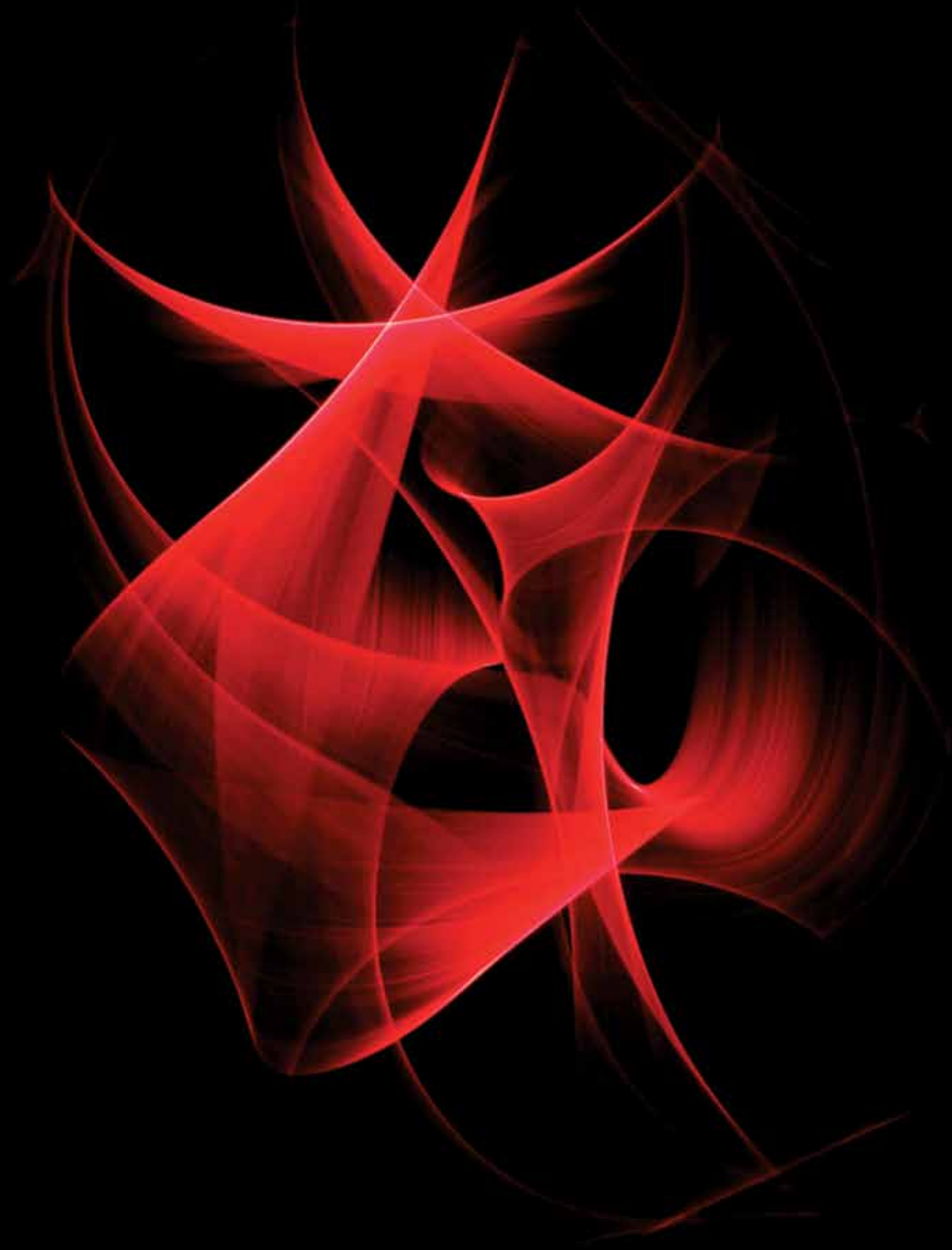




# Solvency II

Understanding the Directive





**The European Union Solvency II Directive is due to be implemented by 2012. Covering over 30 countries it is the biggest ever exercise in establishing a single set of rules governing insurer creditworthiness and risk management.**

For companies its impact is far-reaching. It is not simply about the technical calculation of capital reserves, but also about each company's approach to risk management – from strategic decision-making to ensuring that all employees understand their responsibility for risk.

With offices around Europe, EMB can assist in many ways. We have substantial experience with the definition and development of internal models, based around our market leading software EMB Igloo Professional. EMB Business Consultancy can advise on the regulatory requirements and the development of a risk management strategy. EMB Professional Development can run education programmes improving skills and understanding for all roles and all levels of personnel within your company.

The companies who will thrive under Solvency II will be those companies who embrace the reforms, not as a regulatory burden but as an opportunity to strengthen their organisation through best practice. EMB can help you achieve that.

# Introduction and Overview

The Solvency II Directive has been drafted following the advice on Pillar I issues submitted by CEIOPS in March 2007. While the Directive has 'Solvency' in its title, it explicitly states that capital is not the only (or necessarily the best) way to mitigate failure. This is supported by recent CEIOPS studies of insurer failure and 'near misses' which found the primary causes of failure were poor management and inappropriate risk decisions, rather than capital inadequacy per se.

With this greater emphasis on risk management, the proposal compels (re)insurers to instigate governance and risk management functions and policies as the basis for ensuring adequate solvency continuously.

The Directive stipulates that solvency capital calculations, whether based on the standard formula or an internal model, should be aligned to the specific risk profile of the undertaking. The standard formula categorises risks into modules for capital purposes with an allowance for aggregation and diversification across the modules. An internal model would reflect a firm's risk profile and management approach more precisely, and the sophisticated modelling of risk interactions is highly useful for ongoing management. However, this presents a more significant implementation challenge and will need regulator approval.

The draft Directive therefore aims to align risk measurement and management. Together with the requirement for private and public disclosure, these form the '3 pillars' of Solvency II. Disclosure introduces two new requirements - the Own Risk and Solvency Assessment (ORSA) and the solvency and financial condition report. The ORSA in particular is seen as a key tool for company management as well as the regulator.

## Pillar 1 Quantitative Requirements


- Balance sheet evaluation
- Solvency Capital Requirement (SCR)
- Minimum Capital Requirement (MCR)

## Pillar 2 Qualitative Requirements

- System of Governance
- Own Risk & Solvency Assessment (ORSA)
- Supervisory Review Process

## Pillar 3 Disclosure

- Annual published solvency & financial condition report
- Information provided to the supervisors
- Link with IFRS 2



Lloyd's of London is an interesting case in that it is presently supervised by the UK Financial Services Authority as a single entity under the auspices of the Society of Lloyd's, and market opinion suggests this is likely to continue.

The process will probably be similar to the current ICAS regime, although the model approval process is likely to be more rigorous and increased disclosure required. However, Lloyd's is likely to continue to be treated as a special case compared to other groups. Since it does not meet criteria such as the ability to move capital between entities to support group-level solvency, it will be unable to gain the full benefits of group-level supervision.

The Solvency II Directive itself covers the European Economic Area (EEA) including Norway, Lichtenstein and Iceland, as well as the 27 countries of the European Union. A number of other country regulators, including Japan, are watching Solvency II with a view to introducing similar risk-based capital regulation locally.

In recognition of the significant amount of work still required, both by the supervisory authorities and by insurance and reinsurance undertakings, the proposed implementation date for Solvency II has now been put back to 1 November 2012 with the expectation that implementing measures will need to be agreed in 2010.

# Governance and Risk Management

**Under Solvency II firms will be required to meet regulatory principles rather than rules. The proposed regime acknowledges that some types of risk are best addressed through good governance rather than by simply allocating additional solvency capital.**

Through the Supervisory Review Process (SRP), the supervisor will rate the capability of the firm's governance system to identify, assess and manage the risks and potential risks it faces as a business. The supervisor will have the power to force firms to remedy any apparent weaknesses and deficiencies in the governance system, including strategies, processes and reporting procedures, so as to increase confidence in the overall solvency position.

The onus is on the firm to demonstrate its governance (including corporate governance) and risk management are sound, appropriate for its specific risk profile, and can be reviewed by the supervisor. This will require documentation of:

- policies and procedures
- roles and responsibilities
- reporting and Management Information (MI)

The governance system will support sound and prudent management of the business. It must be proportionate to the nature, scale and complexity of the firm's operations and it must be subject to regular review.

The governance system must also include:

- an adequate and transparent organisational structure with a clear allocation and segregation of responsibilities and an effective system for ensuring the transmission of information
- written and implemented policies for at least risk management, internal control, internal audit and any outsourcing. These policies should be reviewed annually, or for any material change


An effective risk management system will be key. It must include strategies, processes and reporting procedures to monitor, manage and report the firm's risks continuously. The risks will need to be addressed individually, in aggregate, and in relation to their interdependencies.

The risk management system must be well integrated into the organisational structure of the firm and as a minimum, cover:

- underwriting and reserving
- asset - liability management
- investment, in particular derivatives and similar commitments
- liquidity and concentration risk management
- reinsurance and other risk mitigation techniques

If a partial or full internal model is deployed for solvency purposes, the firm will need to demonstrate that it is embedded in the risk management system. The risk management function will therefore have additional responsibilities in relation to the internal model, including:

- design and implementation
- testing and validation
- documentation including maintenance
- analysis and reporting on its performance
- model improvement and enhancement



Since effective risk management is a continuous process, a risk management function will have to be established if it does not already exist. Under the principle of proportionality, this does not necessarily imply the need for a full-time Chief Risk Officer (CRO). However, the risk management function must be demonstrably objective and independent, and whilst the Directive allows that functions such as risk management can be outsourced, in practice this is likely to be only appropriate for smaller insurers.

Outsourcing is an issue that concerns regulatory authorities, particularly in relation to the degree of control of outsourced functions and the level of governance applied. Therefore, supervisors will have the right to access all relevant data held by the outsourcing service provider as well as the right to conduct on-site inspections, within or outside the EU. Supervisors must also be informed in an adequate and timely manner, of important activities being outsourced or any subsequent material changes. Firms need to ensure outsourcing contracts are constituted and managed effectively.

#### **Key points**

- Solvency II is based on principles not rules
- The firm's governance and risk management must match its risk profile
- An effective risk management system is key to governance
- Internal models used for Solvency II must be embedded into the firm, including strategic decision-making
- A risk management function, if not already in existence, needs to be established

# Supervisory Review Process (SRP)

The supervisor will regularly review and evaluate both the qualitative and quantitative compliance of the firm in relation to its operating environment and risks, current or potential.

The review will consider:

- the system of governance and risk assessment
- the technical provisions
- the capital requirements
- the investment rules
- the quality and quantity of own funds
- the use of a full or partial internal model, if deployed

Supervisors will determine the frequency and exact scope of each review and will use monitoring tools to identify any financial deterioration of a firm. The objective is to assess firms' ability to withstand possible adverse events or future changes in economic conditions.

Following the review, the supervisor can require the firm to remedy any weaknesses or deficiencies. A capital add-on can be imposed in strictly defined, exceptional circumstances, particularly if the risk profile of the firm deviates significantly from the assumptions underlying the solvency capital calculation, or there are concerns regarding the governance standards within the firm.

## Key Points

- The supervisor will assess both quantitative and qualitative compliance
- The supervisor is empowered to require firms to remedy deficiencies

While it is anticipated that a capital add-on will be a temporary measure, it may become permanent if the deviation of the risk profile is material, and the development of the internal model is inefficient. The supervisor can also require the firm to develop a full or partial internal model if the standard formula does not accurately capture the risk profile.



# Solvency Capital Requirement (SCR)

The Solvency Capital Requirement (SCR) is the new solvency standard for firms, to be calculated annually, reported to the supervisor and published.

The firm should monitor its actual capital position against the SCR on a continuous basis, and recalculate the SCR as soon as the risk profile of the firm undergoes any material change i.e. if the assumptions underlying the existing SCR are no longer valid. The SCR must be covered by an equivalent amount of assets in excess of liabilities. If the SCR is not covered then the firm must submit a recovery plan to the supervisor and will be closely monitored to ensure compliance with this plan.

The SCR is intended to reflect all quantifiable risks that the firm might face, including:

- non-life underwriting risk
- life underwriting risk
- special health underwriting risk
- market risk
- credit risk
- operational risk

It will correspond to the value-at-risk of the net assets of the firm subject to a confidence level of 99.5% over a one-year period, assuming continued solvency.

The Minimum Capital Requirement (MCR) is a lower level of capital sufficiency below which authorisation could ultimately be withdrawn. The precise details of the MCR have yet to be decided, but it will be calculated quarterly and is likely to be calibrated to a confidence level of between 80% and 90%.

Firms can calculate the SCR in one of two ways:

- use of the standard formula
- use of an internal or partial internal model

## Key Points

- The Solvency Capital Requirement (SCR) is the new solvency standard, calculated annually
- The SCR covers all risks faced by the firm for a 1-in-200 year confidence level
- The SCR can be calculated using either the standard formula or an internal model
- The standard formula is more risk sensitive than the existing standard
- The Minimum Capital Requirement (MCR) is a lower solvency standard

The standard formula is designed to be more risk-sensitive than the current approach and covers the whole spectrum of risks faced by the (re)insurer. The lines of business that the firm writes, the duration of liabilities and the assets held are all considered, together with explicit allowance for other risks currently excluded, such as operational risk.

The formula has a module for each of the above risk types. An SCR for each risk-type (except operational risk) is calculated, with each module calibrated to the "one-year 99.5%" level. The results are then aggregated, with diversification effects governed by a correlation matrix. A separate loading for operational risk (details to be decided) is then added.

Subject to approval by the supervisor, a firm may replace a subset of the standard formula SCR parameters by parameters specific to the firm when calculating the life, non-life and special health underwriting risk modules. The detailed parameters in the formula are still to be specified, and are subject to further analysis and consultation with the industry.

# Internal Models

The introduction of internal models as a mechanism to calculate the SCR is a new departure in Solvency II. An internal model allows a much more bespoke assessment of a particular business and its potential risks than can ever be replicated in a standard formula, and has the potential to be a useful management tool. Internal models are already in common use within the larger and more sophisticated firms in Europe and the Directive is clearly endorsing the use of these models for risk management and regulatory purposes.

Firms also have the option of a partial model, with some components of the standard formula SCR replaced by results from an internal model. However, supervisors will closely scrutinise these models to ensure that they are not just cherry-picking those elements that can provide capital relief.

Some firms may be required to develop a (full or partial) internal model if the supervisor considers that their risk profile deviates significantly from that assumed for the standard formula SCR. It is also likely that some firms may come under “peer pressure” to develop internal models from similar firms that have a more sophisticated approach.

To use an internal model firms require prior supervisor agreement. Although the Directive states that approval will take six months, this sounds like a tall order, particularly if many applications are received in a short period of time.

As part of the initial approval process firms shall agree with the supervisory authorities on a policy for any model changes (major and minor) and then adhere to that policy. Any major changes to the model or the policy shall always require prior supervisory approval; it will be interesting to see how this will work in practice.

To achieve approval a firm must demonstrate that the model passes a “use test”, meets particular statistical quality standards, and is capable of being calibrated to the “one-year 99.5%” level as specified in the SCR.

The “use test” requires that the model is embedded within the system of governance, is a key tool in decision-making processes, and is updated regularly to reflect the firm’s risk profile. Even when approval is given, firms must provide the supervisor with an estimate of the standard formula SCR for two years.

Firms will need to justify the assumptions underlying their model. They may take into account future management actions that they would reasonably expect to carry out in specific circumstances, as long as the model makes allowance for the time necessary to implement such actions. Supervisors may require firms to run their internal model on relevant benchmark portfolios and use assumptions based on external, rather than internal, data in order to verify the calibration and to check that it is in line with accepted market practice. This will mean that models will need to be sufficiently flexible to allow this.

The model should be regularly validated, particularly against actual experience, so the firm can demonstrate to the supervisor that the resulting capital requirements are appropriate. In particular, sensitivity of the results to changes in key underlying assumptions should be tested.

The model should be thoroughly documented, including an outline of the model design and details of the methodology, data and assumptions used. Major changes to the previous version of a model should also be documented.



### Key Points

- Internal models should be tailored to the specific nature of the business
- Internal models also provide an extremely useful management tool beyond compliance
- Internal models must be approved by the supervisor before use
- Firms can also deploy a partial model alongside the standard formula
- Internal models will have to pass the “use test” and be seen to be embedded in the company

# Own Risk And Solvency Assessment (ORSA)

Every firm has to conduct its own risk and solvency assessment (ORSA), based on its risk profile, risk appetite and business strategy. The results are submitted to the supervisor as part of the supervisory review process.

Firms should highlight areas where they believe the assessment deviates significantly from the assumptions underlying the SCR calculation. The submission must also include details of the methods used and, where an internal model has been deployed, a recalibration that transforms the internal results so that they are consistent with the SCR calibration.

Firms will need proper processes in place for identifying and quantifying their risks in a coherent framework. These processes must be sufficiently streamlined so there is no undue delay in updating the assessment following any significant change in the business's risk profile. Firms must also demonstrate that this assessment has an influence on strategic decision making and is not just a box-ticking technical exercise.

It is clear that the SCR standard formula is inappropriate for the ORSA. Supervisors will want to see an internal assessment that reflects the specific risks faced by the firm based on internal data. Firms with internal models should find this to be fairly straightforward as the ORSA will most likely use the same approach as the SCR, with perhaps a slightly different calibration and/or risk profile to reflect the internal risk appetite. There may also be scope to include greater influence from business strategy and management actions within the ORSA compared to the SCR.

## Key Points

- Each firm submits an assessment of its own solvency needs to the supervisor
- The ORSA is an internal risk assessment process as well as a supervisory tool
- The internal risk assessment should be part of the business strategy
- Firms will need to highlight assumption differences between the ORSA and SCR

The ORSA appears to be formalising what is considered to be best practice in the industry today. It will ensure consistency between models used for internal management and for regulatory reporting. Firms who do this well should be able to gain competitive advantage by making more informed business decisions understanding the impact on the risk and capital of the firm.

# Actuarial Function

Firms are required to establish a strong actuarial function to ensure a robust calculation of technical provisions, and also to opine on the overall underwriting policy and adequacy of reinsurance arrangements. Actuaries should also be involved with the risk modelling underlying the SCR calculation and the ORSA, and contribute more generally to the implementation of the firm's risk management system.

In our view this presents an opportunity for actuaries to spread their influence in a firm beyond their traditional role although it also means that they may need to expand their skills into new areas.

The Directive allows for outsourcing in firms where maintaining an internal actuarial function is not cost-effective or where existing resources are already stretched. Outsourcing may also introduce additional skills and an independent view, but would be subject to regulatory scrutiny.

## Key Points

- Firms shall have an actuarial function in the business
- The actuarial function will oversee the technical calculations, ensuring the use of appropriate methodologies and data



# New Solvency and Financial Condition Report

As part of the public disclosure requirement under Solvency II (Pillar 3) firms will be required to publish an annual report on solvency and financial condition.

This report should cover:

- the business and its performance and governance system
- a description of risk exposure, concentration, mitigation and sensitivity by risk category
- the bases and methods of valuation for assets and technical provisions, including any significant differences between those used for valuations in financial statements
- details of the capital management, including (amongst others) the MCR and SCR and information on the main differences between the standard formula and any internal model used

Some of this information may already be in the firm's report and accounts or other statutory publications. Supervisors will allow firms to avoid disclosing confidential information relating to competitive advantage, policyholders or other counterparties.

Firms with an existing sound risk management and performance measurement framework will be already producing much of this material internally today. However, additional checks and balances may be required to ensure that the published details are accurate. Currently the level of disclosure for this type of material among EU firms is highly variable and the Directive will enforce a minimum standard. This is welcome as it will lead to greater transparency for policyholders as well as investors, intermediaries and other interested third parties.

## Key Points

- Firms will report annually on their solvency and financial condition
- Disclosure may be through a specific report or within existing regulatory publications
- The report will cover the risk profile and the assumptions underlying the technical provisions
- Confidentiality of competitive and policyholder information will be respected

# Valuation of Assets and Liabilities

The Directive states that both assets and liabilities should be valued at the level at which they could be transferred to a “knowledgeable willing party in an arm’s length transaction”.

Technical provisions will be calculated in a prudent, reliable and objective manner, and they will be equal to the best-estimate, plus a risk margin, unless they can be replicated using financial instruments for which a market value is directly observable. The best-estimate is defined as the mean of the present value of cash flows using the relevant risk-free interest rate term structure. The risk margin shall be determined using a “cost-of-capital” approach, and is defined as the cost of providing funds equal to the SCR to support the run-off of the liabilities. The cost-of-capital rate will be fixed for all firms, but has yet to be determined.

When calculating technical provisions, the business should be segmented into homogeneous risk groups, and, as a minimum, by line of business. Gross and reinsurance amounts should be calculated separately, with the reinsurance reduced to allow for the expected default.



# Group Supervision

**For each group operating across multiple territories, a single authority will be appointed for coordination and decision-making - the group supervisor.**

Although the MCR must always be covered locally, the SCR can be calculated at the group-level so that groups benefit from a streamlined regulatory process as well as diversification. Initial reactions from the market suggest that this may lead to an increase in merger and acquisition activity.

The group needs to demonstrate that it has sufficient funds to cover its SCR across the Community and that there is no practical or legal restriction on the prompt transfer of the funds to support firms within the group. In this way the subsidiaries within a group can cover their SCR, over and above their own funds. The group supervisor will review, at least annually, any significant risk concentration at the level of the group and any significant intra-group transactions.

The group-level SCR may be calculated using either the standard formula or an approved internal model. The approval criteria for an internal model are the same as for any individual firm. However, the various supervisors involved will need to agree a joint view. If the supervisor of a subsidiary firm doubts that the group model properly captures its risk profile, they will have the power to impose capital additions to the individual firm, or insist that its SCR is calculated using the standard formula instead.

Most of the other requirements for an individual firm will also apply for the group. Risk management, internal control systems and reporting procedures should be implemented consistently throughout the group, so that they can be controlled at the group level.

## Key Points

- Groups will be supervised centrally in co-operation with the relevant territorial regulators
- Although the MCR must be covered locally, the SCR can be calculated at the group level, provided that funds can be transferred around the group to support the SCR
- The group-level SCR can be calculated using the standard formula or an internal model
- The annual solvency and financial condition report may be produced at the group level with information covering both the group and subsidiaries

Firms must produce a report on the solvency and financial condition at the group level. Subject to the agreement of the group supervisor, a group may provide a single report providing the information for each subsidiary and the whole group.

# Conclusion

Solvency II has the potential to bring huge improvements to the European insurance industry. It will level the playing field by ensuring consistent regulation in all territories. It should also improve the solvency of the industry and that means better protection for consumers. It promises benefits of better capital management by aligning solvency with the risk profile of each firm. Much work has been done to balance protection for policyholders with competitiveness for companies.

Whilst the Directive states that regulation should always be proportionate to the nature of the firm, it is likely to drive consolidation within Europe as larger companies gain significant benefits in diversification, skills, group supervision and capital flexibility. Monoline companies may find themselves at a disadvantage and consumers may discover that they have less choice if the market becomes dominated by a few large players.

The fact that the deadline for Solvency II has been extended by 2 years underlines the scale of the implementation challenge. Although Basel II demonstrates that such harmonisation is possible, it has also shown the enormous cost and effort involved, and this must have an impact on premiums. The EU is now bigger than when Basel II came into play with different countries at very different points with regard to capital regulation.

To be ready in time, firms, whatever their size, must start the planning now, in particular defining their risk management strategies and evaluating the ways to calculate capital.

But Solvency II is not just about meeting regulatory requirements. Ultimately, the winners in Europe will be those companies who take the opportunity to really embed the principles into their corporate culture and ensure it becomes a better way of doing business.



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