



thinkpiece

Promoting debate and fresh thinking in the Insurance and Finance Industry

Solvency II: Enabling Transformation Through Regulation

*Richard Jones, John Smith and Brid Meaney**

Summary

- Solvency II legislation which will take effect in October 2012 will implement a fundamental change to the current European insurance solvency framework. With interim progress milestones in 2010 and 2011 fast approaching, each insurer should decide now what Solvency II means for them.
- This paper outlines the key decisions that need to be made now to design the appropriate Solvency II programme. Insurers need to understand the drivers that could influence both the scale of investment and the value to be derived from their Solvency II Programmes.
- To meet Solvency II the insurer *must* consider several key drivers that *will* influence both the scale of investment required and the value to be realised. These include
 - **Desired Business Benefit:** better understand of risk yields development and pricing advantage.
 - **Complexity and Stability of Risks:** the risk profile of the insurer's product portfolio.
 - **Market Peer Group Sensitivity:** experience has shown that evolving market practice is the key driver of the regulatory standards.
 - **Operational Efficiency Ambition:** what level of operational costs are insurers targeting? Finally
 - **Gap Analysis:** including risk measurement, data sourcing and delivery, and model documentation.
- Insurers should start their journey now. 'Wait and see' is no longer a viable option. Most large insurers are currently designing their programmes, and there are discussions in the industry regarding the scarcity of suitable and available resources to work on these projects.
- This is an abridged version of a full-length article prepared by IBM which can also be accessed via the [Thinkpiece website](#).

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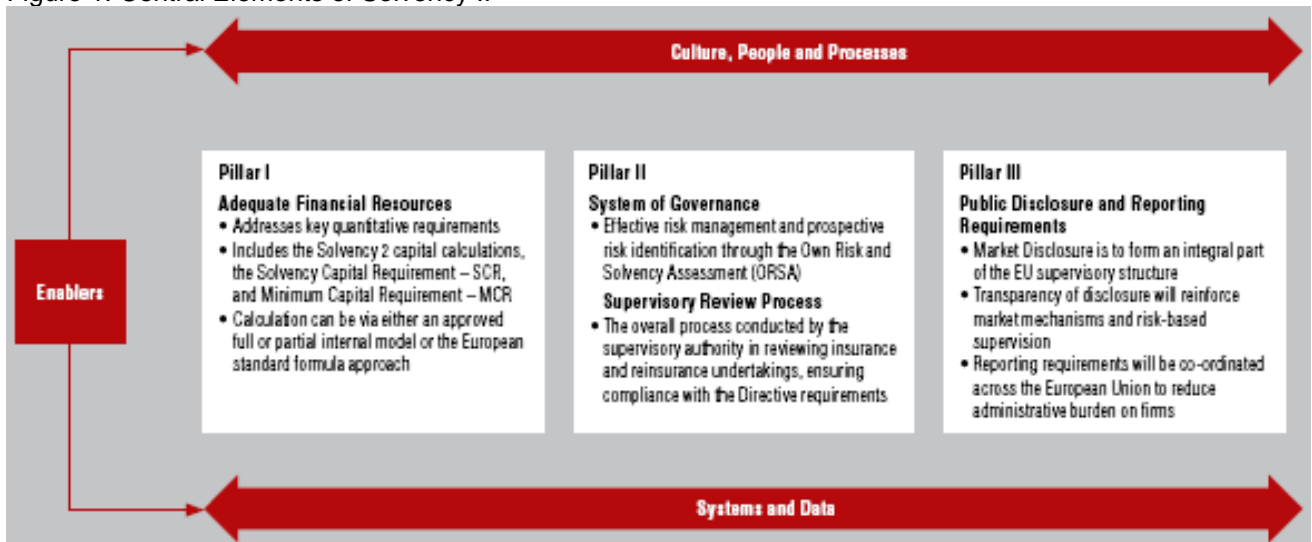
** The Authors also wish to recognise the work of Graham Olsen and Peter Havelock in the preparation of this article.*

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Figure 1: Central Elements of Solvency II



CII Introduction: the Solvency II framework to bring about a modernised set of risk-based regulatory capital requirements for insurers across Europe cannot be more topical in the light of the recent banking liquidity crisis. In so doing, it has become one of the major regulatory issues affecting insurers over the next few years. In this latest CII Thinkpiece, Richard Jones, John Smith and Brid Meaney, senior insurance industry consultants from IBM vividly illustrate the importance of firms' early engagement in the process. They provide a detailed perspective of the steps insurers need to be taking at various stages to ramp up to the new regulatory requirements, and show why this can be good for business not just from a compliance perspective.

Solvency II legislation was initiated in 2000 by the European Commission to implement a fundamental change to the current European insurance solvency framework. Solvency II will produce a more consistent solvency standard for insurers across Europe, ensuring that capital requirements are more reflective of the risks being accepted.

The date for the legislation to come into effect has been set at 31 October 2012. Whilst this may seem a distant horizon, interim progress milestones are fast approaching in 2010 and 2011. IBM advises that each insurer should decide now what Solvency II means for them. This paper outlines the key decisions to be made now to design the appropriate Solvency II programme.

Solvency II Objectives

The primary objective of Solvency II is to strengthen protection for policyholders by ensuring that insurers and reinsurers fully

understand the risks inherent in their businesses and allocate enough capital to cover those risks. It applies the three-pillar approach from the Basel II process in banking capital adequacy regulation.

Pillar I – Risk Quantification and Capital Adequacy

Pillar I calculations quantify the level of risk firms face and identify the amount of capital they need to support that risk. Firms can elect to apply calculation models that are either standard (prescribed by the regulator) or their own internal model, across all business lines, or adopt a combination of the two

The regulations allow a pragmatic approach to be taken as to whether to use a standard or an internal model. The insurer can mix and match the models it uses – for example, by product line – and only develop a more complex internal model where the benefits to be gained warrant the additional effort.

The regulator will need to approve each internal model before it can be used. To gain approval, firms will have to demonstrate that the model is based on sound statistical techniques, uses complete and accurate data to support model assumptions, covers all material risks, and satisfies calibration tests and documentation requirements.

Pillars II & III: Internal Control and Reporting

Pillars II and III address the supervisory, reporting, risk management and disclosure requirements that the insurer will have to meet to comply with Solvency II.

To achieve compliance, the firm will have to prove that it has strong internal reporting mechanisms and a thorough internal audit function. It will also

need to demonstrate comprehensive communications and timely data sharing between the various functional departments – from underwriting, claims, actuarial, operations, IT, investment management, finance, risk and compliance, right up to board level. Firms will also need to demonstrate that they have instilled risk awareness and sensitivity in all core activities.

Compliance will involve a Financial Services Authority (FSA) supervisory review of a firm's risk management and controls, including the firm's Own Risk and Solvency Assessment (ORSA) and Regulatory Reporting.

The ORSA is a firm's own examination of its capital needs taking into account its specific risk profile and strategy.

It also addresses the sufficiency of its risk and management processes. Whilst comparable to the FSA's Internal Capital Assessment (ICA) requirement, Solvency II goes into much greater depth in assessing risk management processes.

Call to Action

The official date for regulatory implementation of the Solvency II is 31 October 2012. This may seem a long way off, however the Basel II regime for banking has taught us that systemic, pervasive change takes time and commitment.

The FSA have made clear that: the risks of delaying implementation plans "are considerable in terms of non-compliance in 2012 and/or being forced into costly high-risk programmes of work at short notice." They emphasised that "starting work now on a measured and a flexible basis is a sensible course for regulator and firms alike".

Preparations should begin today if the commercial and competitive benefits of implementation are to be fully realised by the due date. A surge of Solvency II initiatives are now under way within leading firms of insurers and reinsurers to prepare. Insurers will need to test their proposed internal models with the FSA in the form of a 'Dry Run Entry Compliance Criteria' that will need satisfying by the second half of 2010.

Taking action now – Pillar I Internal Model Dry Run

Most insurers are conscious of the need to 'do something'.

The question is "What can be usefully done?" as Solvency II, by its nature, does not engender a 'one size fits all' approach.

One step that should have commenced or be starting imminently is the Pillar I Calculation, especially so where the insurer aims to apply for internal model approval, as opposed to adopting the prescribed standard.

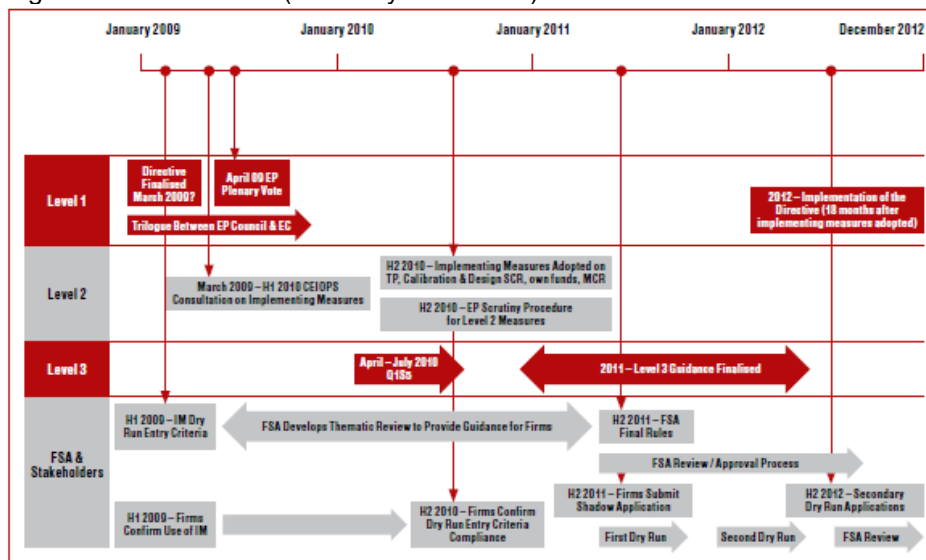
However in advance of 2012, the FSA has set up a dry run exercise in the second half of 2010 to provide insurers the opportunity to demonstrate their calculation models to the regulators. From the regulator feedback and their own internal lessons learned from the dry run, the insurers should be able to refine their models, and take steps to mitigate risks, to increase the likelihood of model approval by October 2012.

Insurers not participating in the first dry run have been warned that they risk not getting approval for their internal models before 31st October 2012. If the model is not approved, then it can't be used at all. It will not simply attract an additional capital loading as per Individual Capital Adequacy. The insurer would then have to use the standard model in calculating Solvency II capital.

Quantitative Impact Survey

Firms undertaking Solvency II planning should also note that there is expected to be a fifth round of the Quantitative Impact Survey (QIS) exercise in April-June 2010. This is particularly relevant where firms are planning to join the dry run from mid-2010, where QIS-5 is likely to form part of the qualifying criteria to enter the dry run process. From June-Nov 2010, those firms seeking to apply for internal model approval will be expected to demonstrate compliance with dry run entry

Figure 2: Call to Action (Solvency II Timeline)



criteria as follows:

- High-level implementation plan
- Internal model development plan
- QIS-5 exercise completed
- Model documentation essentially complete, with indication of how Directive requirements / tests will be met.

Two basic philosophies towards the dry run are available:

- **A quick and disposable approach** in which the calculation is largely performed by actuaries using desktop tools, as opposed to strategic applications, to establish the logic and gain a feel for the numbers and
- **A prototype approach**, where the Pillar I Dry Run is built on the technology that is anticipated to be used in the full, strategic solution.

At the risk of repetition, there is no single 'right' way. Calculating the numbers alone is not the problem, Actuarial departments are geared towards revising models and calculations on a routine basis. The issue is whether they can do it faster, more frequently and to a higher level of quality.

Having in mind the need for an end-to-end process and technology solution, with special focus on the data integration challenges, is likely to put the organisation at an advantage when it comes to delivering the Pillar I calculation inside a framework capable of embedding within the decision-making cycle (Pillar II) with comprehensive disclosure of results (Pillar III).

More than Measurement

Compliance is not simply a case of an insurer demonstrating the consistency and accuracy of its Solvency II capital calculation models. Per Pillar II, firms will also have to demonstrate to the regulator that the internal model is used in the day-to-day management and decision-making of the business – also known as the 'Use Test'.

IBM's experience strongly suggests that insurers will probably feel most comfortable in addressing the Pillar I Capital Calculation, as it can be viewed as another in a long line of actuarial modelling projects.

However, it is the Use Test where Insurers may find the greatest challenge, as it will force firms to confront longstanding working practices and change entrenched behaviours. This is also the most powerful element of Solvency II regime in preventing business failure.

In order to embed Solvency II risk awareness into the insurer's decision-making process, the organisation should present complex capital, risk and performance measurement data and results in a form that is timely, accurate, concise yet comprehensive to help facilitate business decision making.

Potential Business Benefits from Solvency II

In developing the Solvency II business case, business leaders have a choice. They can elect to do the minimum required to implement the legislative changes fearing that the regulators will in effect punish non-compliance.

Alternatively, firms can aim to understand if and where they can invest to achieve competitive advantage and, as a result, maximise the potential benefits.

Solvency II can provide significant business opportunities for insurers:

- provide a common basis for comparing projects / business strategies of different levels of risk, and give management a deeper understanding of risks to identify areas where competitive advantage exists;
- deliver improved MI to facilitate business decision-making at all levels in the organisation;
- create value through improvements to product design and pricing;
- assist the organisation to better align employee remuneration with risk-based performance;
- help to minimise the cost of raising capital, reinsurance and other risk transfer products by making the firm's risks more transparent to (and hence assessable by) the market;
- drive investment in scalable/extendable models to minimise cost of future change programmes (such as IFRS Phase 2);
- provide faster, higher quality financial reporting through improved data integration;
- give efficiency improvements, such as removal of duplication of effort across different reporting processes Increase automation to reduce strain on resources; and
- help improve capital allocation by identifying those risks that can earn appropriate risk adjusted returns.

Realising these benefits need not require an instant, wholesale business transformation. Many firms may prefer a more pragmatic, phased

approach. This will use some 'workarounds' to deliver immediate Solvency II compliance whilst more comprehensive, automated processes and workflows can be implemented more gradually according to the firm's ambition and appetite.

Designing your Programme

Insurers should plan out their programme of change now. Larger groups have already started to prepare for Solvency II and are making solid progress in mobilising their projects. Insurers now need to form a view on what compliance looks like in a Solvency II world, even though the guidance is still under development, in order to plan for the next 3 years and beyond.

Experience has proven that the technology and data integration solution can be a major component of costs. Its delivery may be on the critical path. Hence it is important to agree the key requirements which influence the scale of the technology solution.

These tend to be the non-functional requirements around the capture of data into the risk calculation engines and onward delivery of MI, for example:

- **frequency:** how often will the MI be required to drive decisions/behaviour? How frequent are these decisions actionable?
- **accuracy:** does monthly MI need to be based on 'hard/close' information or are estimates in some areas sufficient for decisions to be taken; and
- **granularity:** how granular will the MI be required; and at what product level can decisions be made?

Many of the core systems operating within insurance and reinsurance firms were developed in-house more than 20 years ago, and many firms have a history of deferring systems investment.

Efficient on-demand data management requires automated data capture, coordination of workflows and accelerated validation processes. This should be supported by a strategic approach to data governance, workflow orchestration and information management to ensure the right data is delivered to the right place at the right time.

Solvency II may require firms to:

- improve and automate existing systems, or build new end-to-end processes;
- create and populate data marts to perform risk calculations and handle risk modelling activities; or
- communicate results to the appropriate reporting mechanisms.

Plans may need to factor contingency in from the start and the solution may need to allow for some flexibility as the views of the regulator and positions adopted amongst the insurer's peer group will evolve over the period.

Restructuring a business to comply with the Solvency II directive can carry significant structural and financial challenges. The business case for change, to meet the regulatory requirements and to deliver additional commercial benefits, should be clearly articulated and documented at an early stage. Engagement of senior sponsors throughout the programme will be important to help make sure that key decisions can be taken quickly. Securing the active sponsorship of a senior executive with proven experience in delivering change and the right business level engagement can be crucial to achieving success.

Figure 3: Anticipated Impacts as Compared to Other Change Programmes

Activity Vs Regulatory Dimension	S II	IFRS	SOX	PSB
Data Management – Acquisition, Distribution and Marts	H	M	L	M
Operational Reporting	M	L	L	L
Segment Reporting	H	M	L	L
Finance & Risk Reporting	H	H	L	M
Disclosure	H	H	M	M
Reinsurance & Risk Transfer	H	M	L	M
Insurance Product Portfolio Management	H	H	L	L
Investment Portfolio Management	M	H	L	M
Provisioning	H	H	L	M
Modelling	H	H	L	M
Valuation Bases	H	M	L	M
Stress & Scenario Testing	H	M	L	M
Capital Adequacy	H	L	L	M
Supervisory Review	H	L	H	M
Internal Controls	H	L	H	M
Corporate Governance	H	L	H	M
Risk Management and Reporting	H	L	L	M
Decision Making Culture & Employee Rewards	H	M	M	M

Conclusion

IBM believes that Solvency II should not be constrained to a discrete Pillar I risk calculation or disclosure project, but should represent a charter for business leaders to transform their firms by embedding class-leading, risk-sensitive decision-making into the operational DNA of the organisation.

Compliance requires insurers to identify and measure risk, calculate capital adequacy to meet those risks and use those calculations to drive operational decision-making. As a result, it offers insurers the opportunity to realise much broader, deeper change-related benefits beyond those that regulatory compliance typically delivers. The winners will potentially be those who grab the opportunity with both hands.

It is important that insurers act now and design the programme which provides the right balance

of costs and benefits. There is not one solution which fits all or one journey to follow, but failing to act now is likely to be very costly. The difficulty faced by insurers is designing a programme which is both flexible and scalable enough to deal with regulatory guidance whilst it is still under development.

As Charles Darwin stated *'It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change'*.

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Richard Jones has been driving Finance and Risk transformation for the last 11 years at leading global Banks and Insurers, after initial qualification as a chartered accountant followed by roles in Investment banking product control. Major assignments have addressed improving Finance data quality and straight through processing, from transaction capture through to reporting. Prior to joining IBM, Richard was global head of Accounting Engine and Interface development at GE Insurance Solutions.

John Smith is an Associate Partner within IBM's Insurance Practice and leads the Business Performance Management and Solvency II practice. He brings extensive experience in finance and regulatory change and management information initiatives.

Brid Meaney is a senior managing consultant within our Financial Management consulting practice. She is an actuary with over 13 years' experience in the insurance industry. Her recent experience has been in the design and delivery of actuarial transformation programmes including organisational, cultural, process and system changes. Previously, a director of Life Strategies, an actuarial and strategy consultancy in Dublin.

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