

## Final draft RTS on the assessment methodology to authorize the use of AMA

European Banking Authority

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# Introduction

## **The EBA has published final RTS setting out quantitative and qualitative requirements under which the competent authorities may permit institutions to use the AMA for the calculation of own funds requirements for operational risk**

The CRR allows competent authorities to permit the use **Advanced Measurement Approaches (AMA)** for the calculation of own funds requirements for operational risk to those entities that meet certain **quantitative and qualitative requirements**. In this regard, the CRR contains a **mandate addressed to the EBA** to specify the **assessment methodology** under which the competent authorities may permit institutions to use the AMA.

To carry out this mandate, the EBA has published final RTS specifying the **qualitative and quantitative requirements** that shall be considered by competent authorities, which will replace the former guidelines published by the CEBS.

These RTS are aimed at ensuring that the operational risk measurement systems are based on a well-founded methodology, are effective in capturing institutions' actual and potential operational risk, are reliable and robust in generating AMA regulatory capital requirements and are comparable across institutions.

The following is an analysis of the requirements that shall be considered by competent authorities under the RTS of the EBA.

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# Executive summary

The document published by the EBA is divided into three main sections: scope of operational risk, qualitative standards and quantitative standards

## Scope of application

- The RTS are addressed to **competent authorities**.
- Institutions that are likely to obtain an approval authorization for the use of AMA are those within the **scope of application of the CRR**.

## Regulatory context

- Directive 2013/36/EU (**CRD IV**) and Regulation 575/2013 (**CRR**).
- “Guidelines on the scope of operational risk and operational risk loss”, CEBS.
- “Operational Risk – Supervisory Guidelines for the Advanced Measurement Approaches”, BCBS.

## Main content

### Scope of operational risk

- **Definition** of operational risk, which includes:
  - **Legal risk**
  - **Model risk**
  - **Financial transactions risk**

### Qualitative standards

- **Governance**: senior management involvement, reporting, etc.
- **Use Test**: internal purposes, integration in the day-to-day risk management process, etc.
- **Audit and internal validation**: audit and internal validation functions and governance.
- **Data quality and IT infrastructure**.

### Quantitative standards

- **Use of the 4 elements**: internal data, external data, scenario analysis and business environment and internal control factors.
- **Core modeling assumptions of the measurement system**.
- **Expected loss and correlation**.
- **Capital allocation**.
- **Insurance and other risk transfer mechanisms**.

## Next steps

- The RTS will enter into force on the **twentieth day following** that of its publication in the Official Journal.
- For institutions using AMA, or for institutions which have already applied for a permission to use AMA, these RTS shall apply from **one year after** its entry into force.

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**The scope of operational risk includes events and losses that are related to legal risk, model risk, and financial transactions risk**

### Scope of operational risk

#### Scope

Competent authorities shall verify that institutions identify, collect and treat data on operational risk events and losses related to **legal risk**, **model risk**, and **financial transactions risk** (including those related to market risk).

#### Risk type:

#### Events and losses:

#### Legal risk

- Breach of rules (legislative provisions, contractual arrangements or internal rules) resulting in **legal proceedings** (judicial or out of court).

#### Model risk

- Improper **definition** of a model and its characteristics.
- Errors in the **implementation** of a selected model.
- Incorrect mark-to-market **valuations** and risk **measurement**.
- Use of a model for a **purpose** for which it was not intended, including **manipulation** of the parameters.
- **Inappropriate monitoring** of model performance.

#### Financial transactions risk

- **Failures and errors** during the **execution of orders**.
- Errors in classification due to data entry errors or the **software** used.
- **Loss of data** on the data flow from the front to the middle and back offices.
- Errors related to the **transaction amount**, **maturities**, etc.
- Technical **unavailability of access** to the market.
- **Unauthorised positions** taken in excess of allocated limits.



**The qualitative standards on governance are related to the operational risk management process and management function, as well as to senior management involvement and reporting requirements**

### Governance of operational risk

#### Governance

Competent authorities shall verify that institutions comply with the following aspects:

1. The **management process** (identification, measurement, monitoring) for operational risk is **appropriate**.
2. The operational risk **management function** is **independent**.
3. The **senior management involvement** with operational risk is **active and consistent**.
4. The **reporting** of the operational risk is **regular, timely** and **sufficient**.

#### 1 Management process

- The **management body**:
  - Approves the operational risk management **process**, the **governance** of operational risk and the **risk measurement system**, which are revised at least on an annual basis.
  - Defines the **operational risk tolerance** in a written statement, including both quantitative and qualitative measures, and it monitors the institution's performance against the risk tolerance.
- Institutions have an **on-going** process to identify, assess and measure operational risk.

#### 2 Management function

- It undertakes certain tasks (e.g. those related to the risk management process) **separately** from the institution's business lines.
- Not responsible for the **audit function**.
- Headed by the **Chief Risk Officer**, who meets certain requirements (appropriately experienced, involved in the elaboration of the operational risk tolerance, sufficient budget, etc.).

#### 3 Senior management involvement

- It implements the **governance** and **management framework** approved by the management body.
- It has been delegated the task of developing **policies and procedures** for managing operational risk.

#### 4 Reporting

- The reports include **all material aspects** of operational risk management and are distributed to **appropriate levels of management**, and **ad hoc reports** are used in case of certain deficiencies.
- The senior management receives at least **quarterly reports**.



Institutions should use the **AMA** for internal purposes, so as to enhance operational risk management, organization and control. Moreover, the **AMA** output should be robust compared to the output obtained under the regulatory regime previously applicable

### Use test

#### Use test

Competent authorities shall verify that institutions comply with the requirements related to the **uses of the AMA, integration into the day-to-day management, contribution to the risk management, and to organization and control**, and the comparison of the AMA with the **previous regulatory regimes**.

#### Detail of the aspects to be verified by competent authorities:

##### Uses of the AMA

- The operational risk measurement system is used to manage risk across **different business lines**, and also for the purposes of the **internal capital adequacy assessment (ICAAP)**.
- The operational risk measurement system is embedded within the **various entities of the group**.

##### Integration into the day-to-day management

- The operational risk management system is integrated into the **day-to-day management** and updated regularly as more experience in **management and quantification** of operational risk is gained.

##### Risk management

- The operational risk measurement system contributes to the regular and prompt **reporting of information** that fully reflects the nature and operational risk profile.
- Institutions use the information from the system to take remedial actions for improving processes.

##### Organization and control

- There is **communication** within the institution regarding the definition of operational risk tolerance and the relationship between the institution's business strategy and its operational risk management.
- The operational risk measurement system increases **transparency**.

##### Previous regulatory regimes

- Institutions calculate, before and after being granted the permission to use the AMA, their own funds requirements for operational risk under both the **AMA** and the **regulatory regime previously applicable**, at least **quarterly**
- Institutions demonstrate the **stability** and **robustness** of the AMA output.

## Qualitative standards



The RTS also specify the requirements that the audit and internal validation functions should meet in order to ensure the effectiveness of the risk measurement processes. Moreover, some requirements regarding data quality and IT infrastructure are included

### Audit and internal validation / Data quality and IT infrastructure

#### Audit and internal validation

Competent authorities shall verify that the **audit and internal validation functions** carry out their tasks regarding the operational risk management, and that the audit and internal validation **governance** is of a **high quality**.

#### Audit and internal validation functioning

- The **internal validation function** provides a **reasoned and well-informed opinion** on whether the operational risk management system works as predicted.
- The **audit function** verifies the integrity of the operational risk **policies and procedures**.

#### Governance

- **Audit programs** for reviewing the AMA framework cover all significant activities that could expose the institution to operational risk, including outsourced activities.
- The **internal validation techniques** are **proportionate** to the changing market and operating conditions.

#### Data quality and IT infrastructure

Competent authorities shall verify that the **quality of the data** used in the AMA framework is maintained over time and that the institution ensures an **appropriate performance** of the IT infrastructure.

#### Data quality

- Institutions have data to build and track its **operational risk history**.
- **Data quality dimensions** are appropriate to provide effective support to the operational risk measurement system (complete, relevant, timely, correct, accurate and consistent).
- Institutions have appropriate documentation for the **design and maintenance of the databases**.

#### IT infrastructure

- The IT infrastructure (system development life cycle-SDLC) ensures **sound and proper performance** of project management, risk management, governance, systems modelling, quality assurance in all activities, etc.



**CAs shall verify that institutions have internal documentation specifying how the four elements of AMA are gathered, combined and/or weighted, and that the institution has a clear understanding of how each of the four elements influences the AMA own funds requirements**

### Use of the four elements of AMA

Detail of the aspects competent authorities shall verify:

- 1 Internal data**
  - Institutions consider within the scope of operational risk **pending losses, material uncollected revenues and timing losses**, apart from the usual loss items.
  - Institutions have defined “**gross loss**”, “**recovery**” and “**recovery except insurance**”. For each individual loss, institutions are able to define the date of occurrence, the date of discovery and the date of accounting.
- 2 External data**
  - Institutions have a **data filtering process** in place, which allows the **selection of relevant data regardless** of the loss amount.
  - Institutions adopt a data scaling process involving the adjustment of loss amounts to fit the institutions’ **business activities, nature and risk profile**.
- 3 Scenario analysis**
  - Institutions have in place a **robust governance framework** (clearly defined, well documented, credible and reliable estimates, etc.), irrespective of whether the scenario is used for evaluating **high severity events** (low frequency) or the overall operational risk exposure.
- 4 Business environment and Internal Control Factor**
  - The institutions’ business environment and internal control **factors** (BEICF) are **forward looking** and reflect potential sources for **operational risk**.
  - Institutions have clear **policy guidelines that limit the magnitude** of reductions in the AMA own fund requirements due to BEICF adjustments.



### The RTS also establish quantitative standards related to core modelling assumptions of the operational risk measurement system

#### Core modeling assumptions of the operational risk measurement system

##### Detail of the aspects competent authorities shall verify:

###### Building calculation Data set

- Institutions apply **gross loss amounts** or **gross loss amount after all recoveries except insurance**, use the date of **discovery** or the date of **accounting**, apply **minims modelling** thresholds, employ appropriate adjustments rates on the data where **inflation** and **deflation** effects are material, group loss caused by **multiple events** into the calculation data set as a single loss, etc.

###### Granularity

- Institutions classify operational risk categories based on **homogeneous, independent** and **stationary data**.
- The level of granularity of the operational risk categories is **realistic** and is **reviewed regularly**.

###### Identification of loss distributions

- The process for the selection of the loss distribution contains **Exploratory Data Analysis (EDA)** for each operational risk category, appropriate techniques for the **estimation of parameters** and appropriate tools for evaluating the **appropriateness of distributions**, especially in the tail.
- Institutions consider the positive skewness and leptokurtosis; where the data are much dispersed in the tail, empirical curves are not used but sub-exponential are used; institutions have in place methodologies to reduce the variability of estimates of parameters, etc.

###### Determination of aggregated loss distributions

- The techniques elaborated by the institution ensure appropriate levels of **precision and stability** of the risk measures.
- Irrespective of the techniques used (Monte Carlo, Fourier Transform, etc.), institutions adopt **criteria** that **mitigate errors** and proved measures of the magnitude of these errors.



The EBA also sets out specific requirements that competent authorities should verify related to the process for estimate the expected loss. In addition, institutions should consider any form of linear or non-linear dependence

### Expected loss and correlation

#### Expected losses

Competent authorities shall verify that:

- The **methodology for the estimate of EL** is **consistent** with the operational risk measurement system, and that the EL estimation process is done by **operational risk category** and is consistent over time.
- Institutions use **statistics** that are less influenced by **extreme losses**.
- The **maximum offset** for EL applied by an institution is bound by the total EL, and that the maximum offset for EL in each operational risk category is bound by the relevant EL applied tot that category.
- The offsets the institutions allow for EL in each operational risk category are **capital substitutes**, or otherwise are available to cover EL with high degree of certainty over the one-year period.
- Institutions clearly **document** how the EL is measured and captured.

#### Correlation

Competent authorities shall verify that an institution carefully considers any form of **linear or non-linear dependence**, across two or more operational risk categories or within an operational risk category. In particular, they shall verify that:

- Institutions support their correlation assumptions on an appropriate combination of empirical **data analysis** and **expert judgement**.
- That losses within each operational risk category are **independent** of each other; or in case that is not possible, **dependent losses are aggregated** together.
- Institutions carefully consider dependence between tail events, and they do not base the dependence structure on **Gaussian or Normal-like distributions**.
- Assumptions regarding dependence used by institutions are **conservative**.
- Institutions properly **justify the dependence assumptions** they use and that they use regularly perform **sensitivity analysis** with the view to assessing the effect of the dependence assumptions of its AMA own funds requirements.



Finally, the RTS establish specific quantitative requirements related to capital allocation mechanisms. Similarly, institutions should meet certain requirements about insurance and other risk transfer mechanisms

### Asignación del capital y seguros

#### Capital allocation

Competent authorities shall verify that:

- The allocation takes into account potential **differences in risk and quality** of operational risk management between the parts of the group to which the own funds are allocated.
- There is no foreseen **practical or legal impediment** to the prompt transfer of own funds repayments of liabilities.
- The own funds allocation from the consolidated group level to the parts of the group involved in the operational risk measurement system relies on **risk sensitive methodologies**.

#### Insurance

The competent authorities shall verify that:

- The insurance provider meets the **authorization requirement** of the CRR.
- The insurance is provided via a **third party**.
- The institution avoids the **multiple counting** of risk mitigation techniques .
- The **risk mitigation calculation** reflects the insurance coverage. In this regard, the insurance coverage relates to the institution's operational risk profile and uses a sophisticated risk mitigation calculation.
- The institution's methodology for recognizing insurance captures all the relevant elements through discounts or **haircuts**.

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