

# Chapter 1

## Commission Delegated Regulation (EU) 2018/959

## Article 32 Determination of aggregated loss distributions and risk measures

For the purposes of assessing that an institution determines the aggregated loss distributions and risk measures in an appropriate manner, as referred to in point (e) of Article 28, competent authorities shall confirm at least the following:

- (a) that the techniques elaborated by the institution for that purpose ensure appropriate levels of precision and stability of the risk measures;
- (b) that the risk measures are supplemented with information on their level of accuracy;
- (c) that, irrespective of the techniques used to aggregate frequency and severity loss distributions, including Monte Carlo simulations, Fourier Transform-related methods, Panjer algorithm and Single Loss Approximations, the institution adopts criteria that mitigate sample and numerical related errors and provides a measure of the magnitude of these errors;
- (d) that, where Monte Carlo simulations are used, the number of steps to be performed is consistent with the shape of the distributions and with the confidence level to be achieved;
- (e) that, where the distribution of losses is heavy-tailed and measured at a high confidence level, the number of steps is sufficiently large to reduce sampling variability to an acceptable level;
- (f) that, where Fourier Transform or other numerical methods are used, algorithm stability and error propagation issues are carefully considered;
- (g) that the institution's risk measure generated by the operational risk measurement system fulfils the monotonic principle of risk, which can be seen in the generation of higher own fund requirements where the underlying risk profile increases and in the generation of lower own funds requirements where the underlying risk profile decreases;
- (h) that the institution's risk measure generated by the operational risk measurement system is realistic from a managerial and economical perspective, and more that the institution applies appropriate techniques to avoid capping the maximum single loss, unless it provides a clear objective rationale for the existence of an upper bound, and to avoid implying the non-existence of the first statistical moment of the distribution;

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	(i) that the institution explicitly evaluates the robustness of the outcome of the operational risk measurement system by performing appropriate sensitivity analysis on the input data or its parameters.
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