

**on changes to Advanced Measurement Approach (AMA) models**

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**I) Preamble**

Under the Solvency Regulation (*Solvabilitätsverordnung – SolvV*) and subject to approval from the Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht – BaFin*), institutions<sup>1</sup> are permitted to apply internal risk models (AMA) to determine the regulatory capital charge for operational risk (OpR). This entails meeting requirements imposed on the risk management system and quantitative model.

It is in the interest of both each institution and the supervisor that an internal risk model is at all times tailored to the specific qualities of the institution in question and to the changing conditions, so that the respective risk structure is covered as effectively as possible. This also applies to foreign subsidiaries for which capital is allocated from the AMA. Extensions and significant changes at group level in particular can have a considerable impact on those institutions' capital requirements. In this respect, it may be necessary, following coordination with the competent foreign authorities, to obtain a new joint decision prior to approval of a change to the model (see section 10 (1a) of the German Banking Act (*Kreditwesengesetz – KWG*), Art. 129 (2) of EU Directive 2006/48/EC). It may also be necessary for German subsidiaries of foreign institutions to obtain a new joint decision.

Pursuant to section 284 (4), in conjunction with section 278 (2), of the Solvency Regulation, an institution is obliged to check and, if necessary, adapt the AMA. Following initial approval of an AMA, it must be regularly adapted to allow, for example, for changes in the business activity or organisational structure, additional data, validation results or other new findings. Following approval of the AMA, the institution is responsible

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<sup>1</sup> The Guidance Notice also applies analogously to groups of institutions and financial holding groups.

for identifying necessary changes to the model and implementing them in an appropriate manner. Pursuant to section 278 (2) sentence 3 of the Solvency Regulation, significant changes to an AMA are to be coordinated with BaFin.

This Guidance Notice should assist institutions with the ongoing further development of internal risk models using procedures that are as transparent, efficient and swift as possible when making changes to the model, as well as ensuring clear communication between institution and supervisor. Uniform governance should also be ensured.

To that end, this Guidance Notice outlines the basic principles for dealing with significant and insignificant changes to the model that state more precisely the requirements of section 278 (2) of the Solvency Regulation.

To implement those principles, institutions adopt internal guidelines for changes to the AMA (see Section IV, Model change policy). These guidelines embody the basic principles, taking the institution's individual characteristics and its AMA into consideration.

The examples of changes and extensions referred to in this Guidance Notice assist institutions with their internal categorisations. The Guidance Notice also lays down the planned means of communication with the supervisor.

## **II) Severity of changes to the model**

Changes to an AMA include modifications both to the mathematical/statistical methods and to all other facts that are essential for meeting the requirements under sections 279 to 292 of the Solvency Regulation. Apart from the quantitative model, this relates in particular to changes in the management of operational risk. The procedure for dealing with intended changes to the model varies depending on their severity.

This Guidance Notice discusses extensions, as well as changes, to the AMA. An extension is present where the change relates to AMA components for which no approval has yet been granted.

An intended change is not looked at in isolation, but rather is assessed in connection with changes that have been made previously or applied for at the same time. An insignificant change *per se* may have a significant impact in connection with other changes and has in that case to be upgraded accordingly.

Irrespective of an institution's internal categorisation, BaFin may upgrade or downgrade actual changes and handle them accordingly.

Changes to the model are graded according to the four categories below, which are explained in more detail in the annex:

- a) extensions
- b) significant changes
- c) major changes
- d) minor changes

Owing to the individual structure of the AMA and to the diversity of potential changes, a universally valid and unequivocal definition of the categories mentioned is not possible in each separate case. The annex to this Guidance Notice contains a non-exhaustive list of examples of changes in the various categories. This list acts as a guide to grading changes according to their severity. Institutions are responsible for developing grading principles and deciding how individual changes are to be handled based on this Guidance Notice. They are laid down in an institution's internal model change policy (MCP, Section

IV). Different requirements are imposed on communication with the supervisor, depending on the severity of an actual change.

### **III) Communication with the supervisor**

The necessary applications and notices are to be submitted to the BaFin section supervising the institution. Copies of correspondence should be sent to the respective regional office of the Deutsche Bundesbank. Documents outlining this change, together with its cause, objective and effects, must be appended. Examples of this include: methodical concepts, amended guidelines or organisational structures, annotated results of comparative calculations and the planned time frame for implementation.

#### **Communication on extensions and significant changes**

An institution must apply in writing, in good time prior to the planned implementation, for approval from BaFin to use the extended or significantly changed AMA to determine the regulatory capital requirement.

BaFin decides whether the planned change can be approved. It will usually only be possible to reach a final decision after carrying out an audit pursuant to section 44 (1) sentence 2, in conjunction with section 10 (1) sentence 9, of the German Banking Act. A decision on whether to approve the application can only be reached on this basis. Section 278 of the Solvency Regulation applies to new elements of the AMA for which approval has not yet been granted but which are to be introduced via an extension.

When extending the AMA, the notice of approval is usually supplemented by an additional administrative act; significant changes, however, basically require independent recognition of suitability. The extended or significantly changed AMA may only be used to determine the minimum capital requirements once BaFin has supplemented the approval or issued recognition of suitability.

BaFin may assess applications for significant changes as a new application for approval (see "Guidelines for applications to use an Advanced Measurement Approach for operational risk"). Fees, if any, are covered by the Ordinance on the Imposition of Fees and Allocation of Costs Pursuant to the Act Establishing the Federal Financial Supervisory Authority (FinDAGKostV).

#### **Communication on major changes**

The institution must give written notice of the change prior to its planned implementation.

Based on the documents submitted, BaFin informally advises the institution of any regulatory objections to the change. Only then should the institution apply the change for regulatory purposes.

#### **Communication on minor changes**

Minor changes to the model may be implemented without approval. They must be notified to the supervisor in writing on a combined and annual basis, at the latest one year after the last notification.

#### **IV) Internal model change policy**

Institutions implement a model change policy (MCP) within their internal AMA framework. The MCP includes appropriate distinctive criteria for determining the degree of severity, outlines the process for implementing changes and their documentation, and names the persons responsible.

In accordance with the MCP, changes to the quantitative model or risk management system are graded according to severity and appropriately documented. The extent of the documentation depends on the nature, scope and complexity of the changes. Except in the case of minor changes, the documentation contains the description, cause, objective and effects of the changes.

The institution must forward its MCP to BaFin and the Deutsche Bundesbank. The supervisor will check this MCP. The MCP must be modified, if needed. Interpretations published by BaFin concerning the Solvency Regulation must also be complied with.

## ANNEX

### to a) Possible examples of extensions

- Examples of extensions to the *scope of application* of AMAs
  - Extension to areas of the institution not yet covered by the approval if not contained in the implementation plan submitted with the application
  - Lifting of a hitherto applied Partial Use relating to individual locations, legal units or business areas if not contained in the implementation plan submitted with the application
  - Taking newly acquired business units or subordinated companies into consideration in the AMA if they are significant
  - Subsequent approval of a Partial Use where, as a result, the AMA cover falls below 95% of a suitable indicator, e.g. the relevant indicator
- Examples of extensions to the *quantitative model*
  - First-time reduction of the capital charge by part of the expected loss
  - First-time consideration of insurances
  - First-time consideration of other risk transfer mechanisms
  - First-time consideration of correlation and diversification effects
  - First-time application of an allocation mechanism at group level

### to b) Possible examples of significant changes

- Examples of significant changes to the *quantitative model*
  - Introduction of essentially new statistical methods or parametric estimates (computation module, basic change to the weighting of the four elements)
  - Fundamental changes to the AMA, e.g. switching from essentially data-related approaches to mainly scenario-based models and vice versa
  - Fundamental change to the modelling of correlation and diversification effects
  - Taking additional risk transfer mechanism into consideration if their handling deviates from procedures, which have already been assessed and approved by the supervisor
  - Basic switch from incorporated external data sources or first-time use of new external data sources (consortia, pools, etc.)
  - Changes to the allocation mechanism which have a considerable impact on the amount of foreign subsidiaries' capital charge
  - Fundamental changes to the model owing to significant changes to the group structure or to the abandonment of significant business units, including subordinated companies
- Fundamental changes to the organisational and operational structure of the management of operational risk, e.g. functions and responsibilities of the central OpR management unit
- In addition to the above-mentioned examples, any changes that cause a 20% or more change to the OpR capital charge

**to c) Possible examples of major changes**

- Examples of major changes to the *quantitative model*
  - Changes to methods owing to validation
  - Changes to the bank's internal procedures for recording losses
  - Changes to the bank's internal procedures for scenario analysis
  - Changes to the bank's internal procedures for business environment and internal control factors
  - Changes to the validation procedures
  - Changes to the allocation mechanism which do not have an impact on the amount of foreign subsidiaries' capital charge
  - Changes to the model owing to major changes to the group structure or to the abandonment of major business units, including subordinated companies
- Examples of major changes to the *risk management system*
  - Significant transfer of functions between centralised or decentralised OpR management units or to third parties
  - Fundamental changes to the integration of AMA results in risk management
  - Fundamental changeover of IT systems, e.g. for the AMA model, data administration or reporting procedures
  - Outsourcing or cessation of outsourcing for significant AMA components
- In addition to the above-mentioned examples, any changes that cause a 10%-20% change to the OpR capital charge

**to d) Possible examples of minor changes**

- Examples of minor changes to the *quantitative model*
  - Taking newly acquired business units or subordinated companies into consideration in the AMA if they are insignificant
  - Changes to the model owing to insignificant changes to the group structure or to the abandonment of insignificant business units, including subordinated companies
- Examples of minor changes to the *risk management system*
  - Restructuring within the centralised or decentralised OpR management units without or with only immaterial transfer of functions between these departments or to third parties
  - New software versions not impacting the calculation process and methodology (e.g. adaptation of masks, error correction)
  - Change of IT supplier for already outsourced IT systems, provided that the risk profile is not significantly altered
  - Minor changes to the systems architecture/data flows
  - Changes to the assignment of authority which, although impacting the management of operational risk, do not affect the functions of the central OpR management unit