



## Solvency II implementing measures

# Up another notch:

## Standard formula capital requirements head even higher under 'third wave'

Typical capital requirements for insurers using the 'European Standard Formula' could rise still further under proposals set out in the 'third wave' of Solvency II consultation papers (CPs), augmenting the already tougher line taken in the previous wave of CPs.

### Key messages

- If adopted, the proposals not only point to a significant increase in the capital requirements for all insurers using the standard formula, but could also force users to raise their internal model assumptions.
- The increases come from substantially higher factors applied to calculate individual capital charges and the material reduction in diversification benefits available on an aggregated basis.
- The possibility of higher charges makes the potential use of entity-specific parameters even more vital.
- These developments may also encourage more companies to apply for partial or full internal model approval than otherwise would have been the case.
- Even companies planning to use their own internal models should be aware of the changes to the standard formula – they will need to use it if they do not obtain model approval and may initially need to use it in parallel with their own models.
- CEIOPS also proposes an increase in the calibration for the Minimum Capital Requirement.
- The proposed changes will be road tested as part of the fifth Quantitative Impact Study (QIS5), which is due to begin in the autumn of 2010.

CEIOPS' proposed changes to diversification benefits could see an increase in the capital requirements in the order of 24% for life insurers and 13% for non-life insurers compared to QIS4.

stress tests) these correlations are much higher than those observed during benign conditions.

Furthermore, within the life and non-life underwriting risk modules CEIOPS has introduced a minimum of 25% correlation between any pair of independent risks, for example, between lapse and longevity risks. This is because CEIOPS now believes that assuming zero correlation underestimates the combined capital charge for many statistical distributions, even where they are independent.

Here, we highlight the proposed changes in some of the key CPs relating to the European standard formula.

### Correlations and diversification (CP74)

CEIOPS proposes a reduction in the diversification benefits within the standard formula compared with the QIS4 allowances. Their own assessment of the estimated capital impact of changes in the correlations between risks illustrates

increases of 32% in the market risk, 11% in the life underwriting risk and 7% in the non-life underwriting risk capital requirements. Once these are combined, the overall capital requirement is expected to increase by 24% for life insurers and 13% for non-life insurers.

The major changes to correlations between market sub-risks are based on observations from recent market conditions. CEIOPS believes that in extreme scenarios (exactly the scenarios considered by these

### Market risk (CP70)

This paper provides the calibration of most of the market risk sub-modules, following CP47's detail of the structure. Overall, we see heavier stress factors compared to QIS4, reflecting the reaction to the market events in 2008.

The interest rate risk sub-module sets out revised stress factors to be applied to the yield curve, varying by time to maturity. They are generally higher than in QIS4, particularly at shorter durations.

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For example:

- +94% / -87% at 1 year to maturity (previously +94% / -51%)
- +64% / -50% at 5 years to maturity (previously +56% / -40%)

The downward stress must be at least 1% absolute, so will increase the relative stresses still further where interest rates are low. There is, however, a floor of 0% on the stressed rate.

In addition, this sub-module calibrates the interest rate volatility stress introduced in CP47. The relative stress is +95% (or -20%, although the downward stress is unlikely to be relevant), that is, a near doubling of the base volatility.

For the currency risk sub-module, the stress factor has been revised upwards from  $\pm 20\%$  in QIS4 to  $\pm 25\%$ . A separate capital charge will need to be calculated for each currency. There are separate, reduced stress factors (0% to 2.25%) for currencies that are pegged to the Euro.

The property risk sub-module now recognises three different stress factors for different types of property: city offices, retail and warehouses (30%), other offices (25%) and all other property (25%). The stress factor is more stringent than QIS4, which was uniformly 20%.

The spread risk sub-module has been updated from QIS4 with new stress factor values. The factor for bonds is now dependent on both credit rating and time to maturity, and is typically significantly higher, for example capital charges have increased:

- from about 1.1% to 5.4% for AAA, 5 years to maturity
- from about 2.5% to 19.1% for AA, 10 years to maturity

Overall, CEIOPS estimates that the capital charge for corporate bonds increases materially by a factor of 3.5 relative to QIS4. The significant increases for longer term bonds could make the impact even larger for annuity providers. The changes for structured credit products and credit derivatives all move in the same direction.

### Equity risk (CP69)

Equities are categorised as either 'global' (listed in the EEA or OECD) or 'other', with different stress factors – 45% and 60%, respectively. While the factors in QIS4 of 32% and 45% were considered low, this is undoubtedly a sizeable increase.

The equity risk sub-module allows the stress factor to vary according to the position of a representative market index, relative to its average over a specified period (proposed as one year). The aim is to prevent companies from being forced to sell large volumes of equities in times of stress, which could exacerbate the problems in the market. However, this introduces the risk that companies may favour equities over other asset classes where the stress factors are fixed.

A stress on equity volatility has been introduced since QIS4. The relative stress is +60% (or -15%, although the downward stress is unlikely to be relevant) so, for example, if the base volatility is 20%, the stressed volatility is 32%.

Certain firms will be permitted to use a duration-based approach rather than the standard approach described above.

### Non-life underwriting risk (CP71)

The premium and reserve risk volatility factors have been increased across the board, most radically for non-proportional reinsurance where these have been doubled from the QIS4 factors. CEIOPS' assessment indicates an increase of 35% on the resultant capital charge compared to QIS4. Equally, the catastrophe risk factors have also been substantially toughened. Proposals for an assumed average level of geographical diversification and level of non-proportional reinsurance have been included.

### Treatment of ring-fenced funds (CP68)

The definition of a ring-fenced fund is still open to consultation but, regardless of the final option chosen, it seems clear that UK with-profits funds will fall into this category. This has implications for the calculation of both the standard formula and the own funds (excess of assets over liabilities) available to meet the capital requirements.

As in QIS4, the standard formula should be applied notionally to each ring-fenced fund and, separately, to the rest of the company's business. The sum of these notional charges would typically result in a higher capital charge than that at the company level, because profits in a ring-fenced fund cannot be used to offset losses elsewhere and so diversification benefits are lost.

Own funds in a ring-fenced fund (e.g. the inherited estate of a UK with-profits fund) generally cannot be used to meet capital requirements in other funds, so any excess is now to be excluded from total own funds. This is a more onerous, but arguably more appropriate, treatment than the approach tested in QIS4.

If a ring-fenced fund has insufficient own funds to meet its capital requirements, they must come from elsewhere. If the shortfall exceeds the potential diversification benefits available between funds, there is some respite for the providers of capital as the diversification benefits can be used to reduce capital requirements.

**If you would like to discuss any of the areas covered in this paper as well as the implications for yourself and your firm, please contact:**



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