

Q&A

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Risk-Free Interest Rate - VA calculations

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50

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Question

In the EIOPA Methodology, based on the considerations done in the Background, for Financial/Non Financial CQS6:

- o The yield is equal to the yield for CQS5 (due to not reliable data for CQS6), i.e. no recognition of a greater risk “remunerated” with a greater yield;
- o The Risk correction is obtained with different transition probabilities and scaling factors than CQS5, in particular a greater probability to default and a smaller scaling factor (analogous to recovery rate for PD) that reflect the greater risk;
- o For EUR the yield curve is flat along durations, the risk corrections are not flat.

Furthermore, we note that:

1. In the Technical Information provided Monthly by EIOPA, [FS for CQS6]

> [FS for CQS5] for the smaller durations. This is due to the fact that, for these durations, the sum of PD and CoD is greater than 35%LTAS; at a certain duration the LTAS is greater and so onward the FS for CQS5 is equal to FS CQS6 (TD Paragraph 284: LTAS of CQS6 =LTAS of CQS5).

2. The actual level of yield for CQS4 and CQS5 (so CQS6) and the composition/duration of Official Corporate Portfolios, provided by EIOPA for each Currency/Country, don't lead to any strange very negative risk-corrected spread.

3. In a future update of the EIOPA portfolios there could be portfolios with relevant exposures in "CQS 4,5,6" and linked durations below 5: in this way and with corporate yields level similar to the actual, very negative risk-corrected spread will be obtained especially for CQS6.

For example for EUR Financial CQS6, supposing an exposure (material or not) in portfolio with duration 2.0 and the following yields, we would obtain:

Example @End December 2016

Financial_5

Financial_6

Duration

2.0

2.0

Hypothetic yield

6.0% (flat)

6.0% (flat)

FS_EUR (EIOPA source)

5.91% (on duration2)

11.99% (on duration2)

Individual risk-corrected spread

≈0.1%

≈-6.0%

This effect would be more relevant for Non Financial, due to greater values of FS_EUR.

QUESTIONS

First: please confirm that our understanding, as explained above, is correct.

Second: we wonder if considering “the greater risk” in the risk corrections and not in the yields could lead to issues in the financial meaning of the individual risk-corrected spreads obtained in the VA calculation. In particular, we ask about the robustness of the actual rationale - if there is no intention to update the methodology for “CQS 4,5,6” - as summarize here below:

- A flat curve for the yields of “CQS 4,5,6” and a Risk Correction not flat that discriminate by duration;
- A flat yield curve only for EUR, in fact for other Currencies (also GBP and USD), the yields of “CQS 4,5,6” are obtained starting from EUR flat yield and applying the K-factor approach (TD Chapter 10.C.4);
- No recognition of a greater risk “remunerated” with a greater yield for CQS6 (than CQS5, and in respect to durations), instead a recognition of the greater risk for the risk corrections (than CQS5, and for durations);
- The possibility, with updated portfolios, to have more exposures (relevant or not) on “CQS 4,5,6” with small durations, and so to obtain very negative individual risk-corrected spread (no floor can be applied) in the calculation of VA (see example above @End December 2016);

POSSIBLE UPDATE

A first basic possible update could be:

- To take into account the greater risk of CQS6 also in the yield, for example applying a factor on the CQS5 yield. The factor could be, as example, the ratio between the two scaling factors used for PD/CoD calculation, so

$$\text{yield}(\text{CQS6}) = \text{yield}(\text{CQS5}) * (50\% / 40\%)$$

- To be coherent the recognition of greater risk (in the yields and risk corrections) along durations for “CQS 4,5,6”, so both for EUR and all other Currency/Country. This mean to adopt some formula for EUR yield (risk corrections already discriminate by duration), since for other Currency/Country there’s already the k-factor approach (for durations greater than the last of the bucket, the k-factor approach could be flat applying the difference of RFRs linked to the “last duration”, and so to be coherent also with the EUR/GBP/USD yields of “CQS 0,1,2,3” for duration greater than the last of the bucket).

EIOPA answer

There is a CQS-specific modelling of the risk correction for exposures with CQS6 because transition statistics are available at that granularity. There are however no reliable data to derive the yield for CQS6 from exposures with that CQS.

The current approach, to use the yield for CQS5 to model CQS6 exposures, is a simple, prudent and proportionate to the size of CQS 6 exposures held by insurance and reinsurance undertakings. There are no exposures to CQS 6 in the currency representative portfolios. In the country representative portfolios they are limited, with the exception of one country, to 1% or 2% of the overall exposure to corporate bonds.

When the exposure to CQS6 increases in future updates of the representative portfolios, a modification of the current approach could be considered.