institution's client structure is questionable, it is a highly concentrated sector due to products or debtor age.	Request for the modification of the client structure	II	Investigation documents of the HFSA and other organisations, data supply
3 Unauthorised activities	**3.1** The Supervisory Authority or other external investigation reveals unauthorised activities	Obligation to terminate the unauthorised activities	II	Investigation documents of the HFSA and other organisations, data supply
4 Unfair market manipulation	**4.1** The institution uses non-permissible tools in their acquisition, marketing and disclosure policies.	Request for the modification of acquisition, marketing and disclosure policies	II	Investigation documents of the HFSA and other organisations, data supply
		IV Business processes and capital		
1 Credit risk	**1.1** The quality of assets is in the bottom 10 to 20% compared to similar credit institutions	Request for the reduction of credit risks	III	Data supply
	1.2 The quality of assets is in the bottom 10% compared to similar credit institutions	Request for the reduction of credit risks	II	Data supply
	1.3 Substantial credit losses in the past three years exceeding 5% of the equity.	Investigation of the source of credit losses	II	Supervisory investigation, data supply, questionnaire
	1.4 The rate of suspended interests exceeds 5 % of the outstanding principal receivables and is at least 30% higher than the sector average.	Investigation of the source of credit losses	III	Data supply
	1.5 Substantial deficiencies in credit risk management and control systems	Obligation for the rectification of risk management and control deficiencies	I	Supervisory investigation based on documents received from other organisations
	1.6 Clients representing higher credit risk than average based on their ratings and industry risks	Order for more detailed reports and stricter risk management procedures	III	Questionnaire, supervisory investigation
	1.7 Introduction of new loan products, including especially unusual and new products in the Hungarian market.	Monitoring of the new products	III	Questionnaire, supervisory investigation
	1.8 The credit institution operates with ratios close to the prudential limits set out in Sections 76-85 of the ACI (higher than 90% ratios)	Closer monitoring of ratios, prudential limits	III	Data supply

	1.9 Average LTV (loan-to-value ratio) above 70% backed only by mortgage collateral in the absence of other coverage	Closer monitoring of real estate related financing	III	Questionnaire, investigation documents of the HFSA and other organisations, data supply
	1.10 High country risk	Closer supervisory monitoring of the activities	Surplus capital requirement prescribed based on separate methodology	Data supply
2 Market risk	**2.1** Substantial losses in the last three years arising from market risks	Investigation of the source of losses arising from market risks	II	Questionnaire
	2.2 Products with exceptional conditions	Request for the review of conditions	III	Supervisory investigations, questionnaire
3 Interest rate risk	**3.1** Interest rate sensitivity analysis indicates high risk	Request for the improvement of interest rate risk management techniques	Surplus capital requirement prescribed based on separate methodology	Supervisory investigations, data supply
4 Liquidity risk	**4.1** Frequent liquidity problems, no access to additional capital, GAP analysis indicates high maturity mismatch.	Request for the improvement of liquidity risk management techniques	II	Questionnaire, data supply, supervisory analysis
5 Operational risk	**5.1** Substantial losses in the last three years arising from operational risks	Investigation of the source of losses arising from operational risks	II	Questionnaire
	5.2 Outsourcing of significant activities, insufficient attention is paid to the entities performing outsourced activities.	Request for closer attention to the outsourced activity	III	Data supply, supervisory inspection, questionnaire
	5.3. Documentation and administrative problems (not only operational risk related problems)	Request for the elimination of documentation and administrative deficiencies	II	Supervisory investigation, clients' complaints, data supply
	5.4 IT deficiencies	Request for the elimination of IT deficiencies	II	On-site and off-site investigations, clients' complaints

6 Capital and profitability	**6.1** The ICAAP value is higher than under Pillar 1	Additional capital requirement in accordance with the ICAAP value and the result of the supervisory risk assessment	I	Data supply, questionnaire
	6.1. Decrease of own funds compared to the end of the previous year exceeding 10%.	Obligation for the formulation of a capital plan	II	Data supply

Closing the supervisory review

Following the processing of the questionnaires, the Supervisory Authority informs institutions about the result of the review (as well as the outcome of any consultations) in a prudential letter. The HFSA documents the quantified result of the SREP process in the SREP Review Form attached to the prudential letter. If the HFSA does not see compliance with the prescribed SREP capital requirement guaranteed, it may issue a resolution to call for the institution to provide additional capital.

If the Supervisory Authority conducts the SREP within a comprehensive investigation, the SREP will be closed in the framework of closing the investigation.

The possible supervisory measures which close the SREP are discussed in Chapter IV.5.

IX. Supervisory review process applied to investment firms

In line with the ICAAP Guidelines, the Supervisory Authority intends to implement the principle of proportionality also in the SREP process. A limited scope of activities, services and products are some of the criteria under the principle of proportionality which are generally characteristic - unlike in universal banks - for investment firms. The employment of the principle of proportionality does not mean that the Supervisory Authority would not require compliance for small institutions with the requirements set by the CRD and by the Hungarian regulation, nevertheless, the HFSA follows a simplified method to review the level of adequacy for small institutions.

In the case of investment firms, the SREP is principally based on information provided by questionnaires and by data available from data supply. (The questionnaire for investment firms is contained in Annex No. 4.) The Supervisory Authority conducts a questionnaire survey in every year and compares its results with the information received from data supply as well as on-site, off-site reviews as a result of which it identifies the institutions against which a supervisory measure needs to be taken within the SREP.

The review of investment firms is not always conducted by way of questionnaires, because if in a given round of supervisory review an on-site comprehensive investigation is carried out, as stipulated by law, at certain members of this institutional group, then within the above process the Supervisory Authority, in each and every case, also carries out the Pillar 2 review.

The measures taken within the framework of the SREP is not aimed at **determining additional capital requirement, rather their primary objective is to reduce risks and to strengthen conscious risk management** by making proposals for improving the quality of risk management, for modifying internal regulation, for the necessary organisational transformation, for requiring internal education and training and for employing new executives or experts.

Within the framework of the SREP, **the HFSA calls on certain institutions to take measures,** or if necessary, imposes an additional capital requirement on them. Such institutions are typically the ones in which any of the unusual, additional risk emerges from services, activities, business models or organisational mechanisms and in which it is coupled with deficiencies in the internal control system. These risks in aggregate jeopardise prudent operation.

According to the Supervisory Authority, activities **generating** unusual, **additional risks are** the following:

- providing or mediating services for high gearing transactions,
- providing or mediating services for „high frequency trading”,
- services for investment loans or deferred financial performance,
- own-account trading (in the case of transactions conducted in favour of the client by using own account).

According to the Supervisory Authority, **the business models or organisational mechanisms generating** unusual, **additional risks** are in particular the following:

- the broker may have authorisation over the client account,
- the broker has limits and/or competences above the usual ones,

- opening and keeping (without justification or control) suspense accounts, transit accounts, technical accounts,
- cross-border services,
- trading with advanced derivative instruments, purchasing foreign securities,
- utilising third-party depositaries,
- compared to the size of the front office, the back office or the control unit does not have sufficient material or human resources,
- the lack of physical and logical separation of retail and back office systems,
- the institution's ownership relations do not provide for the efficient functioning of owner control,
- the Supervisory Authority or any other external investigation reveals management, risk management or internal control problems,
- recent frauds, abuses or operational problems have been revealed jeopardising long-term operation,
- the institution launches new activities or penetrates new markets which will presumably have a significant impact on its operation,
- the institution fails to comply with fundamental procedures set out in supervisory recommendations and methodological guidelines thus jeopardising prudent operation,
- the institution lacks management knowledge, expertise or technical and IT conditions which would be indispensible for the activities it is engaged in or the risks implied therein,
- trust by its clients or market partners towards the institution declined,
- the institution's strategy cannot be regarded well-founded due to the expected macro-economic and sector-specific conditions and to its position and business activity,
- the quality of the ICAAP employed by the institution is inappropriate.

The Supervisory Authority takes into account the results of the quarterly monitoring and utilises the information gathered by the on-site and off-site reviews for the determination of capital requirement.

If the institution finds it necessary within the ICAAP to specify a higher capital requirement and the Supervisory Authority does not establish an additional capital requirement, the HFSA considers the higher capital requirement calculated by the institution as the Pillar 2 capital requirement.

IX.1 Supervisory measures

Supervisory measures, including the necessity to prescribe additional capital requirement for the following typical cases for investment firms according to the individual risk categories:

In line with the Guidelines issued in the subject area of the ICAAP, the HFSA examines the need for supervisory measures or additional capital requirement according to the following risk categories or groups:

I **Environment**
- External risks

II **Corporate governance**
- Exercising of the ownership rights
- Strategic risk
- Internal governance
- Internal control system

III **Market presence**
- Products and services
- Client risks
- Unauthorised activities
- Unfair market manipulation

IV **Business processes and capital**
- Credit risk
- Risky portfolios
- Market risk
- Operational risk
- Interest rate risk in the non-trading book
- Liquidity risk
- Capital and profitability
- Concentrations risk (individual clients, geographical)
- Other risks

The maximum additional capital requirement that can be prescribed within the framework of the SREP is determined by the effective Hungarian legal regulations on the basis of the capital requirement calculated according to Pillar 1 (the aggregate of the capital requirement according to Pillar 1 and the additional capital requirement described in the SREP process) stipulating that the SREP capital requirement may not be higher than the double of the capital requirement specified in Subsection (1) of Section 76 of the AIFCD.

In the case of investment firms whose Pillar 1 capital requirement is defined under Subsection (1) b) of Section 105 of the AIFCD, the SREP capital requirement is determined with the requirement of a capital adequacy ratio of 8 to 16%, whereas in the case of investment firms whose Pillar 1 capital requirement is defined under Subsection (1) a) of Section 105 of the AIFCD, the SREP capital requirement is determined with a requirement of between 100 and 200 % of the initial capital necessary for the commencement of activities.

The relationship between the deficiencies detected at investment firms and the supervisory measures to be applied within the framework of the SREP – with the exclusion of the operational risks – is presented in Table 4, whereas the distribution of typical operational risks according to activities in shown in Table 5.
The tables and the categorisation of deficiencies are regarded as a point of departure by the Supervisory Authority. In actual practice, however, further aspects may also emerge and may be the subject of deliberation.

Based on their significance, the detected deficiencies and problems are classified into three categories, in which category I indicates major deficiencies, while category III indicates minor deficiencies. If only Category III problems are revealed at an institution, the HFSA does not necessarily prescribe additional capital requirement.

If the majority of the problems revealed within the SREP process or in data supply or in supervisory investigations fall into category III, the SREP capital requirement is 8-10% of the capital adequacy ratio or 100-120% of the initial capital. If they fall into category II, the SREP capital requirement is 8-12% of the capital adequacy ratio or 100-160% of the initial capital and in category I it is 8-16% of the capital adequacy ratio or 100-200% of the initial capital.

If the given problem or deficiency is eliminated, it is taken into account by the HFSA during the next SREP. In justified cases, changes take place in the institution's market position, business activity, risk profile or risk management system which changes significantly influence the internal capital requirement, the institutions may propose interim review of the capital ratio, or the Supervisory Authority may decide to conduct an interim SREP.

Table 4: Supervisory responses to the revealed deficiencies

Risk category/risk element	Revealed deficiency, problem	Supervisory measure	Problem category	Primary source of information
		I Environment		
1 External factors	**1.1** Operation under conditions with above average risks, the negative impacts of macroeconomic cycles	Request for the diversification of the activity	II	Data supply, questionnaire, supervisory investigations
		II Corporate governance		
1. Exercising ownership rights	**1.1** Lack or weakness of ownership control	Request for stronger owner's control	III	Data supply, supervisory investigation
2. Strategic risk	**2.1** The institution's strategy is not we--founded	Request for changing the strategy	II	Supervisory investigation, data supply
	2.3 Deterioration of trust (reputation risk)	Closer supervisory monitoring of the activity	I	Supervisory investigation, market information, questionnaire
3 Internal governance	**3.1** Deficiencies in the capacities or expertise of executives	Request for the elimination of deficiencies, order to conduct training, further training	I	Investigations of supervisory authority and other organisations, lessons of prudential discussions
	3.2 Problems related to the qualification and professional experience of executives out of the scope of the HFSA	Request for professional further training	III	Questionnaire, supervisory investigations
	3.3 Non-compliance with earlier supervisory resolutions	Obligation to comply with supervisory resolutions, penalty	I	Supervisory investigation, questionnaire
	3.4 Non-compliance with HFSA recommendations, methodological guidelines	Calling attention to comply with the recommendations, guidelines	II	Supervisory investigation
	3.5 Disregarding other HFSA's notifications (e.g. management letters, CEO circulars)	Closer monitoring of HFSA's notifications	II	Supervisory investigation, questionnaire
4 Internal control system	**4.1** Supervisory or other of external investigation reveals management/control, risk management or internal control problems	Obligation to rectify risk management and control deficiencies	I	Investigation documents of supervisory and other organisations

III Market presence				
1 Products and services	**1.1** The services and products provided by the institution are non-marketable, do not adjust to market demands	Request for the modification of the product and service range	III	Investigation documents of supervisory and other organisations, data supply
	1.2 New types of activities, markets	Closer supervisory monitoring of new activities and markets	III	Data supply, supervisory investigation, questionnaire
2 Client risks	**2.1**. The institution's client structure is highly concentrated according to sectors or products.	Request for the modification of the client structure	II	Investigation documents of supervisory and other organisations, data supply
3 Unauthorised activities	**3.1**. The Supervisory Authority or any other external investigation reveals an unauthorised activity	Obligation to put an end to unauthorised activities	II	Investigation documents of supervisory and other organisations, data supply
4 Incorrect influence on the market	**4.1** The institution employs unacceptable tools in its acquisition, marketing and disclosure policies.	Request for changing acquisition,, marketing and disclosure policies.	II	Investigation documents of supervisory and other organisations, data supply
IV Business processes and capital				
1 Credit risk	**1.1** Significant losses caused by credit risks in the past three years	Investigating the cases of credit losses	II	Supervisory investigation, data supply, questionnaire
	1.2 Serious deficiencies in the credit risk management and control systems	Obligation to rectify risk management and control deficiencies	I	Supervisory investigation, investigation documents received from other organisations
2 Market risk	**2.1**.Serious losses caused by market risks in the past three years	Investigating the causes of market risk losses	II	Questionnaire
	2.2 Serious deficiencies in the market risk management and control systems	Call for a review of conditions	III	Supervisory investigations, questionnaire
4 Liquidity risk	**4.1** Frequent liquidity difficulties	Request for developing the liquidity risk management techniques	II	Questionnaire, data supply, supervisory analysis

Table 5: Typical operational risks broken down according to activities

Activities/loss category	Operational risks	Problem category
	Accepting and transferring orders, executing orders, portfolio management	
Clients, products and business practice or Internal fraud (if intentional)	execution of the transactions without giving an order	I
Clients, products and business practice or Internal fraud (if intentional)	acceptance of orders without appropriate documentation (e.g. the lack of sound recording)	I
Clients, products and business practice or Internal fraud (if intentional)	non-compliance with the requirements on the acceptance of orders (deals made outside the designated business premises, the use of mobile devices in a manner different from the internal rules)	I
Clients, products and business practice	employee mistakes, faults (faulty recording of client's orders, fat finger)	II
Clients, products and business practice or Internal fraud (if intentional)	deals made without collaterals	I
Clients, products and business practice or Internal fraud (if intentional)	wrong allocation	II
Clients, products and business practice or Internal fraud (if intentional)	detecting possible contradictions between the clients' trading activity and the compliance tests, the lack of warning signs	I
Execution, performance and process management	improper execution, erroneous performance (e.g. duplicated execution, failure of execution)	II
Clients, products and business practice or Internal fraud (if intentional)	the lack of limiting risky transactions, the lack of increased inspection (high-gear transactions)	I
Clients, products and business practice or Internal fraud (if intentional)	broker's negligence, insufficient information	II
Employer's practice and labour safety	the lack of regulation on personal business activities (the possibility of trading without restrictions)	II
Employer's practice and labour safety	brokers' disposal over client accounts with authorisation (quasi portfolio management)	I

Activities/loss category	Operational risks	Problem category
Employer's practice and labour safety	the lack of control over the relationship between clients and employees	II
Execution, performance and process management	the lack of limits set in trading systems	II
Execution, performance and process management	the lack of limits set for brokers	II
Execution, performance and process management	the lack of regular review of limits	III
Execution, performance and process management	the use of automated trading systems without controls (robots, algorithms (High-Frequency Trading (HFT))	I
Employer's practice and labour safety	excessive powers granted to brokers (Rogue trader)	I
Employer's practice and labour safety	the treatment of authorisations (the access of the trading area to back-office systems, unauthorised access to clients' data)	II
Clients, products and business practice	the use of monitoring the fulfilment of transactions (e.g. confirmation of performance by the trading area)	II
Custody and registration of financial instruments, as well as keeping client accounts thereof, keeping custody of securities accounts thereof, the registration of printed securities and keeping client accounts		
Internal fraud	issuing fraudulent balance statements, statement of accounts, other documents for the client	I
Clients, products and business practice	confirmations do not reach the client (confirmations requested to be kept at the service provider, confirmations via the broker)	II
Execution, performance and process management	recording fault, the lack of control over reverse entries, insufficient documentation	III
Execution, performance and process management	partner risk – high exposure against third party depositories, the lack of partner risk limits	II
Execution, performance and process management	the handling of client accounts (liabilities), clients with accumulated liabilities	III
Execution, performance and process management	segregation deficiencies	I
Execution, performance and process management	following the deal, its data and certificates are not immediately forwarded to the back office	III
Execution, performance and process management	opening and keeping suspense accounts, transit accounts, technical accounts (without justification and control)	I
Execution, performance and process management	the possibility of opening fictitious accounts, the lack of screening fictitious accounts (accepting positions built on each other by creating fictitious client accounts in a value manifolds exceeding the relatively low trading limit)	I

Activities/loss category	Operational risks	Problem category
Execution, performance and process management	non-compliance with deadlines (e.g. remission, start of transfer) except for IT breakdown	I
Execution, performance and process management	the lack of mutual acknowledgement, confirmation vis-a-vis business partners concerning the details of the transaction	II
Execution, performance and process management	certificates underlying the settlement are not countersigned by the back-office	II
Execution, performance and process management	the lack of coordination between front-office and back-office systems	II
Execution, performance and process management	the lack of daily coordination of deals with the contracting party	II
Execution, performance and process management	the lack of harmony between open positions and the collaterals behind them (the collaterals are not well-founded, the positions are not correctly registered)	I
Own-account trading		
Execution, performance and process management	no limits determined	I
Execution, performance and process management	lack of control of daily limits	II
Risk management, control		
Execution, performance and process management	no appropriate body to manage the operational risk	III
Execution, performance and process management	agents are not properly controlled	II
Execution, performance and process management	the activity of branch offices is not properly controlled	II
Execution, performance and process management	loss-making events are not recorded, incidents are not analysed (breach of passwords, other abuses, producing fictitious documents)	III
Operational disruption and system error	IT protection not properly ensured against intrusion and intervention in the system	I
Operational disruption and system error	IT risks, system errors, system breakdown, interrupted network connection (financial transactions cannot be started in time)	I
Operational disruption and system error	live start of new IT development without proper testing (collateral calculation, etc.)	II
Operational disruption and system error	improper separation of live and test systems (there should be no link-up between the two)	II
Operational disruption and system error	trading system breakdown, disruption of operations	I
Operational disruption and system error	lack of applying closed and non-manipulable IT systems	I
Execution, performance and process	compared to the size of the front office, there are insufficient human resources for	I

Activities/loss category	Operational risks	Problem category
management	inspection	
Execution, performance and process management	compared to the size of the front office, the insufficient human resources for the back-office	II
Execution, performance and process management	inadequate frequency of control of the front office (the lack of daily level control)	I
Execution, performance and process management	front office operation is not inspected continuously	I
Execution, performance and process management	lack of physical and logical separation between the trading are and back-office systems	I
Execution, performance and process management	lack of review for faulty, modified and invalidated transactions (the number, frequency and justification of transactions, etc.)	III
Execution, performance and process management	lack of daily reports on unusual event (transactions withdrawn, data of deals made outside trading hours or deviating from market price, settlement mistakes)	II
Managing human risks		
Employer's practice and labour safety	no set of tools to screen potential employees whose morality or mentality may represent risks for the firm	II
Employer's practice and labour safety	no references requested in the course of admission, selection	I
Employer's practice and labour safety	lack of professional expectations about the relationship between traders and business partners	III
Employer's practice and labour safety	lack of monitoring and supervision concerning the relationship between traders and business partners	III
Employer's practice and labour safety	inadequate regulation on leave and transfer of employees	II
Employer's practice and labour safety	lack of mandatory holidays (another broker has to keep contact with the client for a certain time)	II
Employer's practice and labour safety	lack of mandatory exams (internal, external)	III
Employer's practice and labour safety	losses are not passed on to the person responsible	III
Employer's practice and labour safety	there is no member in the management who would have an oversight of the trading activity	I
Employer's practice and labour safety	inadequate remuneration policy (the maximalisation of commission income is in conflict with client interest)	I
Employer's practice and labour safety	the scope of powers is not adequately detailed for the business area (nature and size of deals, the magnitude of acceptable positions must remain within the set limits)	I

Annexes

Annex No. 1: Risky portfolios
Annex No. 2: The SREP Review Form
Annex No. 3: SREP Questionnaire for small institutions (credit institutions, investment firms)
Annex No. 4: Joint decision process
Annex No. 5: Methodology for the assessment of risks related to membership in integrations

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Directive 2009/111/EC of 16 September 2009 of the European Parliament and of the Council amending Directives 2006/48/EC, 2006/49/EC and 2007/64/EC as regards banks affiliated to central institutions, certain own funds items, large exposures, supervisory arrangements, and crisis management

Directive 2010/76/EU of 24 November 2010 of the European Parliament and of the Council amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for re-securitisations, and the supervisory review of remuneration policies

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