Solvency II Presentation

November 2008

Ernst & Young
Quality In Everything We Do

1. Solvency II Introduction

What is Solvency II and what does it do?

► **The proposed new Europe-wide framework for prudential supervision of insurance**

► **Replacement for Solvency I regulations which became mandatory in Europe in January 2004. However this is a transitional system and is only a minor update to the much older solvency margin calculation**

► **Problems with Solvency I**

- Outdated system (rules date from 1970s)
- Insufficiently risk-sensitive
- Does not reflect best practice
- Difficulties in supervising multinational, diversified groups
- Does not address risk management issues adequately

Aim of Solvency II is to link to the required capital of insurance companies more closely to risks incurred, and focus more on the risk profile of insurance companies

History

- The Solvency II Directive will be the next step of a process initiated some years ago
  - First step of existing rules
  - Creation of a European unified market
  - Increase of solvency requirements
  - More prospective and risk oriented approach

- The solvency systems aim at the protection of the policyholders
  - Provide supervisors with appropriate tools and powers
  - Be applied to life insurance, non-life insurance and reinsurance undertakings
  - Be applied in a robust, consistent and harmonized way
  - Improve competitiveness of EU insurers
  - Provide better allocation of capital resources
  - Be applied without causing significant market disruption

History

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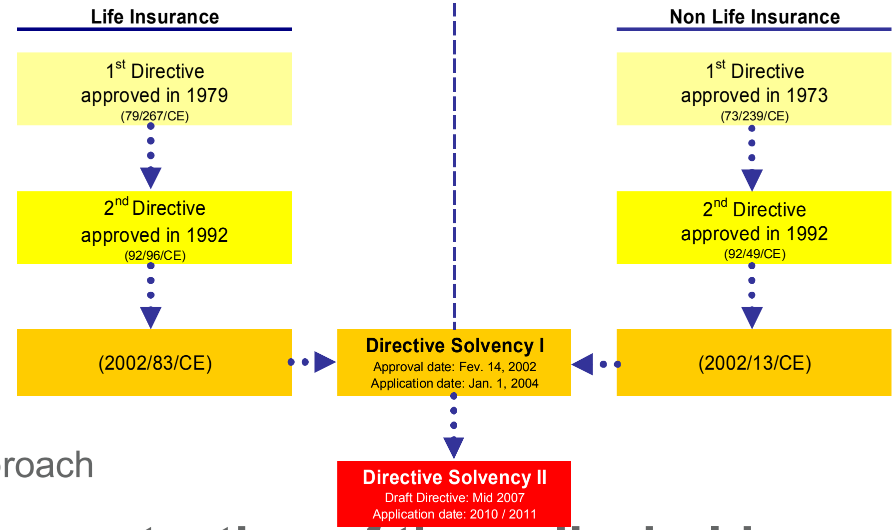

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Current European solvency rules (Solvency I)...

Life insurance

- One third of the required solvency margin represents the guarantee funds and can not be less than a minimum of EUR 3 million
- Solvency margin requirements:

85%<

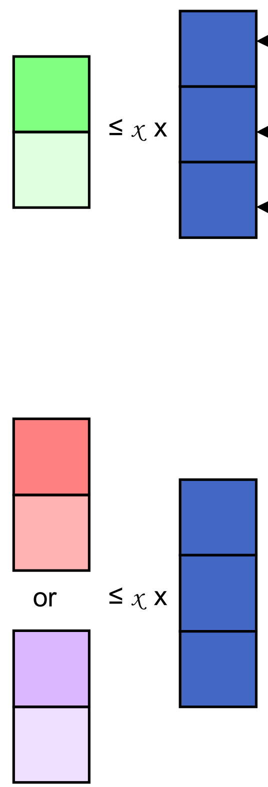
4% x TP* x (total TP* net of reinsurance cessions / gross total TP*)

+

50%<

0,3% x sum at risk x
(total sum at risk retained as the undertaking's liability after reinsurance
/ total sum at risk gross of reinsurance)

Eligible elements for the available solvency margin



Definition based elements

Elements not included in that definition, but which are considered to be eligible

Elements that need prior approval of the supervisory authority

Non-life insurance

Max

18% x gross premiums] € 0 million ; € 50 million
16% x gross premiums] € 50 million; …[

X (Net amount of claims / gross amount of claims)

50%<

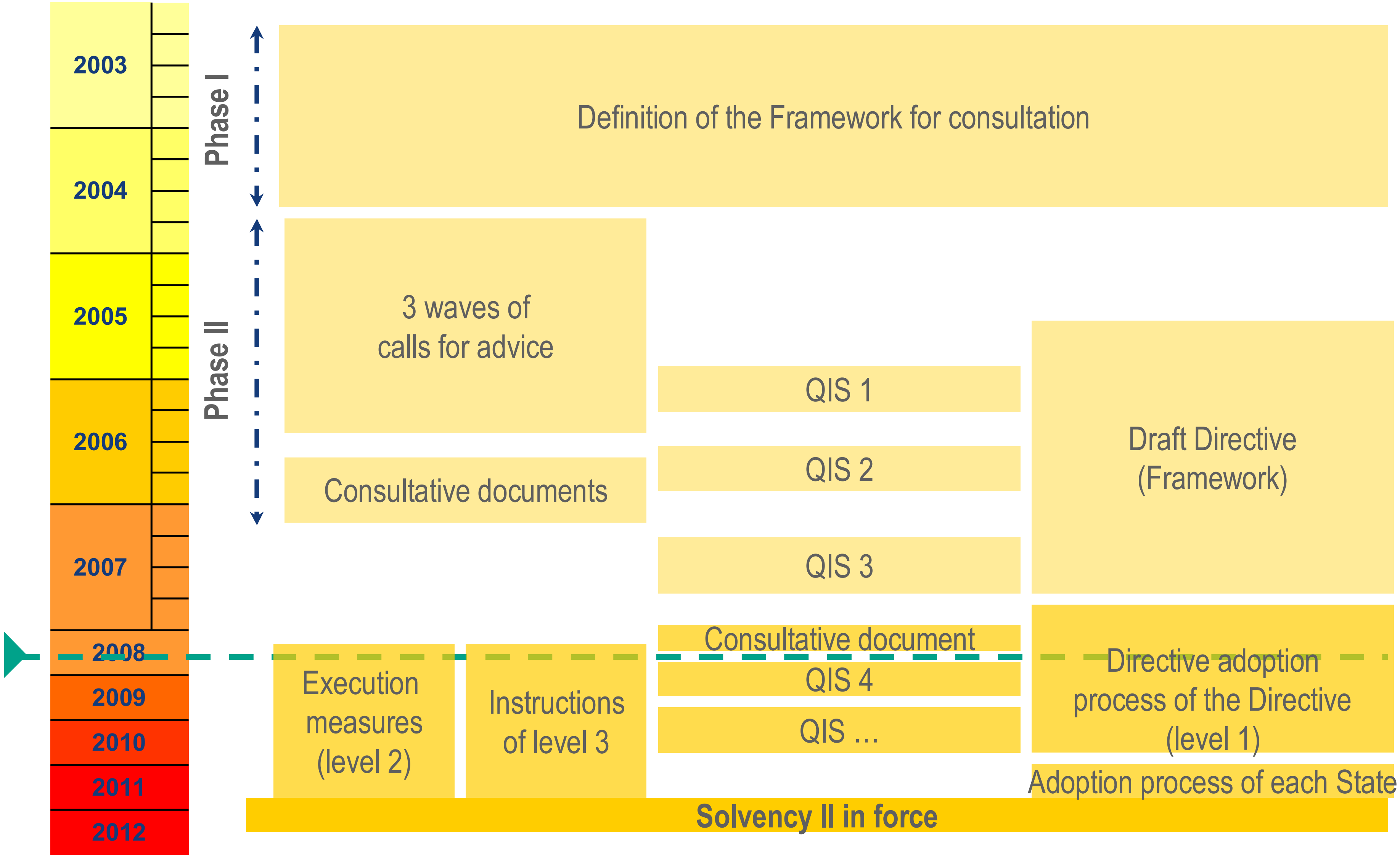
26% x gross amount of claims] € 0 million ; € 35 million
23% x gross amount of claims] € 35 million; …[

X (Net amount of claims / gross amount of claims)

As above

*TP: Technical Provisions

Solvency II Timeline



Solvency II is part of a changing regulatory accounting environment

- **Basel II**
  - Focus primarily on internationally active banks
  - Enhance risk measurement practices and improve stability of international banking system
  - Promote disclosure and enhance self-regulating mechanisms
  - Punch line: reduce systemic risk

- **Solvency II**
  - Focus on all insurance firms domiciled in Europe
  - Improve risk measurement practices and disclosure
  - Punch line: protect policyholders against the risk of (isolated) bankruptcies

- **Similarities**
  - Three pillars, improved risk measurement, economic capital, choice of models
  - Related initiatives are underway: IFRS (Phase 2 “fair value accounting”), FSAs PSB, SST, and Sarbanes-Oxley

Architecture of Solvency II

- Solvency II follows a total balance sheet approach, as it considers both the asset and the liability side, both of them being evaluated following a market consistency principle.
- Whilst in the current regime, the solvency assessment is based on accounting figures that are generally based on the national accounting standards, which vary widely (from market value to book value) between Member States, the Solvency II directive proposal introduces a common valuation principle based on a market consistent valuation of assets and liabilities.
- The Solvency II system is based on two levels capital requirement, representing two levels of intervention. A solvency capital requirement (SCR) sets the required level of capital for a licensed entity, calibrated to cover at least a one in 200 years event (99.5% Value at Risk). A lower minimum capital requirement (MCR) serves as the threshold for ultimate supervisory intervention, including winding-up, thus making the ease, robustness and reliability of calculation of the MCR important features.

Summary Balance Sheet			
Assets		Liabilities	
Reinsurance Investments Other Assets			Own funds Technical Provisions (risk margin element) Technical Provisions (best estimate element) Other liabilities
Total			Total

Architecture of Solvency II

The solvency assessment relies on a few simple steps:

- Technical provisions (best estimate element) represent the best estimate of the future cash flows that will be paid or received until all of the insurance commitments are fulfilled, discounted using a risk free yield curve.
- Technical provisions (risk margin element): as capital will indeed be required until all insurance commitments are fulfilled, the cost of ensuring that the capital needed for subsequent years will be available is computed and booked on the liability side as the risk margin element of the technical provisions.
- Solvency capital requirement (SCR): The various risks that can have a material impact on the undertaking's financial position are modelled and combined to calculate the required capital. Only those risks that have a probability of occurrence of more than 0.5% in the next 12 months are retained in this assessment. This gives the required capital for the coming year.
- If the total value of available assets is less than the sum of the technical provisions, the SCR required capital for the following year, the margin needed to ensure availability of capital in the subsequent years, and the value of the other liabilities, then the firm does not meet its solvency requirement. In the opposite situation, the firm is meeting its solvency requirement and the positive difference is called capital surplus

Solvency II Framework

SOLVENCY II APPROACH
3-pillar structure, like Basel II project

Pillar 1

- Technical Provisions
- MCR & SCR
- Own funds, capital eligibility and tiering
- ALM Models
- Calculations and Reporting

Pillar 2

- Internal Governance and Risk Management
- Internal Models
- Own Risk and Solvency Assessment (ORSA)
- Internal Audit Requirements
- Group aspects

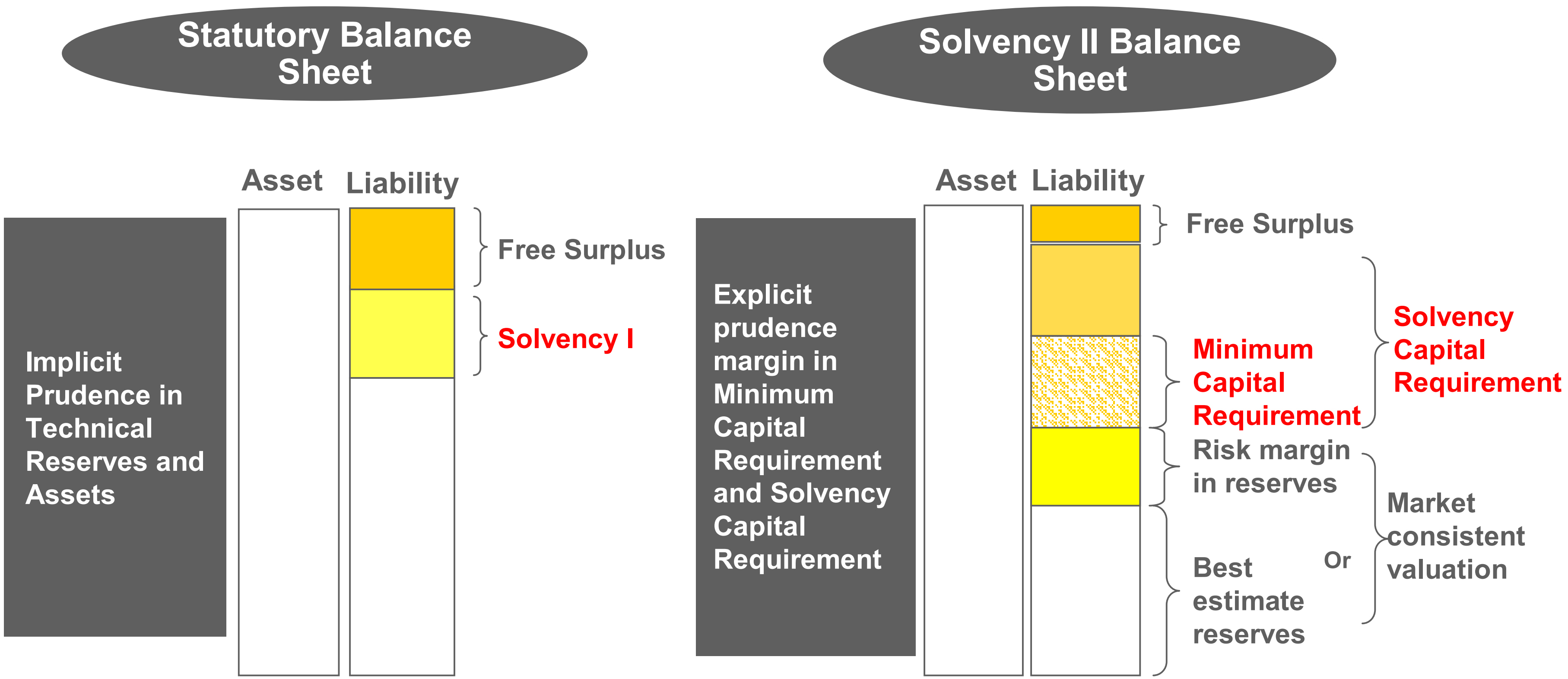
Pillar 3

- Disclosures Policies
- Disclosure & Reporting Requirements

Summary of Proposed Pillar 1

Current Solvency Framework

Proposed Framework

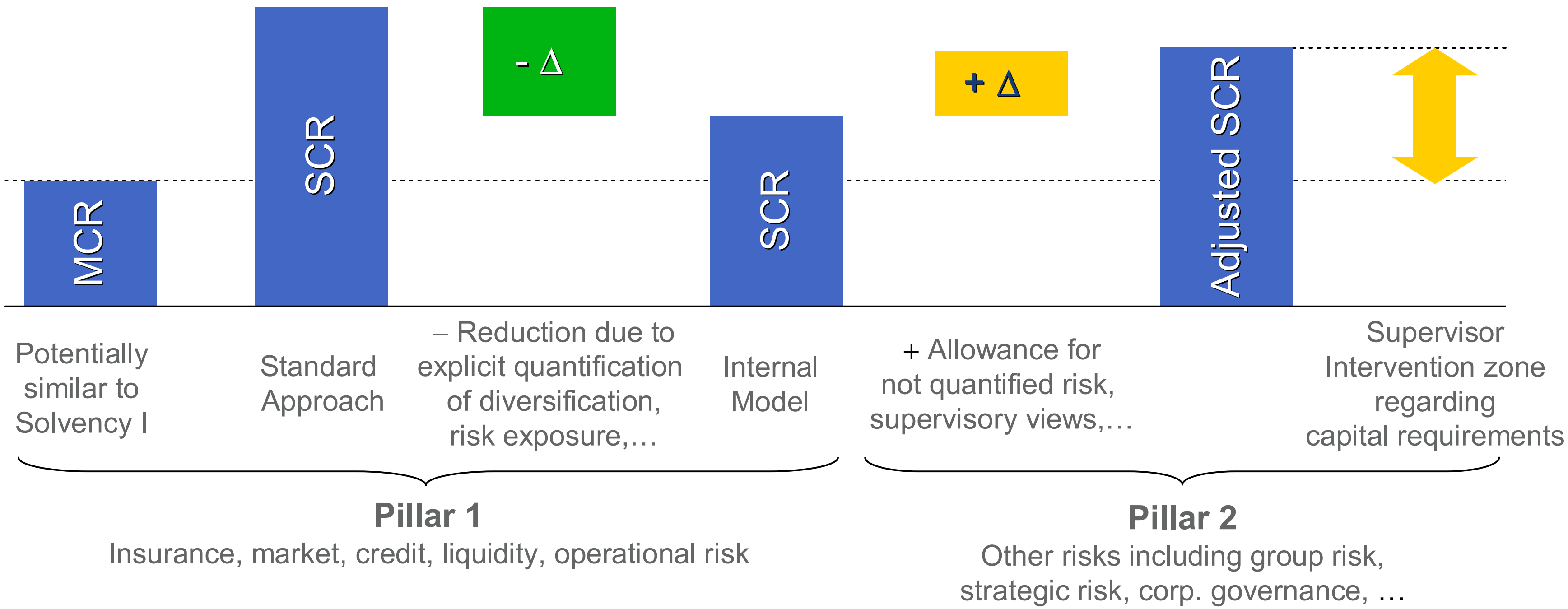


Direction of Pillars 2 & 3

- **Pillar 2: Internal Risk & Capital Assessment**
- Firms must perform own assessment of capital required but also consider capital to meet MCR and SCR in the future
- Subject to supervisory review
- Clear expectation that the assessment will be an integral part of the business strategy
- **Pillar 3: Solvency and Financial Condition Report**
- Major new item of disclosure to be included in the annual accounts
- Broad coverage of business, governance, reconciliation of Solvency II to accounting information and details of risk/capital management
- Potentially significant disclosure of MCR, SCR and any capital add-ons

Interaction between Pillar 1 and Pillar 2

- **MCR, SCR and Supervisor intervention zone**



Risk mapping for solvency requirement

SCR

Operational risk

BSCR

Market Risk

Risk types
- Interest rate
- Equity
- Property
- Currency
- Spread
- Concentration

Risk manifestation
- Volatility of market prices and economic variables
- Volatility of credit spreads over risk free rate
- Additional volatility in concentrated asset portfolio

Counterparty Risk

Risk types
- Default risk

Risk manifestation
- Volatility of asset prices due to rating migrations up to default

Life Risk

Risk types
- Revision risk
- Mortality risk
- Longevity risk
- Disability risk
- Lapse risk
- Expense risk
- Catastrophe risk

Risk manifestation
- Risk arising from the underwriting of life contracts associated with both perils covered and processes to conduct the business

Non Life Risk

Risk types
- Premium & Reserves
- Catastrophe

Risk manifestation
- Future losses are higher than the premiums covering
- Underestimation of reserves
- Extreme events not sufficiently captured by premium and reserve risks

Health Risk

Risk types
- Expenses
- Excessive loss / mortality / cancellation
- Epidemic / accumulation

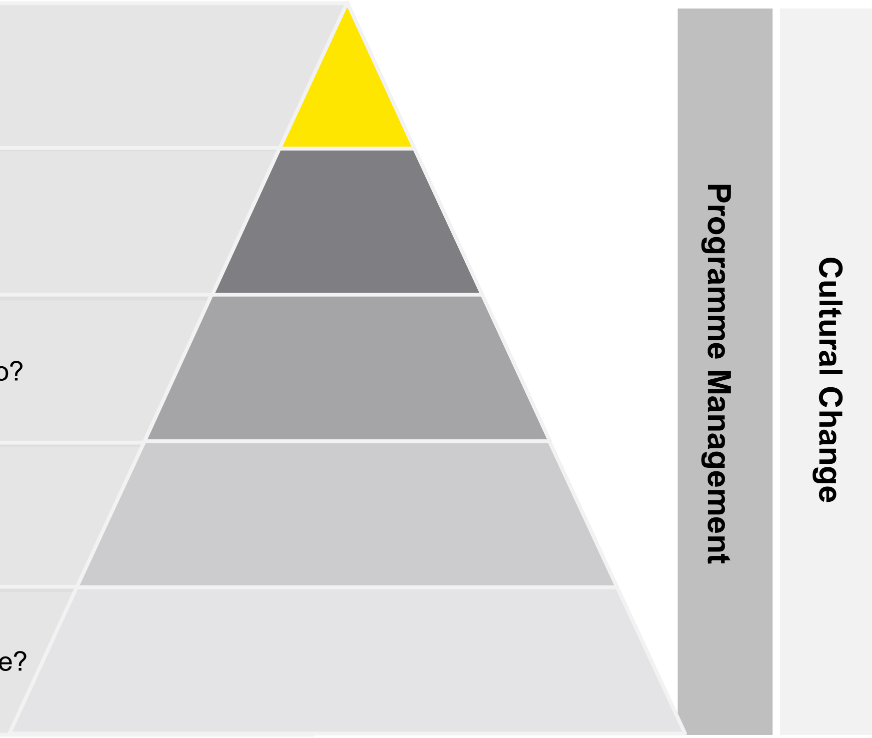
Risk manifestation
- Expenses, loss, mortality or cancellation anticipated are insufficient compared to pricing
- Risk arising from outbreaks of major epidemics

2. Solvency II Strategy

The EY Approach

For a successful Solvency II programme, there are several levels of decision that will need to be addressed at the outset of the Solvency II programme in order to accelerate the implementation.

Strategy / design	Where do we want to be and when?
Process	What are we going to need to do differently?
Systems	Will our systems cope with what we want to do?
Data	Do we have the data to achieve our goals?
Programme governance	What is the right project management structure?



QIS 4 presents insurers with an opportunity to capture some key inputs to accelerate implementation:

- The capital impact assessment
- The potential group benefits
- The gaps in processes, systems and data

Strategy …link Solvency II to business strategy

CEO Strategy

Example

Business objectives / risk appetite

rating: target single ‘a’ rating

peer comparisons: first wave of model approval

Maximise benefit per unit cost

Inform

SOLVENCY II

Project Team

(Design & Implementation)

Challenge

Basel II Learning: Senior management needs to be engaged from the start with clear links from the project to the business strategy

Design

…key regulatory requirements

Balance Sheet – restate and install processes for rapid, frequent, accurate production of 'Solvency II Balance Sheet'

Complete & Accurate Data, Best Estimate methodology and verifiable assumptions – some significant changes cf. status quo eg updated at least quarterly

Insurance Group readiness for Solvency II

Annual submission of Group SII solvency position

Lead supervisor – ongoing monitoring and interaction with subordinate supervisors

Formal management of group diversification with legally binding arrangements etc

Governance System – enhance and formalise

A robust system proportionate to the nature, scale and complexity of the operations. Must stand up to supervisor review.

Written Policies

Production of ORSA

Capital Requirement – Develop Standard Formula Approach to SCR

Modelling developments for standard formula and internal models.

Flexibility required – future proofing.

Capital Requirement – Develop Internal Model Approach to SCR

Enhance existing modelling

Statistical Test, Calibration Standards, P&L attribution, Validation Standards, Documentation Standards

Embedding – Use Test is critical

Timely and relevant MI.

Enhance External Reporting

Production of the Solvency and Financial Condition Report, including:

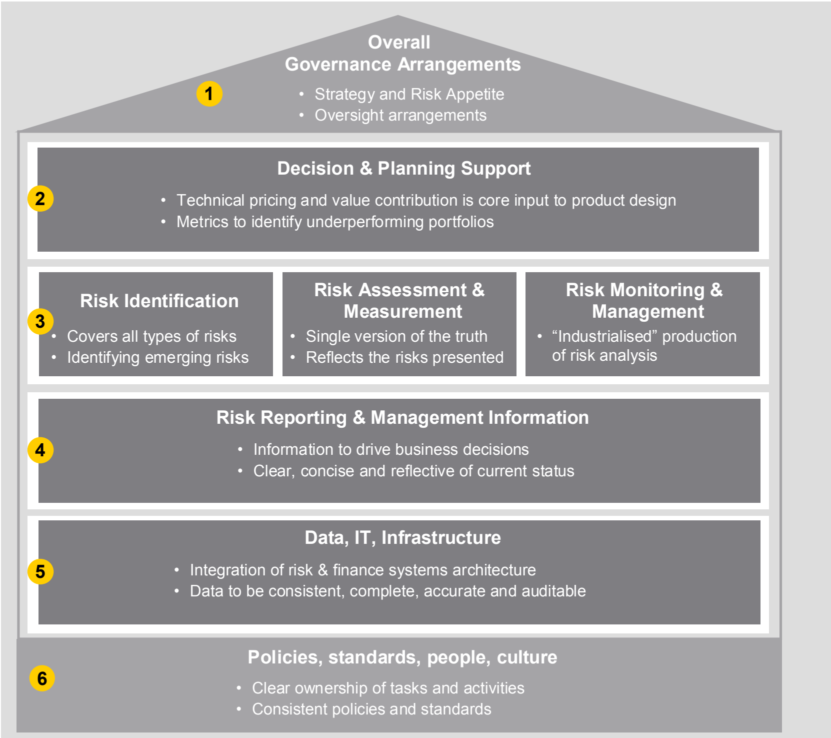
Disclosures of MCR, SCR, capital add-ons (including Analysis of change)

Disclose modelling approach and reconciliation of internal model SCR to Standard Formula SCR

…example areas for consideration

Full Model / Partial Model	Links To IFRS
ORSA Approach	**Links To Other Capital Assessments**
Timetable / End Date / Transitional Arrangements	Demonstration Of Use Test
Business Unit Split	**Changes To Group Structure**
Breadth Of ERM Framework	Data Quality
Desired Level Of Disclosures	**Central V Divisional**
Securitisation Options	Risk Appetite

Process …drive change through Enterprise Risk Management

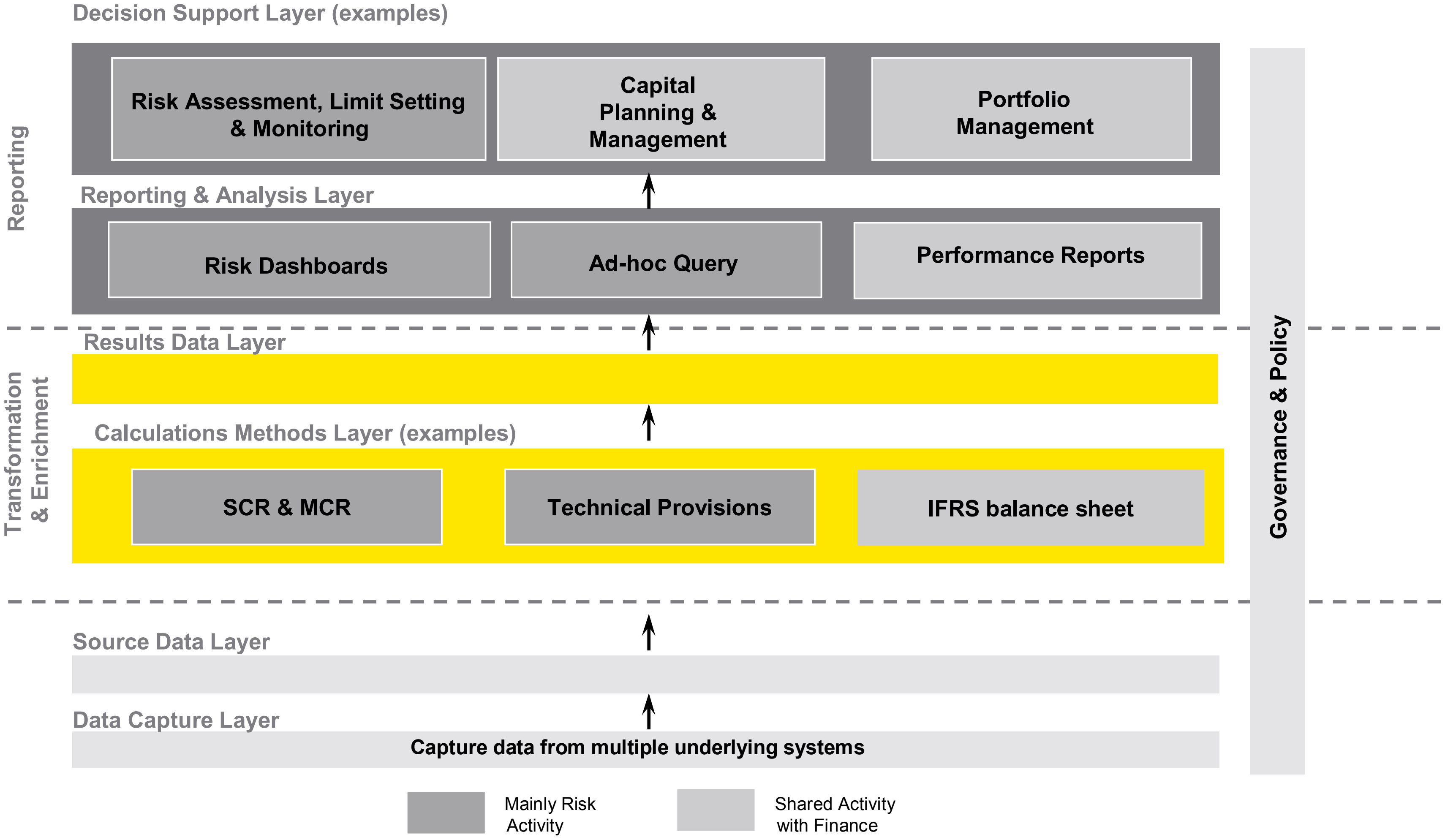


Guiding principles behind ERM

- Appetite for risk set by the Board and part of strategy, cascading down into risk limits that facilitate the achievement of optimal risk-adjusted returns.
- Firm-wide assessment of risks across all risk types (i.e. not linked to regulatory requirements) including emerging risks and risks arising out of new products.
- Quantification at a range of confidence levels, with models driven by risk drivers consistent with the underlying risk.
- Underpinned by common language, across the organisation, that reduces ambiguity and boundary issues.
- Supported by timely, consistent and accurate management information providing a "single version of the truth" used for internal and external reporting.
- Driving risk-return through linking ERM to pricing, new product design, reinsurance programme optimisation, asset allocation etc. This in turn drives capital allocation, distribution of dividends and pay incentives.

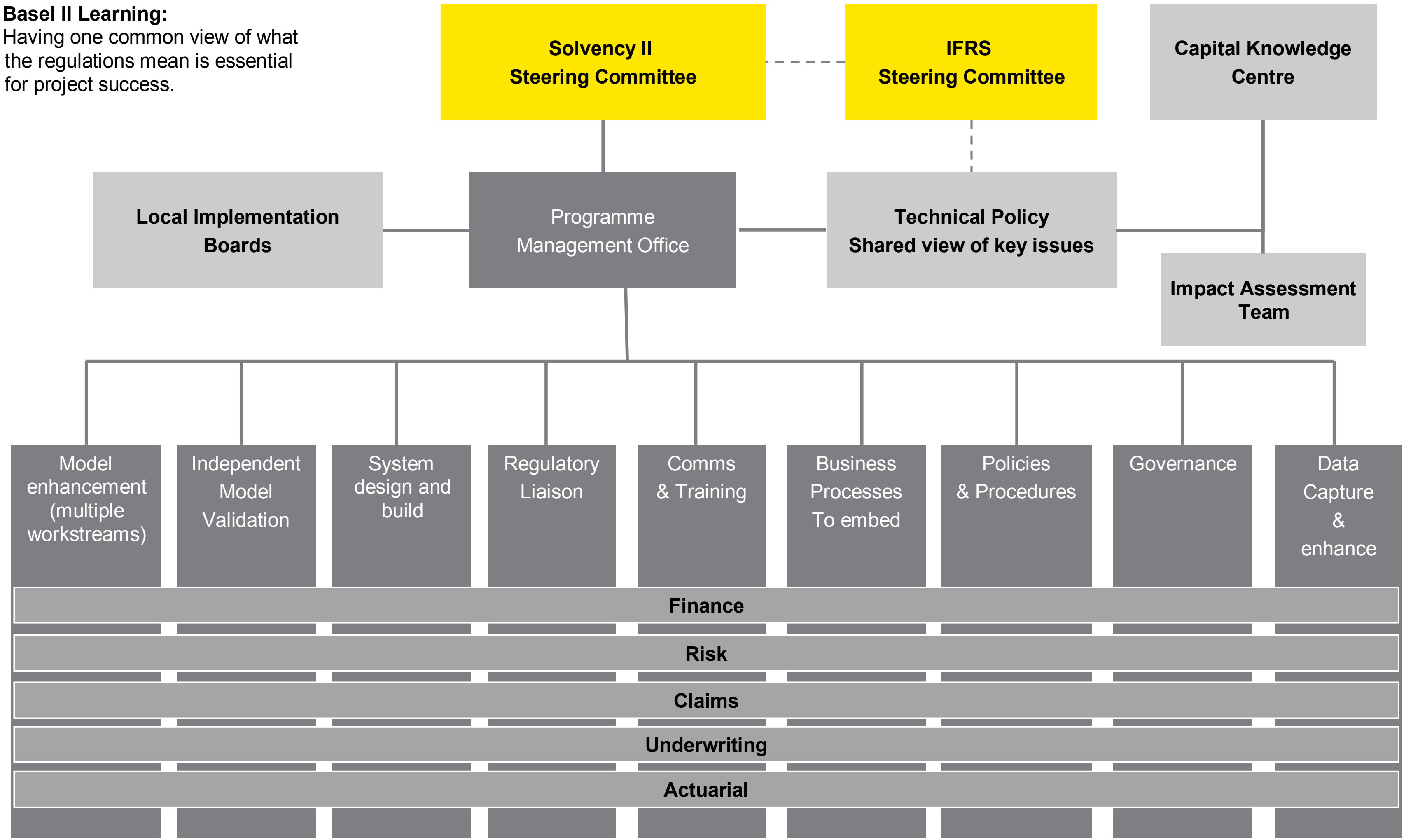
- Key Differentiator: Disclosure and stricter criteria expected to make Enterprise Risk Management a key differentiator
- Risk Appetite: Driver of capital will be firm's, rather than regulator's or rating agency's, articulation of risk appetite
- Breadth & Depth of ERM: Firms will need to drive ERM more to the heart of the business decision making process and they will need to better link the component parts
- Raising the profile of models within the business is essential. These will be owned by the board and senior management under Solvency II

Data & Systems ... revisit data and IT architecture



Programme Governance …ensure connectivity to enable you to embed

Basel II Learning:
Having one common view of what the regulations mean is essential for project success.



3. Roadmap

Why develop the Roadmap now?

Solvency II is a step change in the complexity of the financial close process. Under Solvency II a quarterly hard close is introduced for technical provisions and minimum capital requirements. Annual closing incorporates the SCR calculation. It will be a significant challenge to have the new systems fully integrated ahead of the implementation date.

Current projects already touch on areas affected by Solvency II. Insurers need to establish a current, shared view throughout the organisation to inform projects, recognising areas of uncertainty and having a clear prioritisation. For example, there is significant overlap with IFRS Phase II for the fair value balance sheet but also material areas of difference.

Significant data & systems improvements will be necessary. In particular, this involves the convergence of accounting, risk and actuarial information. Passing the internal model use test will require much greater confidence in economic capital metrics and consistency of accounting, risk and actuarial information.

It is unlikely that existing Internal Models will satisfy the regulatory requirements. UK insurers have already had to implement internal models for the ICA, and the regulator's view is that UK insurers would not meet the model approval standards anticipated for Solvency II, particularly because ICA remains a regulatory based calculation rather than a strategic tool.

Increased demand of scarce skilled resources. Addressing the required changes is likely to require significant development activity. Given the likely squeeze on resources, this activity cannot be back-ended and will need to be spread.

Avoiding the mistakes of Basel II. Bancassurers in particular are very aware of the potential for huge costs associated with "fixing" programmes which have not been properly initiated, given the significance of regulatory change of this scale. Their learning points form Basel II are a key influence on the priority they are giving to this work.

Roadmap structure

Programme Initiation	Phase 1 Gap Analysis	Phase 2 Road Map	Design and Implementation	Embedding into business
2008			2009	2010
Key methodologies and tools				
Establish Project Scope	Bus Process Gap Analysis	Define projects	Develop RM policies and processes	Develop internal review processes
Understand Key Strategic Decisions	Data Gap Analysis	Project prioritisation	Develop governance framework	Dummy runs of output
	System Impact Assessment	Detailed action plan	Design Models and Methodology	Go live
	Capital Impact Assessment		Develop functional architecture	
			Develop logical data model	
			Develop technical architecture	
			System implementation	

Transformation through communication and training

QIS exercises and regulatory dialogue

Roadmap for Solvency II – Next Steps

There are key decisions to be made on Solvency II:

- Where do you want to be and by when?
- What will you need to do differently?
- How will you change current systems?

QIS 4 presents insurers with an opportunity to capture some key inputs to inform these strategic decisions:

- The capital impact assessment,
- The potential group benefits
- The gaps in processes, data and systems, particularly for Pillar 1

These insights can accelerate the preparation of for Solvency II, particularly for Pillar 1

Appendices

A Related EY activity

Confidential

Appendix A: Related EY activity

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Related EY activity

Major European Bancassurer – Development of Solvency II "Roadmap"

- We have recently delivered a Solvency II "Roadmap" engagement for a major European banking and insurance group. This involved:
  - Capturing regulatory information and emerging market perspectives on the likely form of Solvency II, and considering the implications for the client.
  - Providing a perspective on the main implementation challenges and implications in the Solvency II environment, based particularly on experience of Basel II, the Swiss Solvency Test and the UK ICA regime.
  - Carrying out a gap analysis - an assessment of the insurer's current state against Solvency II expectations and regulatory requirements, with respect to both the internal model and the standard approaches to SCR. This was performed via a series of interviews and workshops with key stakeholders and functions within the client, and review of existing documentation.
  - Preparation of the "Roadmap" for Solvency II compliance ahead of the 2012 implementation date: this includes identification and prioritisation of work streams, timelines and recommendations for the governance and structure of the programme.
- The Roadmap focuses on the main features of the Solvency II regime and highlights any areas where, based on our interviews with the client or our own insights of emerging market developments, that further work, beyond that necessary to meet basic Solvency II requirements, may be required.
- Our work covered the full range of the client's domestic and international insurance business units, and spanned both life and general insurance.

Major Reinsurance Group – Development of Solvency II "Roadmap"

- We recently assisted one of the world's largest reinsurance groups in the development of their Solvency II Roadmap. This involved:
  - Compiling a single list of risk management requirements from various sources (local legislation, local supervisory requirements, European Solvency II requirements, recommendations by professional and regulatory bodies etc)
  - Interpreting the requirements, deriving concrete expectations for the client and assessing the practical implications.
  - Providing a perspective on the main implementation challenges and implications in the Solvency II environment, based particularly on experience of Basel II.
  - Carrying out a gap analysis - an assessment of the insurer's current state against the list of risk management requirements, with a particular focus on qualitative governance issues. This was performed using the Ernst & Young Solvency II Gap Analyzer together with a series of interviews with key stakeholders and functions within the client, and review of existing documentation.
  - Derivation of implementation alternatives outlining the range from simple adherence to minimum requirements to best practice options.
  - Preparation of the "Roadmap" for Solvency II compliance ahead of the 2012 implementation date: this includes identification and prioritisation of work streams, timelines and recommendations for the governance and structure of the programme.
- The Roadmap focuses on the main features of the Solvency II regime and the local minimum requirements for risk management, both on an entity, sub-group and group level. Extensive work was done on the internal control framework and various practical implementation options were developed and discussed, ranging from simple compliance to group wide integrated risk management solutions.
- Our work covered the full range of the client's insurance and reinsurance businesses, and spanned both life, general and health insurance.

Further related EY activity

Swiss Insurance Group – SST Implementation

Ernst & Young is assisting a major Swiss insurance group to adapt its internal models to achieve compliance with SST. The project scope includes the solo and group views, and the key risk types (market, credit, underwriting, reserve risks) as well as supporting the company in getting regulatory approval for the approaches taken.

Quantitative Impact Studies – Major European Groups

Ernst & Young has been engaged to provide assistance in compiling results under Quantitative Impact Studies 1,2 & 3 for the Solvency II project, for a number of major multinational insurance companies. The work covered life and non-life business, analysis of results and the preparation of reports on the results for the national insurance associations in each of the countries in which the groups had subsidiaries.

ING – Economic Capital

ING engaged Ernst & Young to conduct an audit of its economic capital (EC) results for its global life and property and casualty activities. The company's objective was to confirm that its EC and liabilities have been calculated in accordance with market practice, and was structured to provide assurance relating to the data, methodologies, assumptions and results produced by the internal models. The audit of EC included testing of calculations, processes and controls, and results on a sample basis, including parallel modelling to test the accuracy of the risk measurement models based on a globally implemented replicating portfolio methodology.

Global Insurer – Review of ICA results

Ernst & Young have recently completed work with a major international insurance group to provide a formal assurance opinion to the Audit Committee on their group ICA results. The review also covered the risk identification, the capital quantification methodology and assumptions used for the ICA in the material life and non-life business units, the non-insurance entities, as well as the aggregation process leading to the Group result.

QIS 3 – Leading Reinsurer

Ernst & Young provided assistance to the UK non-life division of a global reinsurer to prepare the QIS results and also provided peer review of their overall QIS 3 submission.

We have recently completed an "internal QIS 3" calculation for the reinsurer's UK life business.

UK Life Discussion Forum: Solvency II and ICA

We perform regular industry research through our Solvency II and ICA survey, and host a regular life discussion forum (including the 14 largest UK insurers) to share knowledge.

Surveys have been completed for both QIS 2 and QIS 3, delivering a rapid summary of key issues with the QIS results, well ahead of the formal feedback from the FSA or CEIOPS.

Italian Insurance Group – Definition of the Solvency II roadmap

Ernst & Young assisted a major Italian insurance group to review the analytical methodologies and the operational processes related to existing capital models, to focus on the achievement of compliance with Solvency II framework (as currently defined by CEIOPS). The project required the analysis of the current status of the economic capital model developed by the Risk Management function and of the main valuation models used by operating function, assessing the embeddedness of the capital models. EY assisted the client in defining a Master plan that identifies the main activities to carry out the convergence to the standard approach of Solvency II framework and to define a framework in line with requirements for regulatory approval.

General Insurance Solvency II Forum

In London Ernst & Young hosts a regular general insurance forum (25 firms give wide representation across the range of UK entities, global direct writers, London & Bermuda market). Surveys have been completed for QIS3 and to examine readiness of G.I. internal models (surveyed at December 2007). Forum delegates include finance directors, chief actuaries and risk officers.

Individual Capital Assessments

Ernst & Young has considerable experience in developing and reviewing ICA results and methodologies as part of the development of wider risk management frameworks (including operational risk) required by the FSA's Integrated Prudential Sourcebook.

We have either developed the ICA methodology or performed QA reviews for 7 of the 10 largest UK life insurance companies and significant work with P&C clients. Our ICA engagements include assistance to companies in preparing their ICA submissions for the FSA. In addition, we have regular contact with the FSA to enhance our understanding of the spirit of the new guidance and emerging issues.

We have also provided senior actuarial resource to the regulatory team of the FSA to assist in the ICA review process. This gives us an excellent insight into the regulatory perspective for UK insurers

Fitch Ratings – Development of Capital Adequacy Model

Ernst & Young developed a Capital Adequacy Model to consistently measure capital adequacy across insurance sectors (Life, Heath and P&C) and across countries with different accounting standards. Ernst & Young incorporated methodologies that could be implemented using publicly available data and then expanded upon efficiently as more detailed data is obtained. The team built tools to measure and integrate insurance, interest rate, equity and credit risks on a consistent basis for life, health and P&C insurance companies.

Large UK Bancassurer – Economic Capital Review

Ernst & Young deployed a team of three people at a large UK Bancassuer to update their internal Economic Capital calculations. The work involved reviewing and challenging the methodology and assumptions, producing the results (including recalibrating the assumptions, running their models and aggregating the final results), and reporting on the results to Group. As part of the work, we liaised between the client's ICA and Economic Capital teams to achieve greater consistency between the different reporting measures and recommended areas for future development.

Further related EY activity

Reinforcement of the supervisory operation of the Romanian Supervisory Insurance Committee

EY team is collaborating with the Romanian Supervisory Committee in order to restructure its operation. The main objective is the broadness and reinforcement of the technical knowledge of the CSA staff so that a supervisory approach based on the undertaken risks of the insurance companies will be achieved. Emphasis is given in ALM models, the harmonization with IFRS IV, the determination of time warning indicators in case of inadequate capital, the formation of political limitation in case of fraud and the design of an internal control framework.

QIS 3 for Greek insurance companies

Several Greek insurance companies have chosen EY to perform QIS3 exercise. The projects included the valuation of their capital requirements and an overall help in order to initiate their harmonization process with the Solvency II requirements. In particular, the projects included the calculation of operational risk, market risk, life and non-life underwriting risk.

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