

## **Advanced measurement approach (AMA)/ Combined use of an AMA with other approaches**

The present annex indicates the information an institution is required to submit to ensure completeness of the application to use an AMA to calculate the own funds requirement for the operational risk.

In order to expedite the transfer of information to the supervisory authority of the host country (the host supervisory authority), the institution is required, within the context of its application to use an AMA, to indicate clearly what information is relevant to what supervisory authority.

### **1 Letter with formal request for approval**

The application dossier is introduced by a letter with a formal request from the institution for approval to commence using, from a specific date, an AMA for the calculation of the own funds requirement for the operational risk. As the case may be, it will be made clear at what level the institution is submitting the application and that the application is being submitted on behalf of all the institutions – included within the scope of consolidation – named in it that are established in the EU and that, pursuant to their legal status, are likewise, at their level, subject to the CRD.

The institution declares that all relevant information is being submitted (or, as the case may be, is available) and that this information provides an accurate picture of the state of affairs in regard to the institution's readiness for an AMA for calculation of the own funds requirement for the operational risk. At the same time, with reference to the self-assessment conducted, the institution confirms that it is 'broadly compliant' with the qualitative and quantitative minimum requirements of the approach selected.

The letter is signed by at least one member of the Management Committee.

### **2 General information and implementation plan (including roll-out plan and the combined use of an AMA with other approaches)**

Besides general information, this section includes information that is required to demonstrate that the necessary structures and processes are in place within the institution, in order to ensure a prompt and correct implementation of an AMA. To this end, the institution is required to submit at least the following information:

- 2.1 The details of a contact person in respect of the application dossier.
- 2.2 The legal structure of the institution (including any domestic or foreign subsidiaries or foreign branches), with mention of the host supervisory authority concerned.
- 2.3 A detailed overview of the organizational structure of the institution. In respect of the operational risk, this document presents, among other things:
  - the corporate governance aspects, the organization of risk management, the internal reporting circuits, the organization of internal documentation and the organization of the development, validation, implementation and follow-up of risk-measurement and risk-management systems;

- how, as the case may be, the management structure (business lines, for instance) transects the legal structure (subsidiaries/branches, for example) and the geographic structure (foreign subsidiaries/branches, for example).
- 2.4 An indication of whether separate AMA models are used for significant subsidiaries and whether the calculation for, in principle, the entire group is done on the basis of a consolidated AMA model.
- 2.5 A detailed overview of the approaches that will be used per subsidiary, branch and/or business line, with – as the case may be – a reasoned request for a temporarily (because of the roll-out of the AMA) or permanently combined use of an AMA with other approaches, including:
- an overview per legal entity of what business lines there are and what approach will be followed (where relevant, to be specified for branches, too);
  - a list of the domestic and foreign subsidiaries, branches and/or business lines that, from the outset, will be included in AMA calculations at group level (as the case may be, special mention of any such entities that locally follow another approach, but that nevertheless supply the necessary information and are included in AMA calculations at group level), with a statement of the relative importance of those subsidiaries, branches and business lines;
  - a list of the domestic and foreign subsidiaries, branches and/or business lines that are temporarily or definitively not included in AMA calculations at group level, with a statement of the relative importance of those subsidiaries, branches and business lines;
  - a detailed time scale for the rollout of the AMA to the entities that, as at the date of implementation, are not included in the AMA.

The relative importance (extent) of the entities in question is requested, in order to check whether, at the moment of introduction and at the end of the roll-out period, the AMA is being applied to a significant proportion of the operational risks and to a material proportion of the activities.

- 2.6 A description of the plan concerning implementation, from commencement of the preparations for introduction of the new own funds requirement to the completion of the roll-out plan. In respect of both the past and the future, given the relevance for the present state of affairs, the implementation plan is required to give a clear indication of the timing and content of, among other things, the following aspects:
- organization of the implementation (distribution of responsibilities, etc.);
  - development of operational-risk-management processes, including that for data collection;
  - development of the measuring method;
  - ICT implementation regarding operational risk management and measurement aims;
  - formal internal acceptance of the measuring system for the operational risk;
  - training and availability of staff, including management;
  - the use of internal measuring systems ('use test' and 'parallel run');
  - important milestones in the implementation process;
  - reasoning for the sequence of the roll-out of the legal entities and business lines, as indicated in the overview in 2.5.

The institution is required to append a documentation list to the information dossier. That documentation list provides an overview of all available internal documents, together with a brief description of them; if necessary, the BFIC may subsequently request them to be submitted.

### **3 Documentation for the internal measurement system**

#### **3.1 General overview**

The dossier is required to contain at least the following information:

- 3.1.1 A list of the definitions applied for operational risk, losses, business lines, events and other relevant concepts.
- 3.1.2 A general, non-mathematical description of the model and a justification for the choice of model.
- 3.1.3 A mathematical description of the model, the theory, the assumptions and/or the mathematical and empirical principles.
- 3.1.4 Description and justification of the treatment of the qualitative elements in the measurement system, and an indication of their relative importance.
- 3.1.5 Indicators of the forecasting power of the model and an indication of the circumstances in which the model does not work effectively.
- 3.1.6 Description of the development process for the models, with attention given to the parties involved and their responsibilities, and to the requirements regarding internal documentation.
- 3.1.7 Description of the process of approval for the models, with attention given to the parties involved and their responsibilities, to the requirements regarding internal documentation and to the procedure for approval.

#### **3.2 Detailed information**

##### **3.2.1 Incorporation of the four elements**

A description of how the four elements (internal loss data, external loss data, scenario analysis and business environment and internal control factors) are to be used in the AMA, with attention being given to the following points, among others:

###### **3.2.1.1 Internal loss data**

- 3.2.1.1.1 Description and justification of the nature of the internal loss data collected, the observation period, the minimum thresholds in place, and the measures to ensure accuracy, completeness and continued relevance of the historical data, etc.
- 3.2.1.1.2 Criteria for the assignment of loss data to the regulatory eight business lines and seven event types.
- 3.2.1.1.3 Description of how operational losses linked to credit or market risks are included, as the case may be, in the calculation of the own funds requirement for the operational risk; and description of the criteria laid down and indication of the person responsible for setting those criteria and monitoring their application.

###### **3.2.1.2 External loss data**

- 3.2.1.2.1 Description and justification of the nature and sources of the external loss data employed.

3.2.1.2.2 Description of how external data are treated in the measurement system, including any scaling that makes external data relevant for the institution.

3.2.1.2.3 Measures that ensure the continued relevance of the use of external data.

### **3.2.1.3 Scenario analysis**

3.2.1.3.1 Description of how scenario analyses are treated in the measurement system, as supplementary or not to the internal and external loss data collected.

3.2.1.3.2 Procedures regarding the drawing-up, validation, application and amendment of scenarios.

3.2.1.3.3 Statement of the scenarios employed.

### **3.2.1.4 Business environment and internal control factors**

3.2.1.4.1 Description of how the business environment and internal control factors are treated in the measurement system.

3.2.1.4.2 Procedures regarding the selection, validation, application and amendment of those factors.

3.2.1.4.3. Statement of the factors selected in this respect, with appropriate justification.

### **3.2.1.5 Combination of the four elements**

Description of how the four elements are combined and possibly weighted in the measurement system, with an indication of whether the method of combination differs according to the business line and/or the event type and/or other units of measurement serving as the basis for the model.

## **3.2.2 Correlations**

3.2.2.1 Justification and foundation of any taking into account of diversification effects (correlations) for calculation of the own funds requirement for the operational risk.

3.2.2.2 Method of calculating correlations, and the major assumptions employed.

3.2.2.3 Process of validating correlation assumptions and of monitoring the maintenance of their reliability and relevance.

3.2.2.4 Method for the concrete treatment of correlations in the actual calculation of the own funds requirement.

## **3.2.3 Insurance**

3.2.3.1 Description of the policy regarding the use of insurance to cover the operational risk.

3.2.3.2 Description of the measures taken to ensure that the taking of insurance policies into account in the calculations answers to the conditions laid down.

3.2.3.3 Method for the concrete treatment of insurance policies in the actual calculation of the own funds requirement.

### **3.2.4 Expected loss**

- 3.2.4.1 Description of the treatment in the measurement system of both expected and unexpected losses.
- 3.2.4.2 Method of measuring the expected loss.
- 3.2.4.3 As the case may be, description of the institution's internal business practices to cover the expected loss and justification for accepting those practices as a valid alternative for cover by way of regulatory own funds.

### **3.2.5 Validation**

- 3.2.5.1 Description of the procedure concerning validation, in order to verify, among other things, whether the qualitative and quantitative conditions for use of the AMA have been met, the following being the minimum elements:
  - any involvement, in validation, of risk management, internal audit and any other internal or external parties, and how the aspect of independence is treated in the validation;
  - mention of the person ultimately responsible for validation;
  - qualitative and quantitative techniques employed;
  - follow-up of results and robustness of the model;
  - procedure concerning changes to the model;
  - description of the results of the most recent validation.

The most recent validation report is required to be provided in annex.

### **3.3 Allocation of the own funds requirement calculated**

Description and justification of the method to allocate the own funds requirement calculated for the operational risk to the various entities of the group, the following being the minimum elements:

- conversion of business lines to legal entities;
- method of allocating diversification benefits;
- way in which the allocation takes account of the risk of the entity.

## **4 Control environment**

### **4.1 Corporate governance**

- 4.1.1 Description of senior management's involvement in operational risk management, including representation in the relevant risk committees, the task, the responsibilities and the competences
- 4.1.2 Description of the task and responsibilities of the institution's service(s) charged with operational risk management, and its (their) place within the institution's structure and how this has an implication on the independence of the service(s) concerned.
- 4.1.3 Overview and organization of the reporting of information to the institution's senior management, including on the basis of the information generated by internal models.
- 4.1.4 Description of the activities of internal audit regarding the operational risk. An overview (*ex post*) of the investigations carried out and the audit plan (*ex ante* approach) concerning the operational risk are required to be provided in annex.

### **4.2 The use of internal measurement systems (use test)**

- 4.2.1 Description of how the institution has integrated the internal operational risk measurement system into its day-to day risk management process.
- 4.2.2 Confirmation that the use of the operational risk measurement system is not restricted to regulatory purposes.
- 4.2.3 Description of how the operational risk measurement system will be able to evolve in line with the increase in the institution's experience with risk management techniques and solutions.
- 4.2.4 Description of how the operational risk framework supports and enhances operational risk management within the institution.
- 4.2.5 Description of how the risk measurement system provides benefits for the management and control of the operational risk.

### **4.3 Data management and ICT systems regarding the operational risk**

- 4.3.1 Description (diagram) of the data architecture (gathering of data, storage, assembling of relevant data for the calculations); overview of the data flows between the various systems, with an indication of any manual interventions.
- 4.3.2 Overview of the data controls (in respect of completeness, accuracy, integrity, etc.) and back-up facilities.
- 4.3.3 Overview of the measures to ensure the maintenance of data quality.

## **5 Self-assessment**

For the institution to be able to declare that it is 'broadly compliant' with the qualitative and quantitative minimum requirements for use of the AMA for the operational risk, it conducts – on the basis of, among other things, the validation of the model and the internal audit

investigation – a full self-assessment and adds the following information to the application dossier:

- 5.1 Confirmation that there has been a full self-assessment of the regulatory qualitative and quantitative requirements.
- 5.2 Description of the self-assessment process, as it took place within the institution (description of approach, the independent unit that carried out the investigation – supported or not by an internal/external audit consultant – internal documentation system, etc.).
- 5.3 Overview of the requirements not met, with an indication of their materiality; Overview of the steps (with assumed time scale) that will be taken to ensure that the institution meets the requirements.
- 5.4 Internal plan for repetition of the self-assessment, to ensure that the institution continues to meet the requirements.

## **6 Impact calculation**

The results of an impact calculation of the own funds requirement for the operational risk according to the AMA, including:

- own funds requirement for the operational risk;
- own funds requirement for the operational risk, as a percentage of the total own funds requirement;
- comparison with the own funds requirement for the operational risk calculated according to the basic indicator approach and according to the standardized approach;
- impact of correlations in the AMA calculations;
- impact of insurance policies in the AMA calculations;
- extent of the expected loss and indication of whether it is included in the own funds requirement calculated;
- allocation of the own funds requirement to the various entities of the group that, at their level, are subject to the CRD.

As the case may be, the results of an impact calculation of the own funds requirement for the operational risk for the legal entities in the group that calculate a separate AMA (perhaps on a consolidated basis), with – by way of comparison – the own funds requirement as calculated for those entities according to the basic indicator approach and according to the standardized approach.

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