Single Rulebook Q&A

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Legal act	Regulation (EU) No 575/2013 (CRR)
Topic	Market risk
Article	325ay
Paragraph	1
Subparagraph	-
COM Delegated or Implementing Acts/RTS/ITS/GLs/Recommendations	Not applicable
Article/Paragraph	Not applicable
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Disclose name of institution / entity	No
Type of submitter	Other
Subject matter	Definition of the parameter ρ_kl (option maturity)
Question	How is the parameter “ρ_kl (option maturity)” concretely determined? Does the calculation take place at the level of a single option or at the level of weighted net sensitivity, which may consist of several options?
Background on the question	The parameter ρ_kl is used in the calculation of own funds requirements for vega risks in order to calculate the sub-class specific sensitivity in accordance with Article 325f (7) CRR2. The parameter is used as correlations for weighted sensitivities within the same sub-class. A weighted net sensitivity is defined as the sum of the positive and negative sensitivities to the same risk factor.Accordingly, a weighted net sensitivity can result from the data of several options.The calculation of the parameter ρ_kl (option maturity) is based which is used to determine ρ_kl, among other things, on the input data T_k and T_l, namely the option maturities. These are input data that are available at the level of the individual option but not at that of the weighted sensitivities.Accordingly, the question arises whether the parameter is defined as an average value of the data of all the options which are combined to a weighted net sensitivity or how it is to be calculated concretely.

Final answer	In accordance with Article 325ay of Regulation (EU) No 575/2013 (CRR), to determine the parameter ρ_{kl}(option maturity)$\rho_{kl}^{(\text{option maturity})}$ $T_K^{T_K}$ and T_l shall be equal to the maturities of the options for which the vega sensitivities are derived, expressed as a number of years. The parameter ρ_{kl}(option maturity)$\rho_{kl}^{(\text{option maturity})}$ is used to determine the correlation $\rho_{kl}\rho_{kl}$ between the weighted sensitivities $WS_k{}^{WS_k}$ and $WS_l{}^{WS_l}$, which are associated to risk factor k and l respectively, in accordance with Article 325f of the CRR. Section 3 of Chapter 1a on the Alternative standardised approach specifies the vega risk factors for which vega weighted sensitivities should be calculated, and those vega risk factors are assigned to prescribed maturities. Accordingly, $T_K{}^{T_K}$ and $T_l{}^{T_l}$ should be the prescribed option maturities associated to the vega weighted sensitivities $WS_k{}^{WS_k}$ and $WS_l{}^{WS_l}$. For example, for the purposes of vega risk of the foreign exchange risk class, in accordance with Article 325q(2) of the CRR the foreign exchange vega risk factors are the implied volatilities of exchange rates between currency pairs, and they shall be mapped to the prescribed maturities 0,5 years, 1 year, 3 years, 5 years, 10 years in accordance with the maturities of the corresponding options. Accordingly, $T_K{}^{T_K}$ and $T_l{}^{T_l}$ should be equal to those maturities, i.e. the prescribed option maturities associated to the weighted sensitivities $WS_k{}^{WS_k}$ and $WS_l{}^{WS_l}$, respectively.
Link	https://www.eba.europa.eu/single-rule-book-qa/qna/view/publicId/2020_5645