



QIS5 Technical Specification

A brief introduction for General Insurers

April 2010

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Headline News

Latest regulatory update

- ▶ Draft QIS5 Technical Specifications document released by the Commission on 15 April 2010
- ▶ The consultation period for the QIS5 Tech Spec is short (due 20 May 2010) and limited to key stakeholders such as CEA, CRO Forum, Groupe Consultatif, etc
- ▶ The Commission, before publishing the Tech Spec, has modified some of the proposals that had been made by CEIOPS (who supplied earlier drafts of the Tech Spec to the Commission, maintaining consistency with their three waves of Consultation Papers / Final Advice released during 2009/10)
- ▶ The Commission has conceded that:
 - ▶ It has taken account of industry representations on aspects where CEIOPS proposals, if adopted unchanged, would have produced “a significant increase in capital requirements” as compared to QIS4
 - ▶ The Commission’s modifications to the Non-Life calibration of Standard Formula SCR are the most important to Non-Life insurers. The Commission however also draws attention to concessions made in the risk free discount rate and eligibility of own funds which also will affect some Non-Life insurers to some degree
- ▶ Insurers can start immediately to assess their likely capital position by SCR Standard Formula

Impact on Non-Life Insurers

The good news...

- ▶ Calibrations for insurance risk are generally lower than those proposed in the 2009 waves of CEIOPS CPs, and than those consequently adopted into Final Advice
- ▶ Some of these calibrations as now proposed for QIS5 have reverted back to QIS4 levels
- ▶ Geographical diversification has been restored into QIS5 for P&C – despite CEIOPS having proposed that it be removed
- ▶ The P&C factors for Operational Risk have reduced from CEIOPS Final Advice

Beyond Insurance Risk and Operational Risk, Non-Life insurers also benefit from:

- ▶ Reductions in correlations between components of market risk (particularly significant is that between currency risk and concentration risk)
- ▶ Reductions in equity shocks to be tested

And the bad news...

- ▶ A lapse risk module for Non Life business has been introduced to recognise the impact if policy take-up rates were lower than expected. For Non-Life insurers, this means that the recognition of future profits is of increased importance, with a direct impact on value of the technical provision, available capital (own funds) as well as the capital charge
- ▶ Higher spread risk factors for corporate bonds. Other changes to spread risk calculation module may mitigate these to a degree
- ▶ An additional “Intangible Asset” risk module has been introduced with an 80% charge – businesses will need to understand if they will be affected

Other Impacts for Non-Life Insurers

- ▶ Non Life catastrophe risk – the QIS5 tech spec sets out a new method of “standardised scenarios” intended to cover most EEA risk exposures. Where businesses write material amounts of non-proportional reinsurance or material exposures outside the EEA, there is “an expectation that companies would seek [at least] partial model approval”. While this still leaves much to debate, this seems to give Non-Life insurers a better chance now to prepare for their cat risk capital component under SII – both for EEA and non-EEA exposures
- ▶ The Tech Spec importantly contains 120 pages on “Valuation”. This indicates a swing towards a more pragmatic approach to producing the SII balance sheet for Non-Life businesses. However, there is unprecedented detailed content for P&C businesses to understand. It is this content against which businesses will have to align their processes – in areas such as segmentation, best estimate valuation, “Cost of Capital” risk margin, premium provisions and discounting
- ▶ The wording of the non-life best estimate sections of “Valuation” seem to lean towards conventional (i.e. deterministic) P&C reserving methods, bootstrapping and Mack – it appears that stochastic reserving will not be pursued vigorously by regulators
- ▶ The Tech Spec envisages substantial information (considerably more than QIS4) to be supplied by businesses about their internal model for which regulatory approval is sought to use the model for the calculation of SCR – in the form of detailed questionnaires. Businesses will be required to provide some information on their model even if it is only used for internal risk management. The QIS5 model questionnaires will be onerous and arguably duplicative for businesses, in 2010 or 2011, entering the IMAP pre-application process with a national regulator
- ▶ MCR in QIS5 – proposals not significantly changed from previously
- ▶ For those impacted, there is a significant section in the QIS5 Tech Spec which builds from previous CPs and Final Advice – dealing with the division of own funds into basic and ancillary – then tiers 1, 2 and 3
- ▶ Finally, again for those impacted, there is a significant section in the QIS5 Tech Spec which builds from previous CPs and Final Advice – dealing with how to perform a Group QIS5: recognition of EEA sub-groups, how to deal with third-countries and equivalence, etc

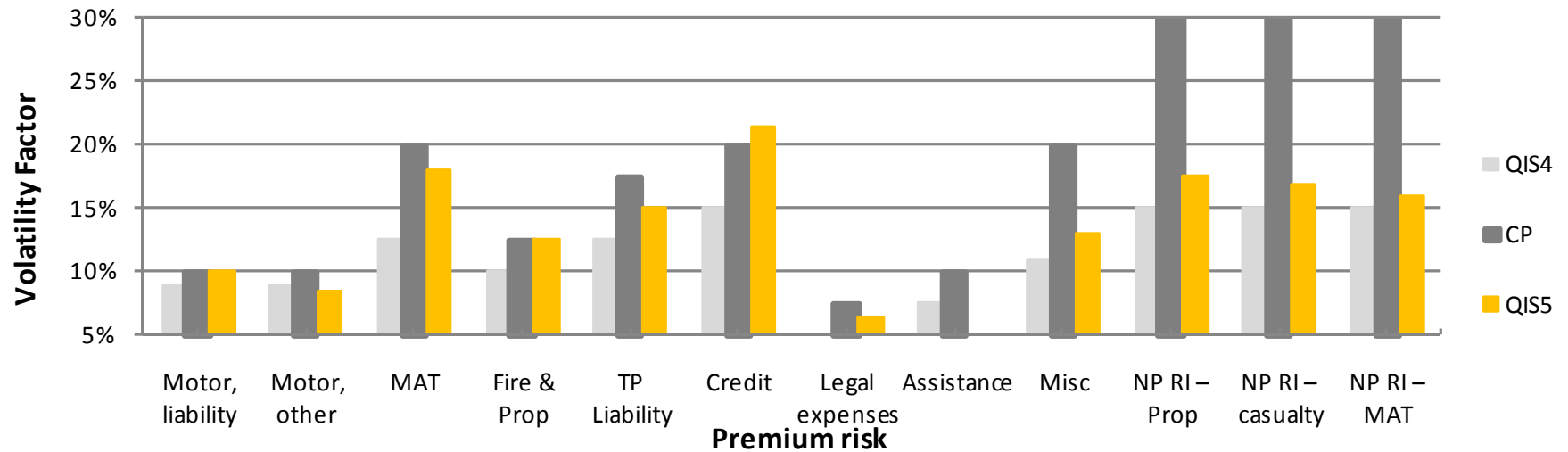
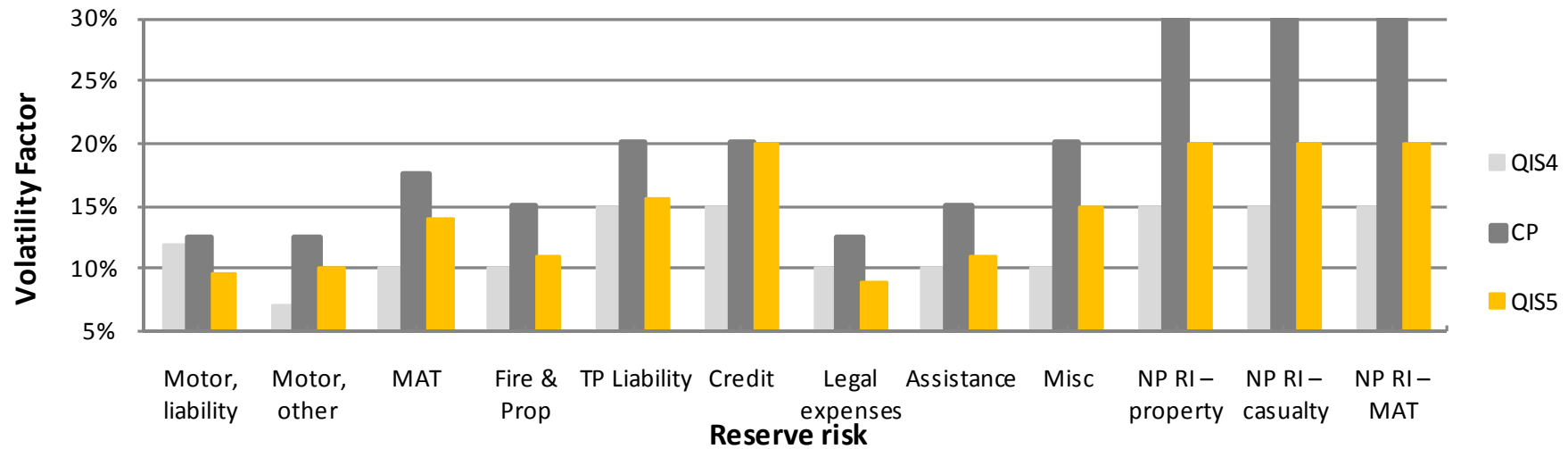
SCR Standard Formula Changes

Insurance Risk

	QIS 4 (Mar '08)	CP (2009)	Final Advice (Apr '10)	QIS 5 (Apr '10)
Premium and Reserve Risk	<p>Prescribed volatility factors</p> <p>Credit for Geographical Diversification – 54 regions recognised</p>	<p>Factors increased significantly</p> <p>Geographical Diversification removed</p>	<p>Some of the increase wound back.</p> <p>Entity specific adjustment to Premium Risk</p> <p>Geographical Diversification removed</p>	<p>Change in volatility factors such that generally: QIS4 < QIS5 < CP/Final Advice (see next slide)</p> <p>Different entity specific adjustment to Premium and Reserve Risk</p> <p>Geographical diversification reinstated – based on 18 regions</p>
Lapse Risk	<p>No capital charge</p>	<p>No capital charge</p>	<p>No capital charge</p>	<p>Capital charge introduced. Covers risk relating to Future Premium recognised on the balance sheet</p> <p>Test +/-50% to policy take-up rates, applied in aggregate and not at LoB level</p> <p>Correlation of 0 with Premium and Reserve Risk</p>
Catastrophe Risk	<p>Method 1 – Factor based on Net WP</p> <p>Method 2 – Standardised scenarios</p> <p>Method 3 – Personalised scenarios</p>	<p>New factors with entity specific netting down.</p> <p>EEA standardised scenarios to be developed further</p> <p>Personalised scenarios no longer available</p>	<p>As per CP</p>	<p>Factor based approach as per Final Advice – last resort if no other method suitable.</p> <p>Standardised scenarios for EEA only – further calibrations issued June 2010, involving correlations by country and by peril. Spreadsheet available</p> <p>Able to replace with partial internal model (eg where entity has significant exposure outside of EEA)</p>

SCR Standard Formula Changes

Insurance Risk cont – Comparison of volatility factors



SCR Standard Formula Changes

Market Risk

	QIS 4 (Mar '08)	CP (2009)	Final Advice (Apr '10)	QIS 5 (Apr '10)
IR Risk	Upwards and Downwards interest rate shock varying by term to maturity Simplification available using parallel shock	Extent of up/down shock increased significantly Simplification no longer available	Reduction in Up shock Slight increase in Down shock As per CP	As per Final Advice
FX risk	+/-20% shock Applies to non-local (regulatory) currency in aggregate	+/-25% shock Applies to each non-local currency, summed across most adverse shock for each currency	As per CP	As per Final Advice
Spread risk	One set of factors for "bonds" and one set for "structured credit"	Increased complexity in proposed methodology. Additional asset categories introduced	Revert back to QIS4 methodology for bonds, but with significantly increased factors	Similar methodology to QIS4 for bonds, with two sets of factors - for widening and narrowing of spreads. Widening factors higher than Final Advice
Other items	Correlations between market risk modules prescribed Equity risk – 32% Global, 45% Other Property – 20% shock Concentration risk	Significant increases in correlations Equity risk – 45% Global, 60% Other Plus "symmetric" dampener Property – 25% to 30% Conct – thresholds lower	Increase wound back. IR correlation up/down shock dependent Equity risk – 45% Global, 55% Other Plus "symmetric" dampener Property – 25% shock Conct – chg maintained	Currency risk and concentration risk correlations back to QIS4 levels, change maintained in others. Two correlation matrices, for IR up/down separately Equity risk – 30% Global, 40% Other (inclusive of the -9% symmetric adjustment for YE2009, ie base shock 39% and 49% respectively) Property risk – as per Final Advice Conct – chg maintained, with further exemptions

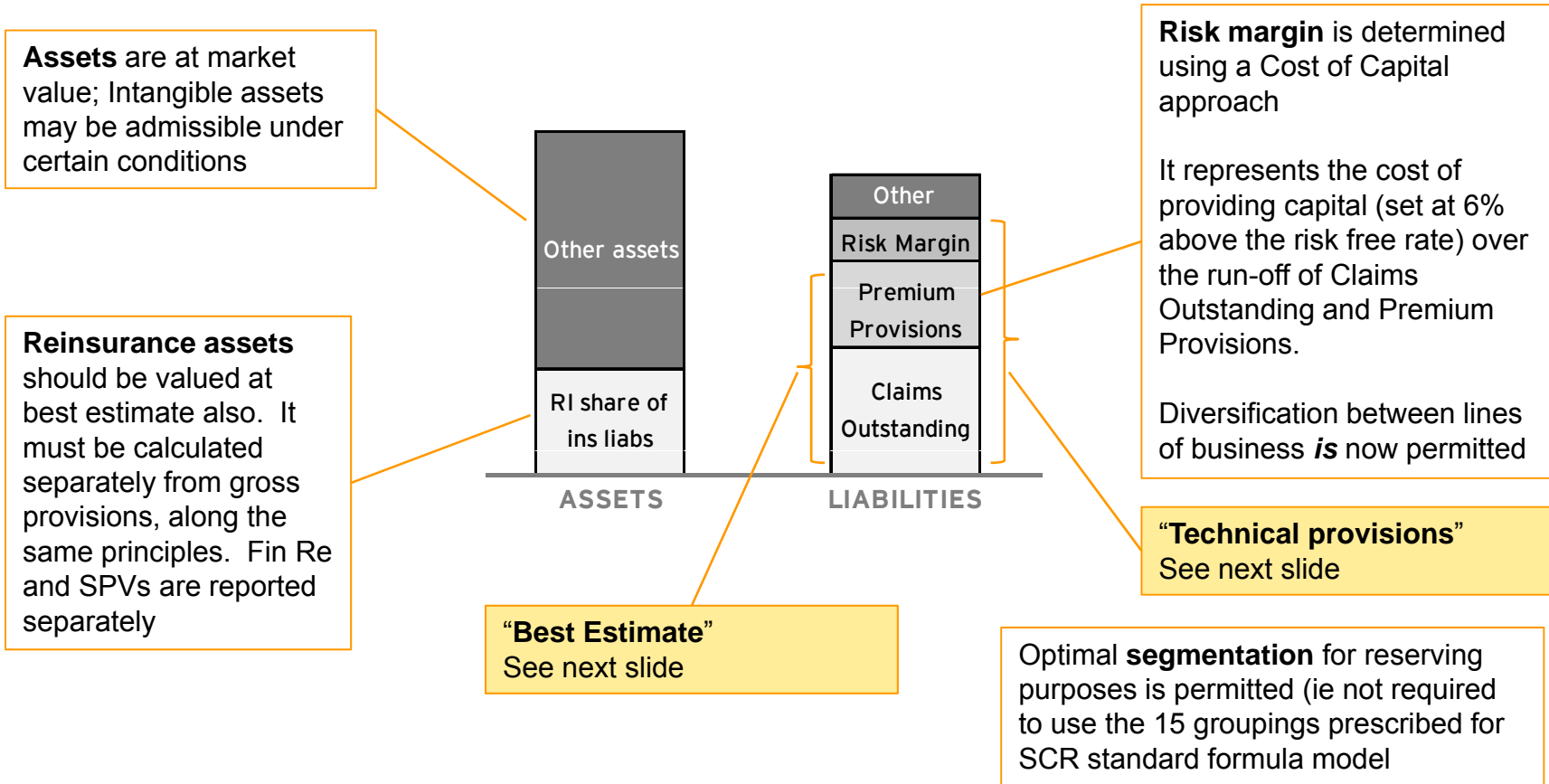
SCR Standard Formula Changes

Other Components affecting Non Life business

	QIS 4 (Mar '08)	CP (2009)	Final Advice (Apr '10)	QIS 5 (Apr '10)																																																
Op Risk	Higher of 2% of gross tech prov or 2% of GEP	Higher of 4.4% of gross tech prov or 4.1% of GEP Plus charge where above exposures increase by >10% on prior year	Higher of 3.6% of gross tech prov or 3.8% of GEP Additional charges maintained	Higher of 3% of gross tech prov or 3% of GEP Additional charges maintained																																																
Correlations	<table border="1"> <thead> <tr> <th></th> <th>SCR_{mkt}</th> <th>SCR_{def}</th> <th>SCR_{nl}</th> </tr> </thead> <tbody> <tr> <th>SCR_{mkt}</th> <td>100%</td> <td></td> <td></td> </tr> <tr> <th>SCR_{def}</th> <td>25%</td> <td>100%</td> <td></td> </tr> <tr> <th>SCR_{nl}</th> <td>25%</td> <td>50%</td> <td>100%</td> </tr> </tbody> </table>		SCR _{mkt}	SCR _{def}	SCR _{nl}	SCR _{mkt}	100%			SCR _{def}	25%	100%		SCR _{nl}	25%	50%	100%	<table border="1"> <thead> <tr> <th></th> <th>SCR_{mkt}</th> <th>SCR_{def}</th> <th>SCR_{nl}</th> </tr> </thead> <tbody> <tr> <th>SCR_{mkt}</th> <td>100%</td> <td></td> <td></td> </tr> <tr> <th>SCR_{def}</th> <td>50%</td> <td>100%</td> <td></td> </tr> <tr> <th>SCR_{nl}</th> <td>25%</td> <td>50%</td> <td>100%</td> </tr> </tbody> </table>		SCR _{mkt}	SCR _{def}	SCR _{nl}	SCR _{mkt}	100%			SCR _{def}	50%	100%		SCR _{nl}	25%	50%	100%	Silent	Correlations back to QIS4 levels <table border="1"> <thead> <tr> <th></th> <th>SCR_{mkt}</th> <th>SCR_{def}</th> <th>SCR_{nl}</th> </tr> </thead> <tbody> <tr> <th>SCR_{mkt}</th> <td>100%</td> <td></td> <td></td> </tr> <tr> <th>SCR_{def}</th> <td>25%</td> <td>100%</td> <td></td> </tr> <tr> <th>SCR_{nl}</th> <td>25%</td> <td>50%</td> <td>100%</td> </tr> </tbody> </table>		SCR _{mkt}	SCR _{def}	SCR _{nl}	SCR _{mkt}	100%			SCR _{def}	25%	100%		SCR _{nl}	25%	50%	100%
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Intangibles	No capital charge	No capital charge	No capital charge	Capital charge introduced - charge of 80% of intangible asset where it is allowed to contribute to own funds under Solvency II valuation. Risk charge added without correlation/diversification																																																
Counterparty risk	Exposures split between reinsurance, derivatives, intermediaries and other	Changes in methodology with simplified calcs Exposures split into Type 1 (ie rated and/or diversified) and Type II (ie unrated, diversified) Reduction in charge for Type II (eg exposures to intermediaries)	As per CP	As per Final Advice																																																

Balance Sheet Valuation

The QIS5 Tech Spec provides detail to insurers around how they must interpret and implement the key SII principle of a market-consistent balance sheet in a property & casualty context.



Balance Sheet Valuation

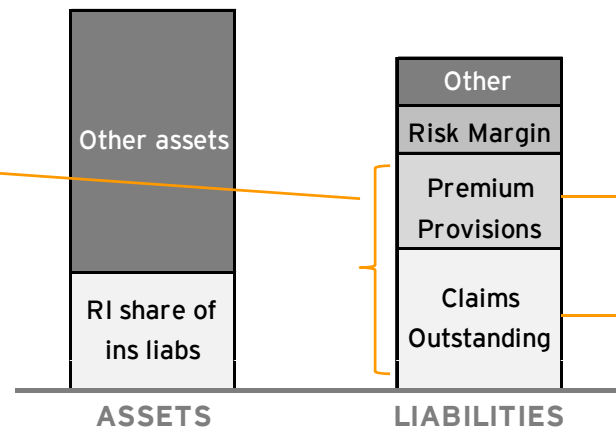
Technical Provisions

The Tech Spec is more pragmatic on the valuation of technical provisions, giving greater recognition to judgement within the process. However, with this pragmatism comes demanding requirements for documentation, testing and validation of assumptions and methods.

“Best Estimate” concept:
Corresponds to the probability weighted average of future cash flows, discounted at the risk-free rate term structure

Conventional deterministic methods, bootstrapping and Mack are recognised – ie less emphasis on stochastic reserving. See TS.1.67-79

Discounting at risk-free rate – TP.1.327 implies that P&C liabilities will use the rate without increasing the rate for illiquidity premium



Claims Outstanding provide for claims events that have occurred *on or prior* to the balance date, whether reported or not.

Premium provisions provide for claim events occurring *after* the balance date, during the unexpired exposure of existing policies to which an undertaking is a party.

This can include policies that have not incepted, like tacit renewals. While this increases the potential for including future profit (and hence adding to available capital), QIS5 requires an additional charge within the SCR to cover lapse risk

Internal Model

Background

The tech spec envisages substantial information to be supplied by businesses about their internal model- in the form of a detailed questionnaire. Information will be required on a model even if it is only to be used for internal risk management , although a considerably greater amount of information will be solicited on models for which regulatory approval is being sought to use the model for the calculation of SCR. The QIS5 model questionnaires will be onerous and arguably duplicative for businesses which are entering the IMAP pre-application process with their national regulator.

The questionnaire is split into 4 sections. The sections to be completed are set out in the table below.

	Undertakings which plan to build, currently building or using internal models in order to get an approval to calculate Solvency II SCR or only for internal management	Undertakings which plan to build, currently building or using internal models in order to get an approval to calculate Solvency II SCR
Solo undertakings or undertakings which are part of a group but solo internal model is not based on a group internal model	IM.B	IM.B IM.C
Solo undertakings or undertakings which are part of a group and solo internal model is based on/part of a group internal model	IM.B	IM.B IM.C (two sets of answers required, see IM.C section overleaf)
Groups	IM.B	IM.B IM.C GIM (Group section)

Internal Model

Breakdown of Questionnaire

IM.B

The IM.B section is for all undertakings, including those who use the internal model for internal risk management only. The questions enable undertakings to highlight areas where the standard formula may lead to inappropriate capital requirements.

IM.C

This section is for undertakings seeking regulatory approval to use an internal model to calculate the SCR.

The questions will cover:

1. Scope of the internal model
2. Pre-application process
3. External models and data
4. Internal model changes
5. Use test
6. Statistical quality (including ranking of risks, data, expert judgement, future management action and replicating portfolio or other techniques)
7. Calibration
8. Profit and loss attribution
9. Validation (including process and independence)
10. Documentation
11. Partial internal models (PIM)

Undertakings being part of a group and intending to use a group internal model for the solo SCR calculation are requested to provide two sets of answers to the questions raised in the section IM.C: one set shall describe the general characteristics of the group internal model and the second set would, if relevant, describe the differences between these generalities and the characteristics of the group internal model when it is used for the solo SCR calculation.

IM.D

This section of the questionnaire is for solo insurance undertakings using a group internal model and focuses on the adjustments from the group internal model.

GIM

The GIM section of the questionnaire is purely for groups applying for an internal model for the group calculation.

There will also be requirements for quantitative data from insurance undertakings (both solo entities and groups) using an internal model for assessing capital needs.

Important Information

- ▶ The information in this pack is intended to provide only a general outline of the subjects covered. It should not be regarded as comprehensive or sufficient for making decisions, nor should it be used in place of professional advice.
- ▶ Accordingly, Ernst & Young LLP accepts no responsibility for loss arising from any action taken or not taken by anyone using this pack.
- ▶ The information in this pack will have been supplemented by matters arising from any oral presentation by us, and should be considered in the light of this additional information.
- ▶ If you require any further information or explanations, or specific advice, please contact us and we will be happy to discuss matters further.