Just in Time

EBA Initial Margin Model Authorisation under EMIR 3.0

Supervisory Requirements and Implications for Firms

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Executive Summary

EMIR 3 introduces mandatory prior authorisation by Competent Authorities (CAs) for **Initial Margin (IM) models** used in non-centrally cleared OTC derivatives. The goal is to ensure that material risks are adequately captured while promoting supervisory consistency and reducing duplication of work across the EU.

This requirement is implemented through the **EBA Draft Regulatory Technical Standards** and the **EBA Draft Guidelines**. Together, these frameworks create a dual-track regime: the EBA centrally validates the general methodology of Pro Forma models (such as ISDA SIMM), while CAs are responsible for their implementation, governance and ongoing oversight. "Own models" are instead fully validated by CAs.

At a Glance

01	Impact of EMIR 3 on Firms	4
02	RTS – Quantitative Requirements	10
03	RTS – Qualitative Requirements	15
04	Conclusion & Take-aways	21

Keywords: SIMM, Initial Margin, EMIR 3.0

01

Impact of EMIR 3 on Firms

Regulatory & Supervisory Transformation

Operational & Cost Impact

Divergence Risk (Baseline Scenario)

Divergence Risk Mitigation under EMIR 3 RTS

Implementation Timeline

Impact of EMIR 3 on Firms 1/5

Regulatory & Supervisory Transformation

EMIR 3 introduces a material evolution in the regulatory framework governing initial margin (IM) models for non-centrally cleared OTC derivatives, moving from a largely principles-based approach to a more structured and procedural supervisory regime. The regulation builds on the existing framework under EMIR and the Joint ESA RTS but strengthens the authorization and validation process to ensure greater consistency across the Union.

Scope & Applicability

- Applies to counterparties (or groups) with Aggregate Average Outstanding Notional (AANA) ≥ €750bn in non-centrally cleared OTC derivatives.
- Targets **systemically relevant** institutions with significant derivatives exposure.
- Threshold calibrated based on EBA survey that captures majority of market risk.

Regulatory Architecture

- Introduction of RTS under Article 11(15aa).
- Replacement of previous RTS (2023/04) following EMIR 3 mandate.
- Shift from principles-based supervision to a structured supervisory procedures, while still allowing for supervisory judgment to be exercised.

Authorisation Framework

- Prior authorization required before use of IM models.
- Competent Authorities must decide within 6 months of application.
- Ongoing validation and monitoring requirements introduced.

EBA Central Role

The key innovation is the introduction of a **central validation function** performed by the EBA for pro forma models such as ISDA SIMM.
This creates a **bifurcated authorization framework**: the EBA validates the core model methodology and assumptions, while competent authorities remain responsible for assessing implementation, governance, and portfolio-specific risks at the counterparty level.

Impact of EMIR 3 on Firms 2/5

Operational & Cost Impact

No Incremental Regulatory Burden

Requirements has already defined under Joint ESA RTS (2016/2251).
No new obligations on model design, calibration, or risk factor modelling.
Existing IM frameworks remain valid.

Cost Structure Impact

No material increase in Staff and expertise, training programs and Model validation infrastructure.

Additional EMIR 3 Elements

Introduction of supervisory fees (limited impact) and increased reporting and transparency requirements.

Efficiency Improvements

Standardized procedures reduce the regulatory and the uncertainty iterations in approval process leading to more predictable supervisory expectations.

Group-Level Optimization

Reuse of qualitative documentation (governance, audit, IT).
Centralized validation frameworks across entities.
Reduced duplication for cross-border groups.

Supervisory Reliance

Competent Authorities may rely on other authorities' assessments, internal validation functions and third-party reviews.

Impact of EMIR 3 on Firms 3/5

Divergence Risk (Baseline Scenario)

Drivers of Fragmentation without RTS

- **Absence of common regulatory standards:** competent authorities would continue to authorize IM models based on their own supervisory practices within the six-month timeframe established under EMIR, while this ensures that authorizations are delivered in a timely manner, it creates a structural risk of divergence across jurisdictions.
- **Absence of detailed and harmonized supervisory procedures:** high-level requirements are defined in the Joint ESA RTS, they leave significant room for interpretation, particularly in areas such as governance assessments, validation methodologies, and performance monitoring.

Qualitative Perspective

Different standards could be applied when assessing internal governance, independence of validation functions, audit processes, and the robustness of IT systems.

Quantitative Perspective

Differences could arise in the implementation of back-testing, including the choice between static and dynamic approaches, the definition of time horizons, and the interpretation of performance metrics.

Outcomes

- Identical models could be subject to different approval decisions, conditions, or remediation requirements depending on the jurisdiction.
- For cross-border groups, without harmonization, each entity within the group could be subject to separate validation processes, requiring repeated submissions of similar documentation and leading to duplication of work

Overall, the baseline scenario would result in regulatory fragmentation, an increased compliance burden, an inefficient allocation of supervisory resources, and potential incentives for regulatory arbitrage.

Impact of EMIR 3 on Firms 4/5

Divergence Risk Mitigation under EMIR 3 RTS

Harmonization with Proportionality

The **RTS** introduced under EMIR 3 directly address the sources of divergence by fixing a common framework for supervisory procedures applicable across all competent authorities. These procedures cover both **qualitative** and **quantitative** aspects of model validation, creating a consistent baseline while preserving flexibility.

Qualitative Harmonization

- Requirements related to internal governance, organizational structure, independence of model development and validation units, audit processes, IT infrastructure, outsourcing arrangements, and the quality and auditability of documentation.
- Overlap with other regulatory frameworks, (e.g., DORA and EBA guidelines) explicitly incorporating them into the RTS.
- Avoids the risk that competent authorities apply different interpretations.

Quantitative Harmonization

- RTS adopt a more flexible and principle-based approach, aligning more closely with the Joint ESA RTS.
- No rigid prescription on back-testing type (static vs dynamic) and time horizons.
- Use of Margin Average Shortfall (MAS) as supervisory indicator (not binding metric) and for supporting the identification of high-risk netting set.

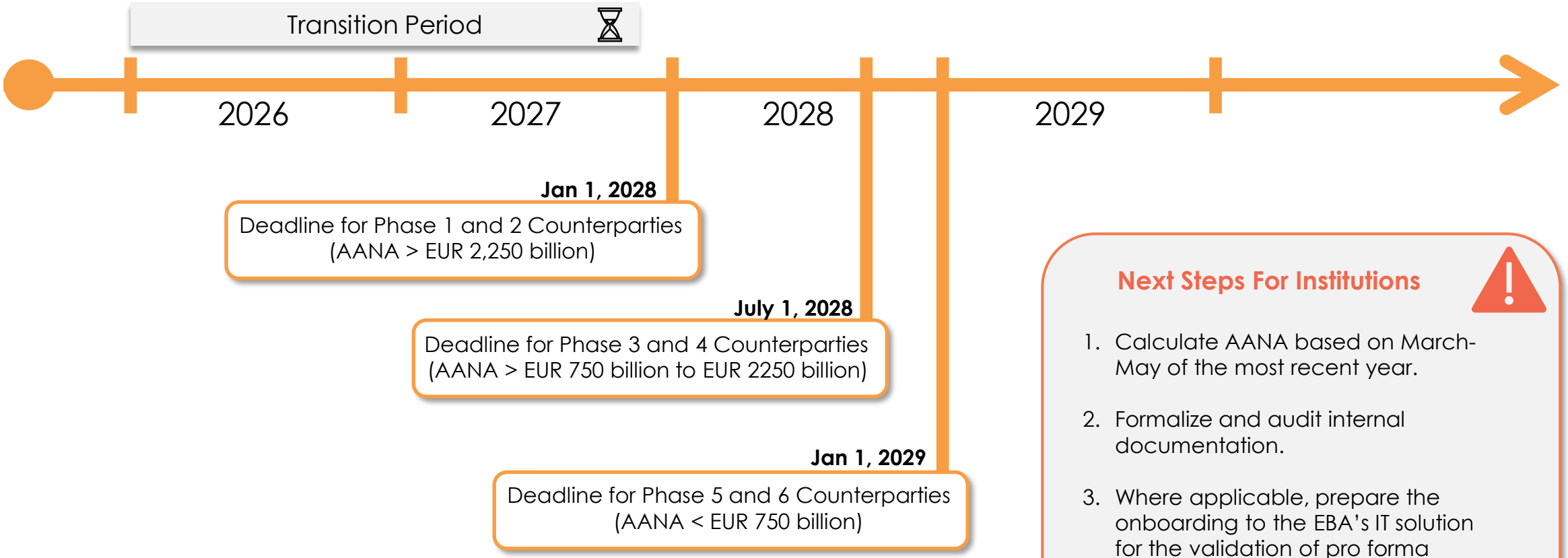
EBA Central Validation Impact

- Central validation role of the EBA further enhances convergence by removing duplication in the assessment of pro forma models.
- Allowing competent authorities to focus on implementation and counterparty-specific risks.
- While maintaining sufficient flexibility to account for differences in business models and risk profile.

The **RTS** strike a balance between harmonization and proportionality even if some differences remain due to supervisory judgment.

Impact of EMIR 3 on Firms 5/5

Implementation Timeline



Next Steps For Institutions

1. Calculate AANA based on March-May of the most recent year.
2. Formalize and audit internal documentation.
3. Where applicable, prepare the onboarding to the EBA's IT solution for the validation of pro forma models.

02

RTS – Qualitative Requirements

Bifurcated Authorization Path

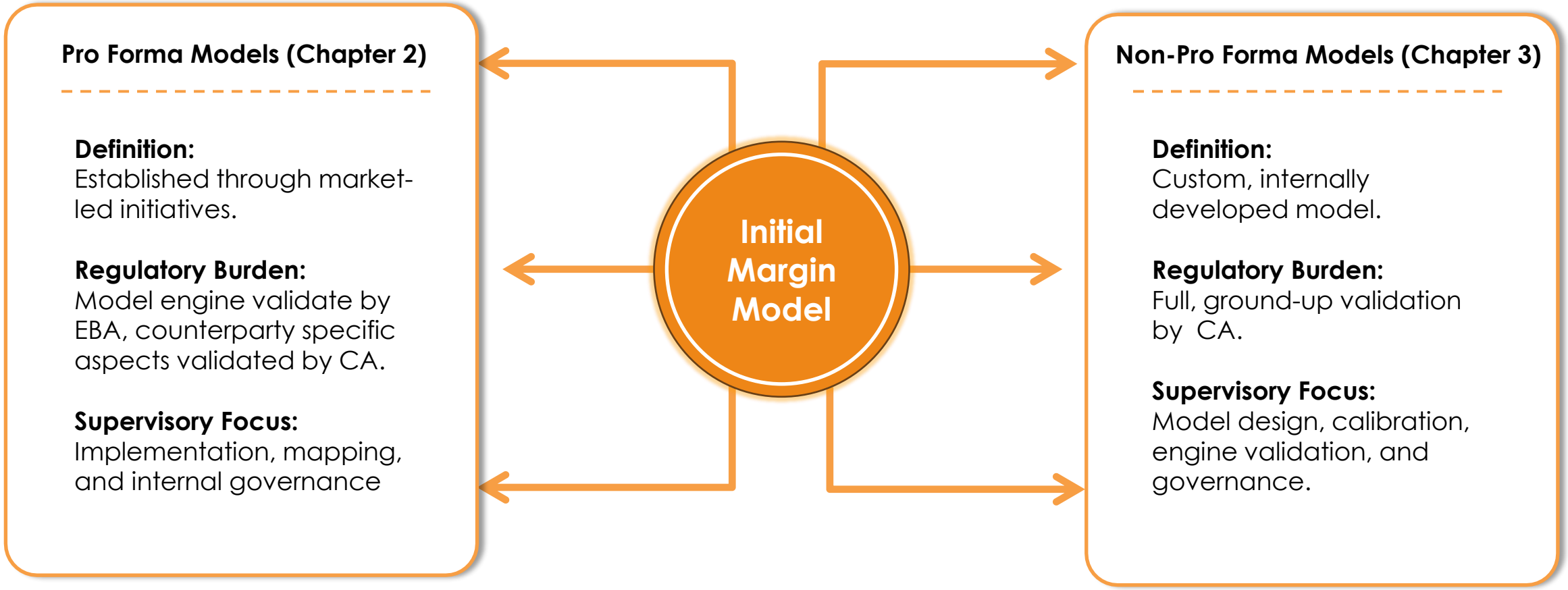
Internal Governance

Model Development & Internal Validation

Audit, IT Systems and Outsourcing

RTS – Qualitative Requirements 1/4

Bifurcated Authorization Path



RTS – Qualitative Requirements 2/4

Internal Governance

The qualitative requirements for **Internal Governance** under the RTS are designed to ensure that institutions have **robust internal controls** and **oversight**, regardless of whether they use standardized pro-forma model or an own model.

Sound Understanding

IM model cannot be treated as a «black box»

- **Model Engine**: the core mechanics, assumptions, and mathematical foundations of the model.
- **Technical Limitations**: clear awareness of the circumstances where the model might fail or might produce less reliable results.
- **Reliability**: understanding of how the specific assumptions affect overall accuracy of the model.

Approval and Oversight

Direct control over critical technical and operational areas

- **Structural Implementation**: approve organizational structure, ensuring the **Model Development Unit (MDU)** is independent of the trading unit.
- **Methodologies and Extensions**: approve methodologies, extensions and material changes after reviewing validation and audit reports.
- **Corrective Actions**: take appropriate corrective measures when weakness are identified.

Monitoring and Accountability

Ongoing monitoring requirements

- **Annual follow-up**: formally follow up on recommendations raised by audit, MDU, or internal validation function.
- **Performance awareness**: awareness on the ongoing performance of the model through **back-testing** results and internal reports.
- **Reconciliation and Disputes**: Governance frameworks must explicitly include processes for managing **margin disputes** and reconciling IM amounts with trading partners.

RTS – Qualitative Requirements 3/4

Model Development & Internal Validation

Model Development Unit (MDU)

- **Independence:** the MDU must be separate and independent from the units responsible for originating, renewing or trading exposures to ensure that the latter cannot alter the model implementation without appropriate control
- **Quantitative Ownership:** the MDU is responsible for the quantitative outcome of the IM model, input data, and the production of reports.
- **Representation:** the MDU must be proportionate to the size of the counterparty and must be appropriately represented in its decision-making bodies.

Internal validation

- **Staffing Independence:** validation must be conducted by personnel independent from the team responsible for the model's implementation.
- **Frequency and findings:** continuous monitoring is required, with internal validation performed at least annually, producing reports that are comprehensive and sound.

Non-Pro Forma Models

- **Appropriateness** of the model, its **assumptions** and **calibration process**.
- Model **Performance**.
- **Accuracy** of the model implementation.

Pro Forma Models

The counterparty should not relay on model developer validation and must validate the model using actual own portfolios. Counterparty must **distinguish** between pro forma model and counterparty specific elements.

Counterparty Specific

- **Accuracy** of the implementation of the pro forma model.
- **Appropriateness** of the model.
- Model **performance.**

Pro forma model

- Model **assumptions** and **calibration**.
- Model **limitations** and **mitigating** measures
- with respect to the counterparty portfolio composition.
- **Engagement** with pro forma model developer.

RTS – Qualitative Requirements 4/4

Audit, IT Systems and Outsourcing

Audit

- **Mandatory Annual Review:** internal or external audits must review all initial margin models at least annually.
- **Independence and Scope**: audit must be independent, adequate and proportionate to the size of the counterparty.
- **Reporting:** audit results must be presented to the management body on annual basis.

IT Systems

- **Performance:** IT systems must provide accurate IM calculations in a timely matter.
- **Resilience:** counterparties must have appropriate remediation capabilities in place to handle potential IT systems failures.

Outsourcing

Outsourcing occurs when a counterparty delegates **"important or critical functions"** such as implementation, internal validation or audit of the IM model to a service provider.

Competent Authorities shall verify that:

- Outsourcing does not hinder the ability to assess the model and full access and audit rights are granted to the CA in relation to the service provider to verify compliance.
- Senior management remains actively involved in decision-making and supervision of the outsourced service provider.
- Counterparty own staff maintains sufficient knowledge to understand the activities or services delegated to the service provider.

The acquisition or use of a **pro forma** IM model is not considered outsourcing, however the counterparty shall:

- Establish **contingency plans** in case the use of a pro forma model is no longer viable.
- Maintain operational and technical capability to calculate IM using the **standardized approach**.

03

RTS – Quantitative Requirements

Pro Forma Model Implementation

Own Model Implementation

MPOR and Parameter Calibration

Back-testing

Margin Average Shortfall

RTS – Quantitative Requirements 1/5

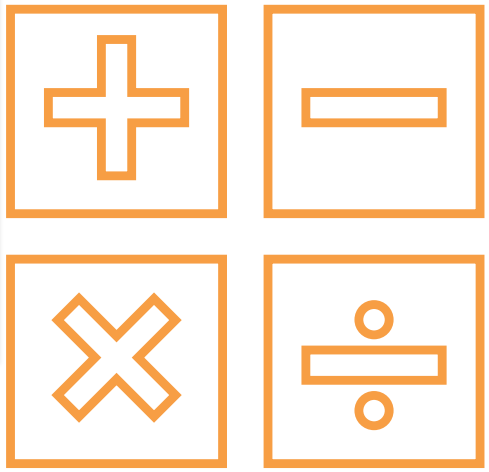
Pro Forma Model Implementation

Mapping

Understanding of the **model risk factor** definitions and taxonomy, including the correct classification by asset class, tenor and other relevant dimension.

Maintain a well define and comprehensive **mapping table** to identify how each internal risk factor is linked to the corresponding pro forma model risk factor.

The CA will evaluate the technical methods used for mapping including **interpolation**, **transformation** or **aggregation** techniques and its consistency across products and trading desks.



Weights and Correlation

Risk weights are correctly applied according to the specific **bucket** structure defined by the model developer

Intra- and inter-bucket **correlations** are correctly implemented, as well as the treatment of exposures that span across different asset classes.

For any given IM calculation, the counterparty must be able to show the **full path**, from individual trades to final margin amount.

Sensitivities

Verify that the **sensitivities** used as input of the pro forma model must reflect the shock size, valuation convention and model assumptions prescribed by the model developer.

If using **simplifications** or **approximations** in computing the sensitives, the counterparty must justify their use and assess whether they have a **material impact** on the final margin figures.

RTS – Quantitative Requirements 2/5

Own Model Implementation

Competent Authorities shall perform a **granular review** of how the counterparty **identifies** and **includes** risk factors. More specifically the regulators shall assess the specific **policies** and **metrics** used to identify and include new risk factors into the model and may require counterparties to analyze their most material netting sets to identify whether there are any **structural deficiencies**, such as the absence of a necessary risk factor.

Interest Rate

- Interest rate risk factors must be **captured for each currency** in which margin amounts are exchanged.
- Different curves must be treated separately, including those referencing different tenors and inflations curves.
- For material exposures in the most liquid currencies, the yield curve model must use at least **six maturity buckets**.
- The IM model must either model two given curves directly or include a basis curve representing the difference between them to ensure **basis risk** is not ignored.

Equity, Commodity and Credit Spread

- The model must ensure that each single name, index or commodity is **shocked and treated separately**.
- For single-name **equities** and **credit** issuers, the counterparty must either model the risk factor **directly** or use a combination of **systematic** and **idiosyncratic** risk factors that are both shocked.
- For commodities, the model must capture **basis risk** stemming from **different delivery locations** and **maturity mismatches**.
- Across all asset classes. CA shall verify that the counterparty has established clear criteria for the number of risk factors used to model the **volatility surface**, ensuring **Vega risk** is sufficiently captured.

Foreign Exchange

- All FX risk factors reflecting the spot exchange rate between any two currencies **must be included**.
- The CA may verify that the model documentation **explicitly specifies** that these spot exchange rates are shocked to determine the IM.

At model level, **non-identical** positions should not be netted, and the **residual risk** should be correctly captured. Any netting set **excluded** due to **unmodelled non-linearity** must be treated under the **standardized method** for the calculation of initial margin.

RTS – Quantitative Requirements 3/5

MPOR and Parameter Calibration

Margin Period Of Risk

Both pro forma and own models must use assumed variations based on a **one-tailed 99 percent confidence interval** over a **Margin Period of Risk (MPOR) of at least 10 days**. Counterparties must **actively monitor** circumstances that would warrant a longer period and have **mitigation measures** in place to address the **risk of longer liquidating time**.

If a counterparty uses a **shorter** period to calibrate parameters and then **rescales** them to a 10-day MPOR it must **provide a detailed explanation** of the methodology and ensure that it does not systematically underestimate the initial margin.

Parameter Calibration

Calibration of parameters must be performed **at least annually** with historical data spanning a **minimum of 3 years and a maximum of 5 years**. Counterparties must **monitor** if applied shocks remain appropriate during volatility and correlations regime shift.

Pro Forma Models

Even if pro forma model developer provides generic calibration, the counterparty must verify that the selected stress period represents a period of significant stress for its own actual positions.

Non-Pro Forma Models

The counterparties must provide the **full time series** used to calibrate shocks and correlations so that the CA can verify if it meets the regulatory requirements.
The counterparty must prove that the chosen stressed period for each calibration constitutes **at least 25% of the total calibration data** and that at least one distinct stress period is identified per asset class.
If a single stress period is applied to an entire asset class, the counterparty must provide an **impact analysis** comparing parameter outcomes from different stress periods calibrated on subset of risk factors.

RTS – Quantitative Requirements 4/5

Back-testing

Back-testing is a critical quantitative check to ensure reliability of the IM model, comparing predicted risk measures against realized market changes. Back-testing shall be performed **at least every 3 months** and shall comply with the following standards:

Independence

The unit performing back-testing must be entirely **independent** of the trading unit responsible for the exposures.

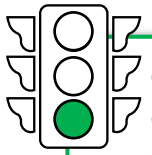
Consistency

Counterparties must use the **same pricing methods, market data, and model parameters** used in their end-of-day valuation processes.

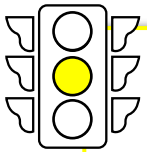
Approximation

If a counterparty uses a **Taylor series** approximation for pricing, they must compute at least material **first and second order** terms.

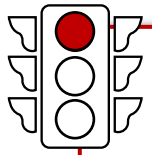
Every quarter, each netting set must be categorized into one of **three zones** based on the probability that the observed **overshooting** (actual loss exceeding predicted IM) are compatible with a compliant model. **Back-testing** outcomes must be **reported periodically** to **senior management**. If back-testing indicates that the hypothesis of correct model calibration should be **rejected** for material netting set, **clear and well-defined procedures** must be in place to **escalate** to senior management and eventually **take remedial actions**, such as recalibrating parameters.



Green zone: number of overshooting is low and consistent with 99% confidence level. Probability of compatibility is ≥ **5%.**



Yellow zone: number of overshooting moderately exceed expected levels. . Probability of compatibility is < **5% but** ≥ **0.01%.**



Red zone: number of overshooting significantly exceed expectations. Probability of compatibility is < **0.01%.**

RTS – Quantitative Requirements 5/5

Margin Average Shortfall

The **Margin Average Shortfall (MAS)** is an indicator introduced to complement the "traffic light" back-testing system. While the traffic light system counts the **frequency** of overshooting, MAS measures their **severity**.

Definition

MAS measures the absolute average riskiness of a netting set in the event of **counterparty default**. It quantifies the average additional margin needed to **cover losses that exceed predicted IM**.

$$MAS_s^{ns} = \frac{100}{T}\sum_{t=1}^{T}\max(0, A_{s,t}^{ns})$$

Where:

- MAS_s^{ns} : margin average shortfall for each netting set.
- $A_{s,t}^{ns} : PL_t^{ns} - IM^{ns}$ additional margin required to cover losses case of overshooting.

Analysis

Every quarter, counterparties must identify their worst-performing netting sets with the highest MAS score. They are required to select, if available, a sample of **15 red-zones, 10 yellow-zones, 5 green-zones** for a **consolidated analysis**. The goal is to identify common patterns, such as model deficiencies, data issues, inappropriate parametrization or portfolio specific-risks, that cause large margin shortfalls and overshooting.

Because **MAS** and **IM** are **different** measures, MAS it is not used to determine regulatory consequences, it acts as an **indicator** used to focus supervisory attention on the **most problematic** netting sets.

04

Conclusion & Take-aways

Final Remarks and Next Steps for Firms

Conclusion & Take-aways

Final Remarks and Next Steps for Firms

Reduced divergence does not mean reduced governance

- EBA central validation reduces fragmentation risk, increases consistency and improves certainty across the EU.
- The EBA retains the ability to act independently where methodological concerns arise. Divergence risk is reduced but not eliminated.
- Supervisory expectations shift from model approval to governance, controls, auditability and defensible model performance.
- Improved consistency supports efficient collateral management and reduces disputes and operational friction.
- Balancing global SIMM interoperability with evolving regional supervisory expectations.

What Firms Should Prioritize Next

- Strengthen governance and management body oversight.
- Enhance sensitivity mapping and CRIF traceability.
- Upgrade reconciliation and dispute management frameworks.
- Ensure robust validation evidence and audit readiness.
- Improve coordination across Risk, Collateral Management and Model Validation.

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