

QIS5 results: SCR

March 2011



EIOPA has published the results of the fifth Quantitative Impact Study conducted across reinsurance and insurance undertakings throughout Europe in 2010. While the report demonstrates increased participation in the latest study it also highlights significant work which needs to be done to reduce complexity in the guidance and to ensure consistency across territories.

EXECUTIVE SUMMARY

On 14 March 2011 EIOPA issued its report on QIS5. Milliman has produced this detailed summary of the SCR section of the EIOPA report. Additional summaries are available from Milliman relating to the other sections of the QIS5 report. This is part of a series of Milliman summaries covering the key areas of QIS5.

A short Milliman summary is available giving an overview of the whole QIS5 report. The full report is available on eiopa.europa.eu.

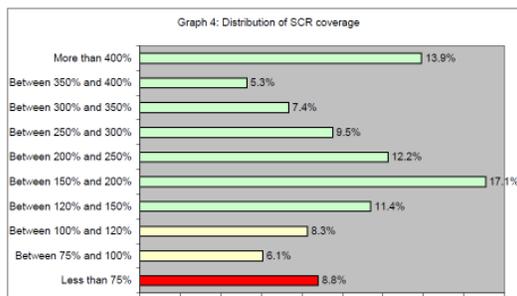
The sections of this summary are listed below with some of the key findings from each section:

- **SCR coverage** - 15% of the participants did not fully cover the SCR, which would trigger regulatory action.
- **MCR coverage** - 4.6% of the participants did not fully cover the MCR, which would trigger withdrawal of the license.
- **SCR composition** - Market risk has the highest weight within the standard formula, particularly for life undertakings (67%). For non-life the main driver remains the non-life underwriting risk sub-module (>50%).
- **Diversification and loss-absorbing capacity** - Only 60% of undertakings calculated a loss absorbency adjustment, which may mean that the SCR is overstated.
- **Equivalent scenario** - Almost all countries reported shortcomings with the method on both complexity and more theoretical grounds.
- **Operational Risk**
- **Market Risk** – Only a few supervisors commented that the absence of equity and interest rate volatility stresses was a significant omission. Spread risk and the look-through approach to unit-linked business were noted as needing simplification.
- **Counterparty Default Risk** – This module was perceived as complex with improved simplifications required.
- **Life Underwriting Risk** – the need to calculate lapses on a policy-by-policy basis was criticised.
- **Health Underwriting Risk** – Key areas of concern were segmentation, the disability/morbidity sub-module, lapse risk, and catastrophe risk.
- **Non-Life Underwriting Risk** – This module received a lot of criticism regarding complexity particularly the catastrophe risk sub-module
- **Undertaking Specific Parameters** - there is a restricted and closely-defined area where USPs can be used. EIOPA emphasised that changing the parameters of the standard formula does not comply with the Solvency II requirements regarding internal models.
- **Risk Mitigation**
- **Participations**

SCR COVERAGE

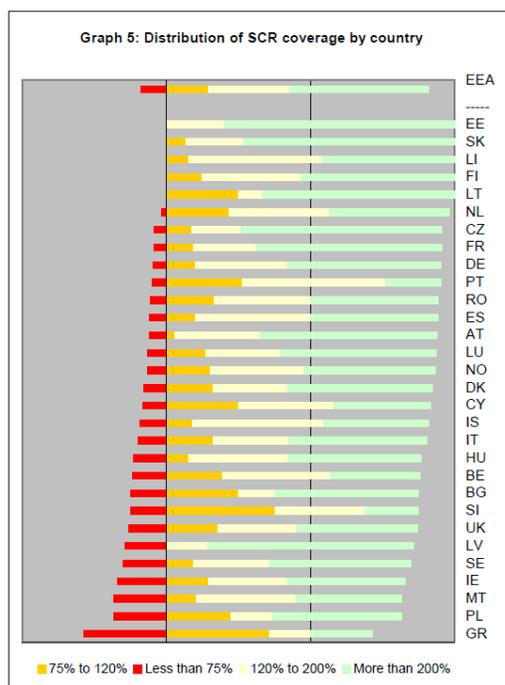
15% of the participants did not fully cover the SCR, which would trigger regulatory action. Fewer than 9% of participants covered 75% or less of the SCR.

The following graph shows the distribution of SCR coverage:



At individual level, 29% of the participating undertakings had SCR coverage between 120% and 200%, around the market average of 165%, while almost half of all participating undertakings held more than twice their capital requirements.

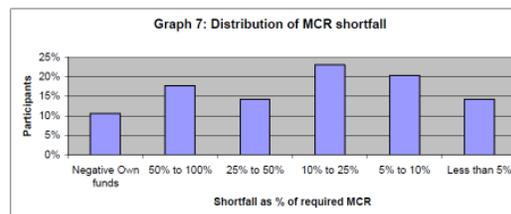
The following graph shows the distribution of SCR coverage by country:



In the majority of countries, around 10% of undertakings had a solvency position materially lower than the SCR. This group in particular includes a number of small undertakings.

MCR COVERAGE

4.6% of the participants did not fully cover the MCR, which would trigger the most serious intervention from the supervisor, withdrawal of the license. The scale of the shortfall among those undertakings is as follows:



So around a third (1.7% of all participants) have a shortfall of less than 10%; however, a quarter (1.3% of all participants) have a shortfall greater than 50% of the MCR.

The MCR was subject to a corridor of between 25% and 45% of SCR. 35% of undertakings' MCRs are already within the corridor (before it is applied).

There was also a requirement that the MCR be greater than the AMCR levels - €2.2m for non-life and €3.2m for life undertakings. For almost 15% of participants, this resulted in a final MCR above the 45% cap, and for 6.6% of undertakings, this final MCR was higher than their SCR. Some supervisors commented that a number of the undertakings which failed to meet their MCR were undertakings which would have been able to meet their calculated MCR, were it not for the AMCR coming into play and raising this higher.

SCR COMPOSITION

Market risk has the highest weight within the standard formula, particularly for life undertakings (67%). The main components within the market risk are equity, spread and interest rate risks.

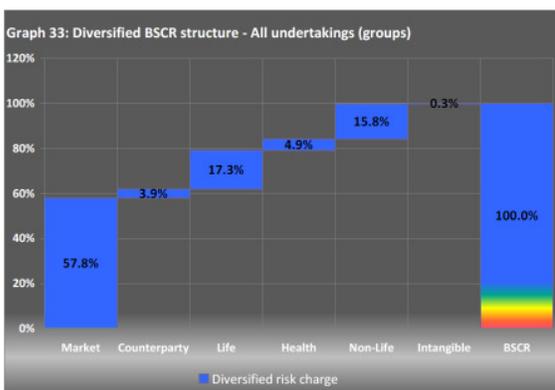
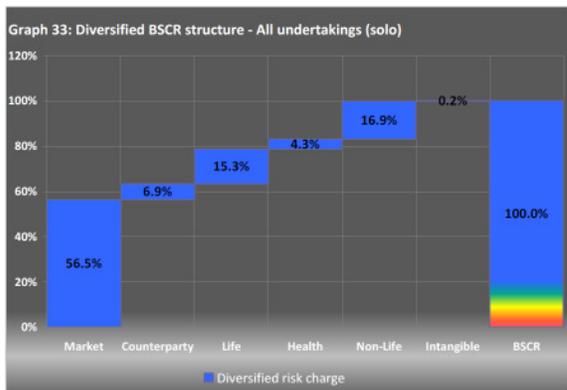
For non-life the main driver remains the non-life underwriting risk sub-module (>50%). For non-life business, the key risk drivers are the number of claims and the potential mis-estimation of reserves, which are captured in the premium and reserve risk sub-modules. Lapse risk is a residual risk.

For undertakings primarily or solely underwriting health insurance, health underwriting is the main component in terms of capital requirements, with an average of 63%.

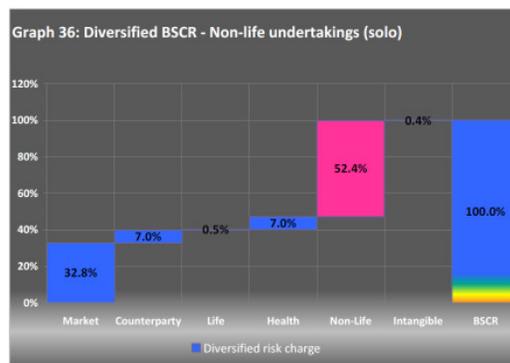
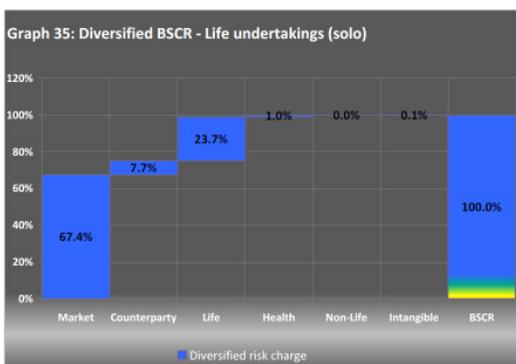
Life underwriting risk is the second most material module for life undertakings behind market risk.

The main risk drivers of life underwriting risk are lapse and longevity risk.

The charts below show the composition of the SCR for solo undertakings and for groups, including diversification benefits:



The charts below reproduce this analysis separately for undertakings which write predominantly life business and undertakings which write predominantly non-life business.

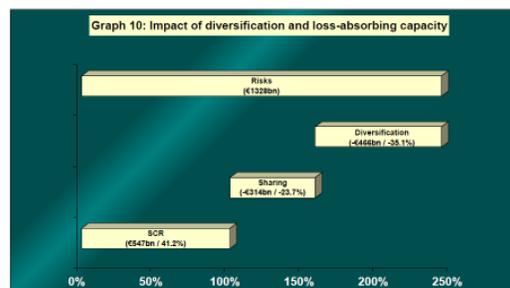


As would be expected, life undertakings have very little underwriting risk arising from anything other than life but relatively more market risk, while in the case of non-life undertakings the most significant risk is non-life underwriting and the share of market risk is smaller.

DIVERSIFICATION & LOSS ABSORBING CAPACITY

For QIS5, the sum of the individual risks modelled totalled €1328bn. The diversification benefits amounted to a €466bn reduction in the total risk charge at solo level. The loss absorbing capacity of technical provisions and deferred taxes resulted in a €314bn reduction in the own funds needed.

Overall, the final SCR of €547bn is a little above 41% of the sum of individual risks modelled.



At group level, the adjustment for the loss absorbing capacity of technical provisions allowed for an overall reduction of 28% of basic SCR and benefited about half of the participating groups. The adjustment for deferred taxes was on average 19% for groups.

Only around 60% of the undertakings who took part in QIS5 calculated a loss absorbcency adjustment, which may mean that the SCR is overstated for undertakings which did not perform the calculation.

EQUIVALENT SCENARIO

Only 39% of participating undertakings completed the single equivalent scenario calculation. This lack of engagement with the method was accompanied by extensive feedback on its shortcomings.

One of the key aims of introducing the methodology to the standard formula was to streamline the adjustments for future discretionary benefits and deferred taxes.

OPERATIONAL RISK

Qualitative feedback on operational risk was scarce and mainly focused on the method being too crude and not giving adequate incentives for good risk management practices.

In this light it is surprising that most undertakings which plan to use partial internal models indicated an intention to use the standard formula methodology to assess their operational risk. Groups also intended to use the standard formula for operational risk due to a lack of data and in the awareness that it lacks risk-sensitivity.

MARKET RISK

As well as comments on specific sub-modules, there were some more general comments on market risk:

- A few countries felt that the absence of equity and interest rate volatility stresses was a significant omission from the standard formula resulting in perverse risk management incentives, although the majority of supervisors did not raise this point. In most countries, volatility was one of the major additional risks included in internal models.
- There were comments on the lack of recognition for geographical diversification within an asset class and the fact that the ratings-based approach to certain risks penalised undertakings in lower-rated countries.

Specific comments are mentioned in the report for the interest rate, equity, property and concentration sub-modules, in addition to the market risk sub-modules that we have mentioned below.

Spread risk

The most commented on sub-module of market risk was spread risk, around which there were various

concerns, falling into three broad areas: calibration, consistency and complexity.

On calibration, undertakings in two countries found the spread risk sub-module to have too high a calibration although one other country considered that the deviation from CEIOPS' advice has led to an overly low calibration. There were also comments that the sub-module was over-calibrated for structured credit and local government bonds.

On consistency, a few countries expressed the view that the non-inclusion of spread risk on EEA sovereign debt led to the omission of a risk and skewed incentives for undertakings.

The complexity of the module is of concern for a couple of countries, particularly as it relates to structured products. Even the simplifications offered by the technical specifications are considered to be too complex.

Look-through approach

A key issue related to market risk was the application of the look-through approach to unit-linked business. Many undertakings found this extremely time-consuming, and disproportionate to the (often second order) magnitude of the market risk related to unit-linked business.

A significant number of countries saw scope for simplifications in the look-through approach used in the market risk module, particularly for investments in unit-linked funds. These were:

- To use the asset type split by the fund's asset allocation or investment mandate;
- To use approximations of asset allocations, currencies, ratings and durations of investments; and
- To assume all assets are equities and make a high-level currency split.

Currency Risk

Two countries noted the counterintuitive approach to currency risk as incentivising undertakings to hold excess assets in the reporting currency rather than the currency of the liabilities.

Illiquidity Premium Risk

Some undertakings saw the illiquidity premium risk sub-module as inappropriate or unnecessary. One country noted that this shock only referred to the impact on the liability side of the balance sheet, neglecting the assets.

COUNTERPARTY DEFAULT RISK

The calculations demanded by the counterparty default risk module were widely perceived as being extremely laborious and complex, especially in view of the fact that the charge demanded for counterparty risk by the SCR standard formula is quite limited.

The main criticism with regard to complexity was directed at the determination of the risk-mitigating effect for type 1 exposures. Complexity issues also arose from the cross-dependency of catastrophe and counterparty default risk.

Even the simplifications offered by the QIS5 Technical Specifications were regarded as too complex. A considerable number of participants suggested simplifications. In particular it was felt that calculating the risk-mitigating effect of counterparties could benefit from simplification. Undertakings in some countries offered ideas on overhauling the overall approach of the counterparty risk calculation.

LIFE UNDERWRITING RISK

Life underwriting risk has been generally well received, and the impression is of a module that most of the industry is content with. The only major exception to this is lapse risk.

Lapse risk

The key practical criticism was the need to calculate lapses on a policy-by-policy basis. Criticisms were that this was too onerous in terms of calculation time.

There were also criticisms from undertakings and some supervisors of the policy-by-policy approach on more theoretical grounds, with some suggesting that the treatment of surrender strain should not be asymmetric and should be by broad segment to better reflect lack of policyholder rationality.

Longevity risk

There was feedback from a number of countries that as the current shock was only a shock on the level, it failed to adequately take into account trend risk. Undertakings felt a stress on the future improvement rates would be more appropriate.

HEALTH UNDERWRITING RISK

The health underwriting risk module had been subject to a complete overhaul since QIS4, and

hence attracted a considerable number of comments. Key areas of concern were segmentation, the disability/morbidity sub-module, lapse risk, and catastrophe risk.

The health catastrophe sub-module was regarded as too severe for some undertakings and to be ignorant of certain risk events for others.

NON-LIFE UNDERWRITING RISK

The non-life underwriting risk module received a lot of criticism regarding complexity. Very little of this was around premium and reserve risk, however, which accounts for almost 80% of this module.

The catastrophe risk sub-module attracted a very large number of comments and complaints from the non-life industry across Europe. The feedback is classified into four major areas:

- calibration and methods used,
- applicability to the respective line of business or regional market,
- data availability, and
- effort needed to calculate the required capital.

The lapse risk sub-module was perceived as being immaterial by a large proportion of participants, and hence the effort involved in calculating the stress was judged by many to be superfluous.

There was some feedback from undertakings that while the introduction of future premiums and contract boundaries made sense from a theoretical point of view, the difficulties encountered in calculating them outweighed the benefits.

UNDERTAKING SPECIFIC PARAMETERS

For the vast majority of countries, the participation in the USP part of the exercise and comparison of USPs with standard parameters was negligible with no more than five undertakings in any given line of business responding to this section of the exercise.

The USPs were in most cases lower than the standard parameters. However, in some lines of business a significant standard deviation was observed.

In general industry considered the requirement for five years' data would penalise SMEs and recent start-ups.

Under internal models, undertakings mentioned using different (internal) parameters to the standard

formula in order to take into account the specific risk profile of the undertaking. There is a restricted and closely-defined area where undertaking-specific parameters can be used. EIOPA's view is that changing the parameters of the standard formula does not comply with the Solvency II requirements regarding internal models.

RISK MITIGATION

Risk mitigation techniques other than proportional reinsurance were generally seen as difficult to take into account within the standard formula, and a considerable number of participants reported problems relating to this topic. Concerns were mainly raised in the context of the non-life underwriting module.

PARTICIPATIONS

Under QIS5 participations in related undertakings were subject to a 22% risk charge where the participation was considered strategic. Otherwise the appropriate global or other risk charges of 30% or 40% respectively were to be applied. One country felt that the differentiation between strategic participations and ordinary equity investment was dubious and could lead to regulatory arbitrage.

Overall undertakings regarded two thirds of their participations as strategic, applying a capital charge of 22%.

The qualitative questionnaire asked undertakings to describe the criteria they had used in distinguishing strategic participations from other participations. From this it can be seen that the emphasis was most frequently on a combination of:

- the degree of control;
- the long-term nature of the relationship or involvement in the participation; and
- the maintenance or development of the activities of the participating undertaking.

SUMMARY

QIS5 has identified a number of areas where complexity should be reduced, particularly surrounding a number of the SCR sub-modules. EIOPA has commented that it is already working on some of these areas and will issue further guidance on this in due course.

QIS5 is expected to be the last in the series of impact studies, and as such any further

improvements to the Solvency II regime will be through *ad hoc* work and tests leading to the finalisation of the Level 2 Implementing Measures later this year and the subsequent consultation on the Level 3 guidance. Companies are encouraged to engage fully in these further consultations to ensure that the final Solvency II guidance provides a solution that is both sound and workable.

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