

# Solvency Assessment and Management (SAM) Roadmap



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Version 1

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# 1. Introduction

The Financial Services Board (FSB) is in the process of developing a new risk-based solvency regime for South African short-term and long-term insurers, known as the Solvency Assessment and Management regime (SAM), to align the South African insurance industry with international standards. The purpose of this Roadmap document is to serve as a concise guide to the new regime for insurance professionals and to assist insurers in preparing for SAM.<sup>1</sup>

SAM will be based on the Solvency II capital adequacy, risk governance, and risk disclosure regime being implemented for European insurers and reinsurers. SAM will share the same broad features as Solvency II, being a principles-based regulation based on an economic balance sheet, and utilising the same three pillar structure of capital adequacy (Pillar 1), systems of governance (Pillar 2), and reporting requirements (Pillar 3).

The primary purpose of the regime is the protection of policyholders and beneficiaries. Additional objectives are:

## ■ SAM Objectives

- To align capital requirements with the underlying risks of an insurer.
- To develop a proportionate, risk-based approach to supervision with appropriate treatment both for small insurers and large, cross border groups.
- To provide incentives to insurers to adopt more sophisticated risk monitoring and risk management tools – this would include developing full and partial internal capital models and increased use of risk mitigation and risk transfer tools.
- To maintain financial stability.

An overarching principle is that the recommendations arising from the SAM project should meet the requirements of a 3<sup>rd</sup> country equivalence assessment, as established by the European Union. However, in implementing this principle, the approach being followed by the SAM project is that Solvency II must be adapted to South African circumstances. Given that the shift toward an advanced risk-based regulatory regime implies the deployment of significant resources, cost, time, and effort, the principle of proportionality will be adopted, to ensure that insurers' compliance burden reflects the nature, scale and complexity of the risks they face.

The regime will apply to all insurance entities operated on a commercial basis, including government owned insurers. The regime will exclude entities licensed under the proposed micro-insurance legislation, which will operate under a separate regulatory environment. Micro-insurance products will be characterised by systemically lower risk, which will fall under more rules-based prudential and

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<sup>1</sup> This Roadmap document is based in part on the FSA Discussion Paper *Insurance Risk Management: The Path to Solvency II*, September 2008.

market conduct requirements with the aim of facilitating lower underwriting and distribution costs.

Both the standardised and internal model approach for both the long-term and short-term insurance industries will be implemented in January 2014.<sup>2</sup>

This Roadmap highlights key elements of the SAM regime, and identifies some of the most important milestones on the journey toward implementation in 2014. The key elements are drawn from the Solvency II Directive, but should not be regarded as a summary of the proposed SAM regime as proposals in this regard are still evolving. The Roadmap has been drawn up to assist insurers in identifying the areas in which they should focus their implementation efforts over the next three years.

Further information and guidance will be communicated at frequent and regular intervals as implementation draws closer. Annexure 1 contains specific questions on issues where feedback is sought by the FSB. Insurers (and other stakeholders) are invited to provide responses to these questions by 31 December 2010. These responses will be used as a basis for engagement with individual insurers in 2011.

- *SAM  
Engagement*

Insurers (and other stakeholders) are also encouraged to comment on issues that they feel should be prioritised within the SAM project process, or where further clarification is required with respect to their preparations. Ideally, such submissions will be made to the structures that have been set up to govern the SAM project process (overleaf). Each insurer should already have nominated a SAM coordinator to maintain direct access to these structures. The onus is on insurers to take part in these structures, evaluate the likely impact of the regime on their business, understand what preparations are required, and use these forums to voice any concerns they may have.

Questions are interspersed throughout the Roadmap at key junctures to elicit essential information from insurers. The FSB urges insurers to complete these questions using the template provided, which can be found at [www.fsb.co.za](http://www.fsb.co.za). Any additional questions, comments, suggestions, or other communication can be lodged at [SAMroadmap@fsb.co.za](mailto:SAMroadmap@fsb.co.za).

This version of the Roadmap, dated November 2010, may be regarded as 'version 1' of the process and timelines associated with the SAM project. Some detail in this document is largely based on Solvency II requirements. As the work of the different SAM task groups progresses these details may change. Should circumstances arise which necessitate extensive revision to the process or timelines, a revised Roadmap will be issued so that insurers may take timely action to adjust their preparations accordingly. Although such revisions are not currently anticipated, it is nevertheless necessary to recognise two factors that

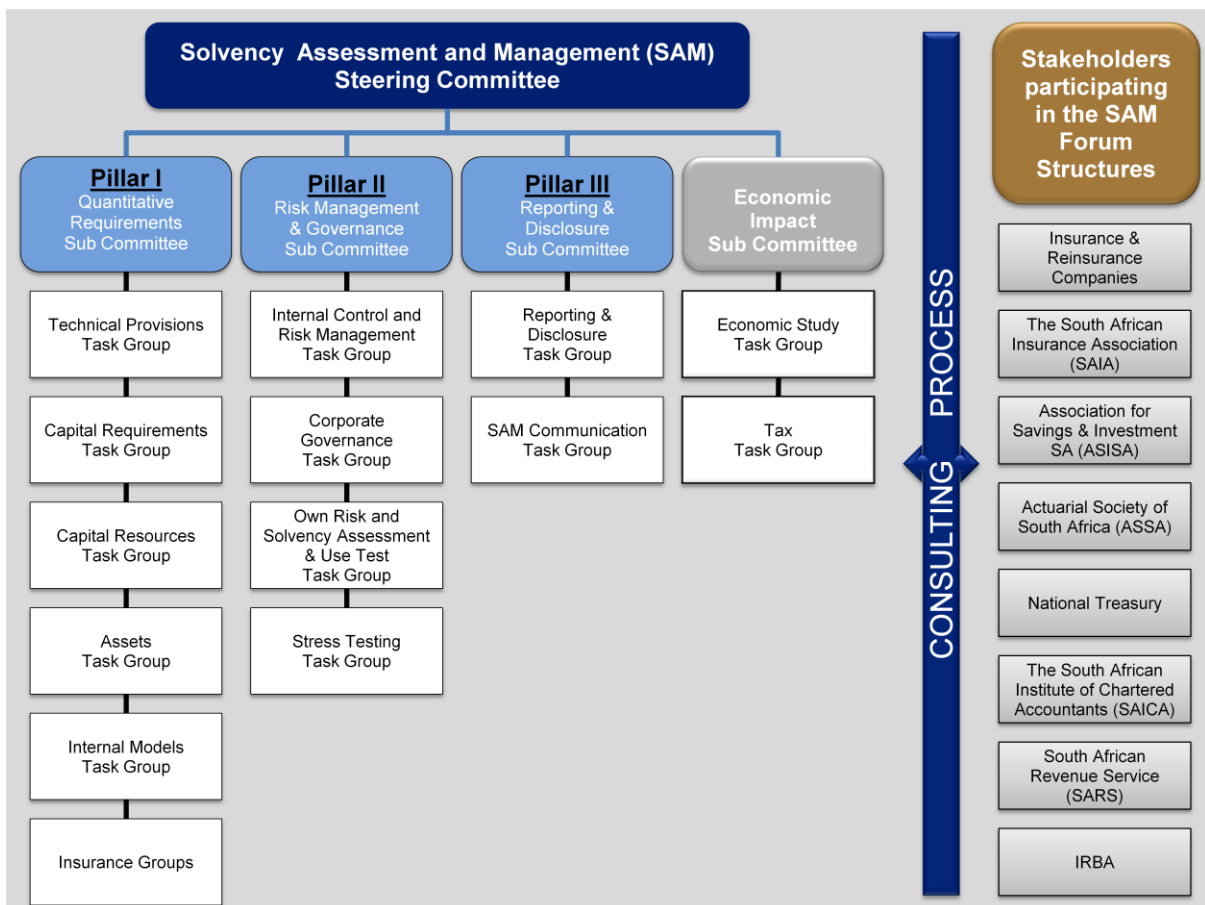
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<sup>2</sup> An internal model is a risk management system developed by the insurer itself to analyse the organisation's risk profile, quantify risks, and determine the capital required to protect against those risks. The standard formula determines the capital requirement on the basis of risk estimates with predefined calibrations and correlations.

may influence planning. Firstly, the roll-out of the SAM regime is a consultative process with industry, as a result of which revisions to the process may yet arise. Secondly, SAM is based on Solvency II, which is subject to the uncertainties that accompany international negotiations and policymaking. However, the end goal is now clear enough that any delay by insurers in their preparations for SAM implementation would risk non-compliance and/or rushed short notice implementations.

The next section of this Roadmap sounds out the key messages which insurers should take away from this communication and a high level statement of the preparations which insurers should be making. Subsequent sections discuss the areas in which these preparations should be made, and also clarify certain elements of the regime that may hitherto have seemed uncertain.

**Figure 1: Solvency Assessment and Management (SAM) Governance Structure**



## 2. Key Message for SA Insurers

The SAM regime will establish key responsibilities at the highest level of insurers' governance structures, particularly for the Board of Directors and senior management. The FSB wishes to sound three key messages to insurers in their preparation.

### ■ *Planning & Preparation*

1. Insurers need to develop systems to assess capital adequacy and capital planning, to implement systems of governance and the management of all risks, and to address reporting and disclosure requirements.
2. Insurers should already have started their planning, as implementation is three years away. The parallel run of the standard approach scheduled for all insurers for year-ends ending in 2013 is a mere two years away. By May 2011 SAM task groups should provide proposals on the details of the SAM requirements. In the interim, the level 1 Solvency II text and CEIOPS' Consultation Papers provide a useful early indication of what the final requirements might look like, although these may be adapted to South African circumstances. Annexure 2 contains a list of useful publications.
3. Much of the work done to develop the SAM regime will be output of the SAM project structures. Insurers are advised to participate in the SAM project process. Substantial representation on behalf of industry in the project process is sought to ensure ultimate delivery of an effective solvency regime implementation for the South African insurance industry. It is of course of benefit to insurers to take part in these structures, discover the likely impact of the regime on their business, understand what preparations are required, and use these forums to voice any concerns they may have.

While the finer details of the SAM regime are yet to be finalised, enough is known now in terms of the principles that will inform the legislation, as discussed in the subsequent sections of this Roadmap. Insurers can begin their planning and preparation for implementation now, thereby avoiding incurring significant costs and risks later on. The following bullet points provide an indication of what insurers should be doing to prepare.

- Develop an internal plan for the implementation of SAM.

Q1: Have you begun planning for SAM implementation?

- Conduct a gap analysis to determine what needs to be done to transition from the current regulatory framework to SAM.

Q2: Have you set an internal deadline to perform a gap analysis to determine the transition requirements to SAM? If so, by when?

- Assess the potential impact on your capital requirements of both transitional and final SAM quantitative requirements.

Q3: Have you allowed in your planning of SAM implementation the necessary resources and time to complete the South African Quantitative Impact Studies?

- Insurers will be provided with an opportunity to formally indicate during the course of 2011 whether they intend to apply to use an internal model approach. Insurers wishing to use internal models should already have made significant progress toward this. High level criteria will be available from the beginning of 2011 for the pre-approval process for the internal model approach.

Q4: Do you intend applying to use an internal model?

- Nominate an accountable individual at board or senior management level responsible for implementation.

Q5: Have you nominated a champion to drive SAM implementation?

It is important that the Board of Directors and other officers decide how to discharge their responsibilities under the SAM regime. At the beginning of each subsequent section, functions that will need to be involved in implementing the requirements are identified, subject to the individual insurer's particular organisational structure.

■ *Accountability*

Stakeholder engagement concepts employed in these bulletin blocks should be interpreted as follows:

Key Responsibility	This level of engagement entails endorsing insurer strategy, developing directional policy, and ensuring statutory and regulatory accountability.
Functional responsibility	These roles are entrusted with implementing all required processes and procedures associated with a key technical function, and supervising the tasks required to execute the functional mandate.
Active involvement	This denotes that technical expertise is required as input to a separate functional area.
Contribution is required	This conveys that the officer's participation may be required across functional areas.
Awareness	This indicates to the insurer officer that they should retain a high level understanding of the subject matter.

## 3. Policy Approach

### Stakeholder Engagement

Board / senior management	Awareness
Risk management	Awareness
Finance	Awareness
Actuaries	Awareness
Internal audit	Awareness

#### ■ 3<sup>rd</sup> Country Equivalence

Given South Africa's strong economic links with Europe, Solvency II has been chosen as the conceptual basis for the move toward a risk-based regulatory regime in South Africa. A number of other compelling reasons have also motivated this decision. The principles-based three pillar framework of Solvency II represents international regulatory best practice. The primary purpose of SAM, as under Solvency II, is the protection of policyholders and beneficiaries. The move will moreover align the prudential regulatory framework for the insurance sector in South Africa to international standards being developed by the International Association of Insurance Supervisors (IAIS). Attaining Solvency II 3<sup>rd</sup> country equivalence will help ensure that South African based insurers may continue doing business in the European Union (EU) and other jurisdictions without concerns with respect to the quality of their home supervision.

Solvency II will have significant implications for insurers regulated in other parts of the world. In recognition of this the EU has established the principle of 3<sup>rd</sup> country equivalence in respect of regulatory frameworks of countries outside of the EU. An overarching principle of the SAM project is that its recommendations should meet the requirements of a 3<sup>rd</sup> country equivalence assessment. However, at the same time, consideration is also being given to how Solvency II may need to be adapted to take account of South African circumstances.

The European Commission will conduct three distinct types of equivalence assessment in terms of the Solvency II level 1 text, namely:

- Article 172 - equivalence for reinsurers
- Article 227 - equivalence for 3<sup>rd</sup> country subsidiaries of European Economic Area (EEA) groups
- Article 260 - equivalence of group supervision by a 3<sup>rd</sup> country regime

The FSB will liaise with the European Commission as to attaining a 3<sup>rd</sup> country equivalence assessment once substantial progress has been made developing SAM. Once the European Commission has made an assessment it is valid for all insurers regulated under that regime. In the absence of an equivalence assessment by the European Commission, an individual assessment may be

made for an internationally active insurance group either operating in or from a European jurisdiction by the relevant EEA regulator.

Where South African insurance groups have subsidiaries elsewhere in Africa, the equivalence assessment will be on the basis of group supervision arrangements under SAM, rather than an assessment of the regulatory regime in each of those other African jurisdictions.

The underlying criterion for meeting 3<sup>rd</sup> country equivalence is that the regulatory framework is fully risk-based. The equivalence assessment made by the European Commission will focus on the principles adopted by regulatory frameworks, rather than the parameters used in Solvency II - it is principles driven and is not simply a box ticking exercise. In light thereof, the SAM task groups take Solvency II as a starting point in their work, but consider the implications thereof in the context of South African circumstances. In other words, the focus of the task groups is on what is best given South African circumstances. Should the details of the SAM task groups proposals differ substantially from the methodology followed by Solvency II, the FSB will engage with the European Insurance and Occupational Pensions Authority (EIOPA) as to whether the particular issue has any impact on 3<sup>rd</sup> country equivalence assessments<sup>3</sup>. While the likelihood is regarded as remote, should any such issues emerge, these will be resolved by engagement with EIOPA to help inform an assessment of the costs and benefits of identified options.

- *Proportionality* A guiding principle of the policy approach adopted by the FSB in developing the SAM regime is that the principle of proportionality should be taken into account. According to this principle regulatory requirements under SAM should be applied in a manner which is proportionate to the nature, scale and complexity of the risks inherent in the business of the insurer or reinsurer. The principle of proportionality is invoked so that requirements imposed on small and medium-size insurers are not too onerous.

Proportionality does not mean that simplifications will automatically be applied to an insurer. An insurer's own risk profile will serve as the primary guide to assess application of the principle. Proportionality will be applied coherently across all three pillars and group supervision provisions. The intention of the principle of proportionality is to achieve the objectives of the SAM regime in a manner that is appropriate for each insurer's risk profile. Further guidance will be issued following the work of the SAM structures as to the criteria of 'nature, scale and complexity'.

The FSB will conduct an economic impact assessment of the proposed SAM regime in conjunction with National Treasury. The purpose is partly to inform the thinking of the SAM structures as the proposals are finalised – in particular on the issue of proportionality – but also to demonstrate to Parliament that the SAM structures have applied their minds to the impact on the industry, consumers, and the economy.

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<sup>3</sup> EIOPA will take over the work of the Committee of European Insurance and Occupational Pension Supervisors (CEIOPS).

- *Economic Impact Assessment*

The first phase of the economic impact assessment will consider what particular national objectives need to be taken into account, such as transformation, access to finance, the emergence of smaller black-owned insurance businesses, and how the principle of proportionality should be applied in light of these objectives. The conceptual framework developed as the deliverable of the first phase will be broadly consulted on by mid-2011, prior to proceeding to the second phase, which will involve a quantification of the potential impact.

The second phase of the economic impact assessment will be conducted after an initial survey of the potential impact of SAM (referred to as SA QIS1) which is planned for mid-2011. SA QIS1 will elicit both quantitative and qualitative information to evaluate the capital and non-capital costs likely to be incurred by insurers. The second phase will also attempt to assess benefits insurers may enjoy in terms of improved risk-based pricing through a better understanding of their risks, and possible identification of products that may experience higher or lower premiums as a result. It is envisaged that the final report of the economic impact assessment will be available by the end of 2012.

Q6: Which of the issues: governance arrangements, capital adequacy, use and approval of internal models, do you expect to generate significant additional costs and how do you intend to quantify these costs?

Q7: Where these issues are likely to add to your current regulatory commitments, what do you think the benefits are to insurers and their customers?

- *The Road to Parliament*

The broad policy approach to be adopted by the FSB, in consultation with the National Treasury, is given substance in the form of initial proposals for primary and subordinate legislation through the work of the SAM task groups. These initial proposals follow a 'Road to Parliament', in the course of which a number of drafts of the legislation are produced for comment by the SAM task groups and National Treasury, and later when the legislation is nearing completion by the general public.

Milestones in the high level legislative timeline for the road to parliament are illustrated below. The final draft of the primary legislation will be available for industry comment by the end of 2012. Once the proposals have been subjected to the necessary consultation and National Treasury processes, the draft Bill will be submitted to Cabinet. Public consultation will take place in the second half of 2013 before the Bill is enacted.

Primary legislation is enacted by Parliament. It is also referred to as original legislation, national legislation, or an Act of Parliament. Primary legislation contains the fundamental policy or underlying principles of legislation that are unlikely to change. It provides for the basic or minimum issues and powers necessary to regulate a specific activity or sector and delegates legislative and other authority to implement and enforce the Act to an organ of state, in this instance the FSB.

Primary legislation may delegate legislative authority in order to empower an organ of state to make subordinate legislation. The reasons for empowering an organ of state to make subordinate legislation are, amongst others, the specialised and/or technical nature of the subject matter with which the primary legislation deals and to allow for or facilitate:

- expert input into its design and technical language to be used in its wording; and
- flexibility in responding to events, emergencies, and industry developments.

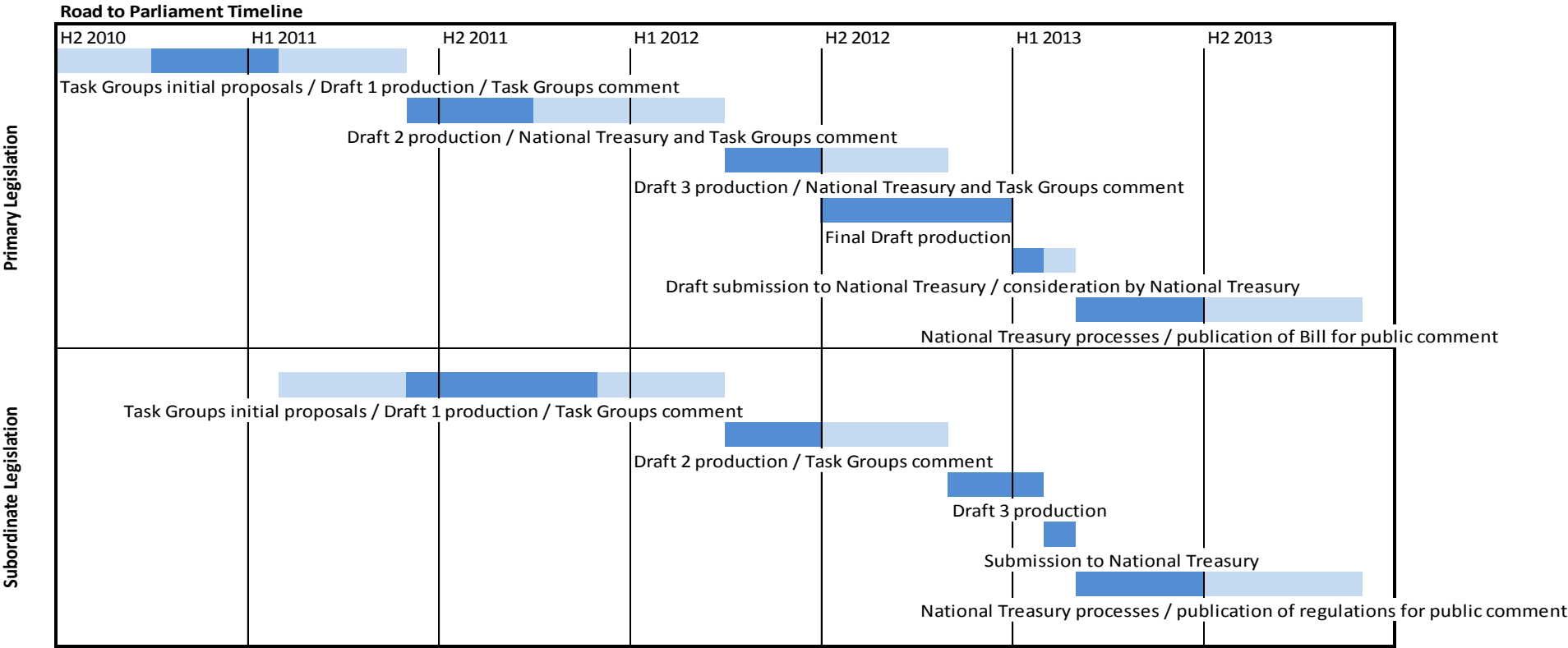
It is recognised that the outcome of the SAM project, specifically with respect to reserving issues, may also require amendments to the tax legislation pertaining to long-term and short-term insurers. A tax task group, which will include representatives of National Treasury, SARS, industry, and the FSB, to be housed under the Economic Impact Sub-committee of SAM, has been formed to investigate tax issues.

The foundation text of the SAM regime will be the primary legislation, which will draw extensively on the principles enshrined in the level 1 Solvency II text. Technical details related to the implementation of SAM will be contained in subordinate legislation, issued in the form of Regulations and Board Notices. Supervisory standards to ensure common interpretation, and consistent implementation and application, will be issued in the form of Directives and Guidance Notes. Comparison is drawn below between the Solvency II texts and the SAM process to draw attention to the fact that these are a useful departure point for insurers wishing to gain further insight into the requirements and build a head start in their planning process. Details of relevant CEIOPS papers can be found in Annexure 2.

**Figure 2: Solvency II - SAM Points of Concurrence**

SOLVENCY II			SAM	
Level 1	Solvency II Directive	Framework principles	Foundation text is the primary legislation	Short-term + Long-term Insurance Act
Level 2	Implementing measures	Technical details	Technical details are in subordinate legislation	Regulations and Board Notices
Level 3	Supervisory standards	Day-to-day supervisory guidelines	Supervisory standards	Directives and Guidelines
Level 4	Evaluation	Compliance and enforcement	Ongoing supervision	

**Figure 3: SAM Road to Parliament Timeline**



## 4. Insurance Group Regulation

### Stakeholder Engagement

Board / senior management	Key responsibility
Risk management	Functional responsibility
Finance	Functional responsibility
Actuaries	Functional responsibility
Internal audit	Contribution is required

In the main, the FSB supervises insurers on a solo basis, as no group legislation presently exists. As discussed above, effective supervision of insurance groups is an essential element of a 3<sup>rd</sup> country equivalence assessment under Solvency II, and hence a regulatory framework for insurance group supervision will form a critical part of SAM. Given the urgency around the issue of effective group supervision that was highlighted by the recent global financial crisis, interim measures for the supervision of insurance groups in South Africa will be introduced as early as 2012.<sup>4</sup>

A significant number of South African licensed insurers are currently operating within a group structure. Insurance groups benefit from the pooling and diversification of risk, intra-group financing, and integrated governance structures. However, being part of a group also presents a range of risks to an insurer. These may include, for example, direct or indirect risk exposures to other group entities, conflicts of interest, and inadequate risk assessment. The recent global financial crisis has demonstrated that the failure of one entity within a financial conglomerate may damage, or even cause the failure of, related entities. These considerations need to be assessed as part of the interim and final measures in order to move towards more effective regulatory practice.

#### ■ Group Regulation

Interim measures for the supervision of insurance groups are being drafted by making use of the SAM structures, which enjoy representation by most of the large short-term and long-term insurance groups. Enabling legislation for group level regulation should be finalised during 2010 and implemented in 2012, subject to review by National Treasury and approval by Parliament in 2011.

<sup>4</sup> In 2008 and 2010 the IMF and World Bank conducted an assessment of insurance regulation in South Africa in terms of their joint Financial Sector Assessment Program (FSAP). The FSAP exercises identified the lack of group-wide supervisory powers as one of the shortcomings of the current supervisory regime, citing as a reason for the importance thereof the extensive interlinkages in the South African financial sector. Due to its lack of insurance group legislation, the FSB does not currently fully comply with the Insurance Core Principle (ICP) of the IAIS dealing with group supervision. The interim and final measures envisaged through SAM should address these shortcomings.

Insurance groups will be defined and regulated through the Short and Long Term Insurance Acts. The Acts will also provide powers to the FSB in terms of group supervision and will help determine the lead regulator and supervisory process applicable to insurance groups.

Solvency II makes provision for two methods by which to assess group solvency, namely the accounting consolidation-based method and the deduction and aggregation method. The essential difference is that the former method treats the group as a single economic entity, whereas the latter method recognises diversification effects in solo calculations, but not at group level.

The Solvency II level 1 text expresses a preference for the consolidation-based method. However, the text also states that a group supervisor should consider the circumstances under which these methods are appropriate. It is possible that the risk aggregation and deduction method will be used under the interim measures as this is a transparent approach to calculating group solvency, providing detail of the entities aggregated in the return, and it is relatively simple to carry out. The deduction and aggregation method is also used by most regulators globally. In terms of CEIOPS' level 2 implementing advice, no 3<sup>rd</sup> country equivalence issues are anticipated to arise from the preference for the deduction and aggregation method. It is envisaged that the consolidation method will be used in the event of insurance groups electing to use an internal model. The SAM Insurance Groups task group has been tasked with making a recommendation on the use of the consolidation-based method or risk aggregation and deduction method for the final SAM requirements. Further guidance will be issued following the work of the SAM Insurance Groups task group.

Subordinate legislation will clarify issues around capital fungibility and the transferability of own funds within a group.

## 5. Quantitative Requirements (Pillar 1)

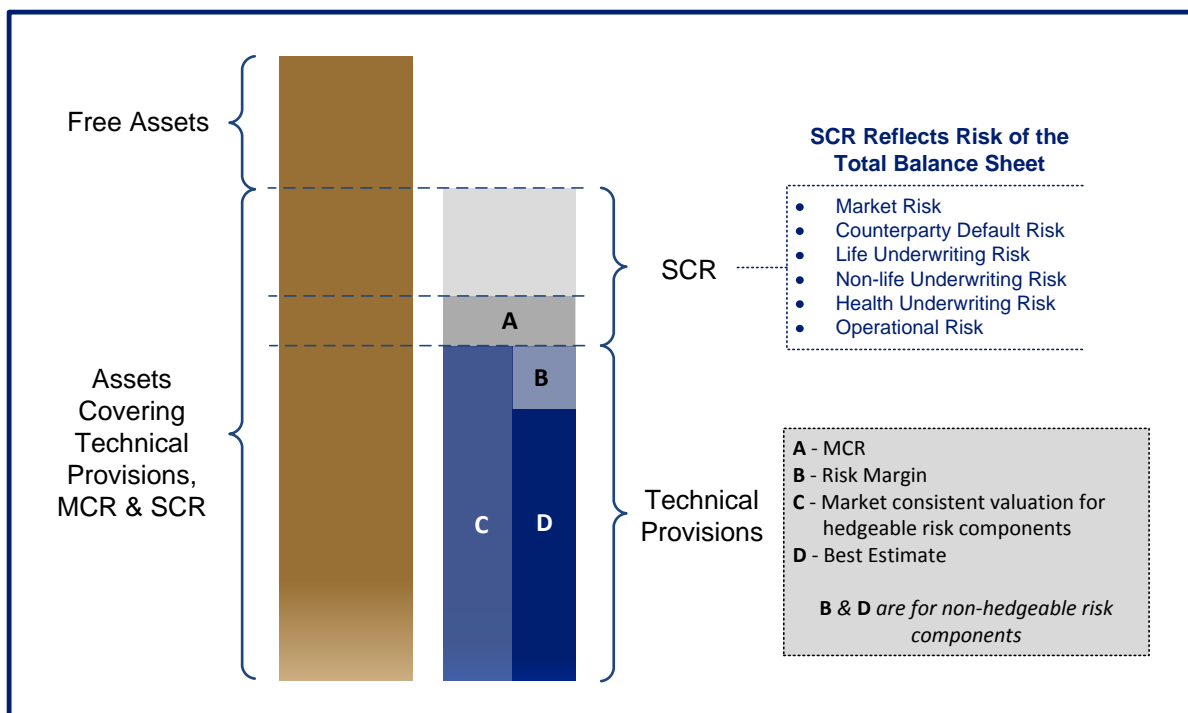
### Stakeholder Engagement

Board / senior management	Key responsibility
Risk management	Functional responsibility
Finance	Functional responsibility
Actuaries	Functional responsibility
Internal audit	Contribution is required

#### ■ *The Economic Balance Sheet*

Pillar 1 of SAM stipulates the quantitative requirements that insurers must satisfy to demonstrate they have adequate financial resources. The economic balance sheet approach to be adopted under SAM integrates the interdependencies between all assets and liabilities, calculated at market consistent values. The liabilities are sub-divided in technical provisions, other liabilities, and the solvency capital requirement (SCR). The minimum capital requirement (MCR) sets a minimum lower capital boundary for an insurer's capital requirement. The solvency balance sheet is illustrated below.

**Figure 4: The Solvency Balance Sheet**



■ *Solvency  
Capital  
Requirement*

So as to be equivalent to Solvency II, SAM will require that the SCR is calibrated to correspond to a Value at Risk (VaR) of eligible own funds that enables an insurer to absorb losses against all quantifiable risks to a confidence level of 99,5% over one year. SAM will make provision for two approaches to calculate the SCR. Insurers who have received approval will calculate the SCR using an internal model.<sup>5</sup> Insurers writing simpler business, or writing business on a smaller scale, may prefer to use the standard formula calculation, or even a simplified version thereof, to determine the level of capital they will be required to hold as SCR.

All insurers, including those seeking internal model approvals, will be required to be familiar with the standard formula calculation as they will be required to report to the FSB on this basis during both the parallel run planned for 2013 and the post-2014 transitional period (both the parallel run and post-2014 transitional reporting requirements are discussed at the end of this section).

In principle the Solvency II standard formula modular structure, or one very similar, will be followed under the standardised approach. Solvency II has different lines of business, catastrophe scenarios, risk mitigation techniques, and underlying product features to those prevailing in South Africa. The modular structure eventually adopted under SAM will be adapted to more accurately reflect the South African insurance risk landscape. For example, the relevance and composition of the health module to South Africa is still uncertain, as are the scenarios under the catastrophe risk sub-module. These uncertainties will be clarified through the work of the SAM structures and following consultation with industry.

Accordingly, all insurers should familiarise themselves with the structure of the SCR standard formula under Solvency II and the inputs, calculations, and aggregation thereof. The CEIOPS QIS5 technical specifications as illustrated below currently articulate how the standard formula is likely to be applied in practice in the EU.

The structure and calibration of the Solvency II standard formula is based on the results of a series of quantitative impact studies conducted by CEIOPS. During the SAM project some QIS's (based on South African proposals) will need to be performed (as discussed below) and insurers are encouraged to take part in those to understand the implications for their businesses.

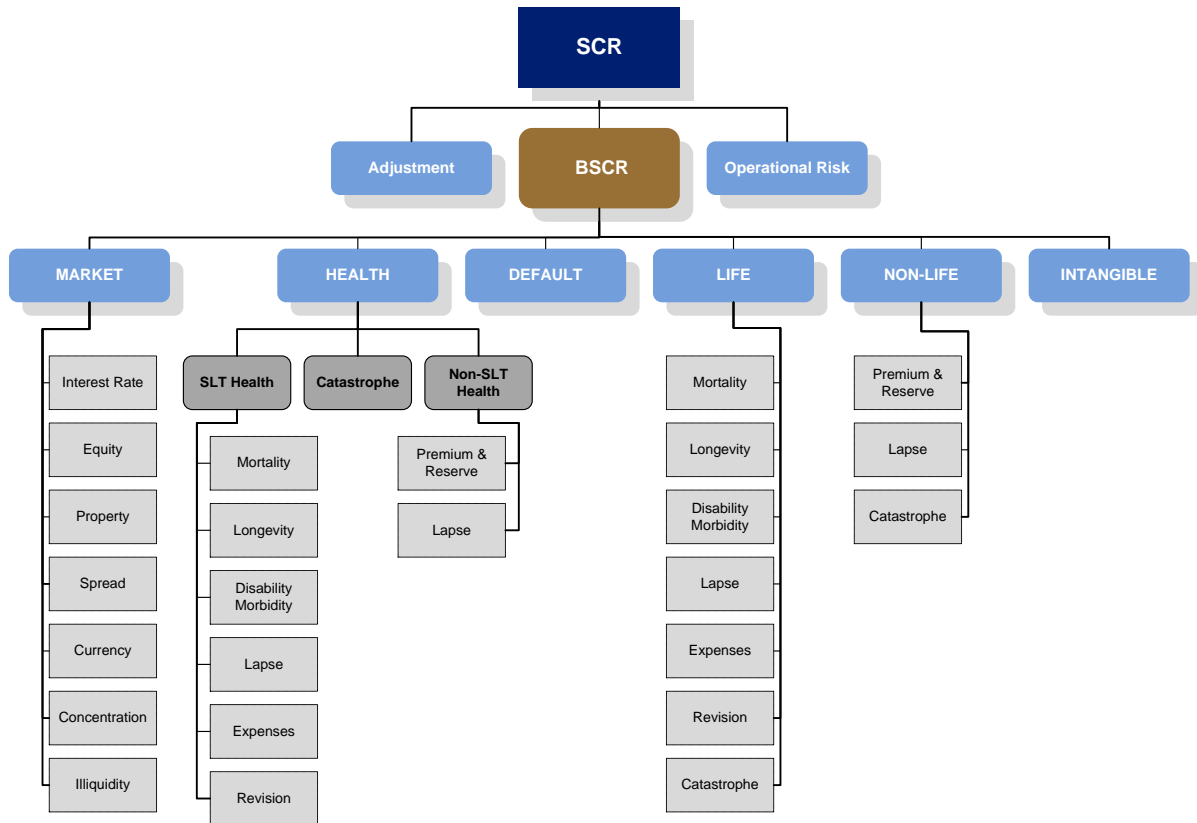
Because consideration will be given to the principle of proportionality, even smaller insurers should already be reviewing the Solvency II SCR standard formula to understand the potential implications for their businesses and to provide input into the SAM proposals. To accord with the principle of proportionality, simplifications to the standard formula may be developed, allowing smaller insurers to use proxy calculations for parts of the standard formula. Such insurers will however be required to demonstrate that the resulting calculations are appropriate to the 'nature, scale and complexity' of the risks they

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<sup>5</sup> The internal model approval process is discussed in section 9 of this document.

face. Further guidance will be issued as to the circumstances under which these simplifications may be applied in practice as the actual formulae are developed by the relevant SAM task groups.

**Figure 5: CEIOPS QIS5 SCR Modular Structure**



Source: CEIOPS' QIS5 Technical Specifications

■ **Quantitative Requirements**

Under Solvency II, the fair valuation of assets and liabilities is based on the amount for which the asset or liabilities could be exchanged between knowledgeable willing parties in an arm's length transaction. The same principle is being considered for SAM.

Liabilities are comprised of technical provisions and other liabilities. Technical provisions are the insurance obligations due to policyholders and beneficiaries. Other liabilities are non-insurance liabilities such as tax liabilities and other creditors and can include subordinated debt.

Under Solvency II, technical provisions consist of a best estimate and a risk margin on non-hedgeable liabilities. The best estimate is equal to the probability-weighted average of future cash flows, taking account of the time value of money. The risk margin reflects the cost of capital to cover the SCR in run-off or the cost of capital incurred by a third party in assuming the liabilities. SAM will

follow the same principles as Solvency II, but proposals on the detail of the methodology to be used must still be finalised by the SAM structures.

The aim under SAM is that statutory valuations should be in line with general financial reporting standards being developed by the International Accounting Standards Board (IASB) as far as possible, but this also depends on proposals on statutory reporting currently being developed by the IAIS. There is a risk that if international standards in this area cannot be exactly aligned, then the accounting and regulatory frameworks in the South African insurance sector may not be identical. To mitigate the impact of any discrepancies that may exist between the accounting and regulatory frameworks, solvency is defined in terms of a 'total balance sheet requirement', which captures true economic values in the balance sheet, by stating available solvency capital as the difference between the market consistent value of assets and liabilities, taking into account the interaction between assets and liabilities, diversification, and risk mitigation. Insurers need to consider how they will develop the systems and processes needed to generate market consistent values for an economic balance sheet to report to the FSB and the market.

Q8: What steps are you taking to develop the appropriate valuation systems to calculate technical provisions under SAM? How is this work linked to the implementation of IFRS Phase 2 standards?

As per Solvency II, capital resources under SAM will probably be referred to as 'own funds'. A distinction is made between basic own funds and ancillary own funds. Basic own funds are defined in the market consistent value balance sheet as the excess of assets over liabilities, plus subordinated liabilities. Ancillary own funds are off-balance sheet capital resources that can be called upon to absorb losses. Such contingent capital items would include instruments such as letters of credit and guarantees.

#### ■ *Own Funds*

Basic and ancillary own funds are classified into three tiers based on eligibility characteristics, which are determined by criteria of the quality of own funds. Tier 1 capital should satisfy all quality criteria, whereas Tier 2 capital need not be able to absorb losses on a going concern basis. Tier 3 comprises lower quality capital instruments. A rule will stipulate the proportion of each of the three tiers that must be available to support the SCR and MCR. Ancillary own funds are unlikely to qualify for inclusion under Tier 1, nor are they available to support the MCR.

Insurers need to familiarise themselves with the Solvency II own funds articles and level 2 implementing measures. By doing so, they can gain insight to the implications of changing eligibility criteria, both for their existing capital instruments, and future capital planning. The FSB understands that the application of new eligibility criteria to existing instruments may render them less effective for solvency purposes. Insurers are urged to participate in the SAM processes and structures, so that an appropriate framework for own funds in the South African context can be drawn up.

Q9: What steps have you taken to consider whether you have the right quality capital to meet likely capital requirements?

■ *Minimum Capital Requirement*

The MCR establishes a lower bound for the required solvency capital, below which policyholders and beneficiaries would be exposed to an unacceptable level of risk if the insurer were allowed to continue its operations. Given that it is a lower bound, it is intended that the quarterly calculation of the MCR should meet the criteria of being ‘clear and simple’. It is likely that the MCR under Solvency II will be calibrated so as to move within a corridor of 25% and 45% of the SCR at a lower confidence level of approximately 85% over one year (as opposed to 99,5% for SCR). The SAM structures will consider and develop proposals on a South African equivalent measure for MCR.

The existence of a lower bound for the solvency level in the form of the MCR should not be interpreted to mean that the SCR is a target level of capital. The SCR is required to be continuously maintained. Insurers will be required to inform the FSB in the event that there are insufficient own funds to cover the SCR, or in the event that this is a possibility within the near term.

**Figure 6: Ladder of Intervention**

Threshold \ Action	Additional Reporting	Financial Recovery Plan	Closure to New Business	Curatorship / Judicial Management
Adequate Capital				
Breach Adjusted SCR	Required	Possible		
Breach SCR	Required	Required	Possible	
Breach MCR	Required	Required	Required	Possible

The SAM framework will provide the FSB with certain predefined options according to a ‘ladder of intervention’. Specific options and timelines for re-establishing compliance under these steps are yet to be determined within the SAM structures. However, it is envisaged that the ladder and breaches thereof will in principle be treated in SAM as recommended under Solvency II. The table above illustrates these options as applied under Solvency II. The most severe sanctions are implemented in the event of an MCR breach, since this represents a level of capital below which policyholders and beneficiaries are placed at unacceptable risk, with the possibility that the insurer could be placed under curatorship or judicial management. A breach of the SCR would at a minimum require additional reporting and a financial recovery plan, with the possibility that the insurer could be placed in run-off. The role to be played by supervisory risk ratings in the ladder of intervention process is yet to be determined within the

SAM structures. Such risk ratings could provide the FSB with greater discretion and flexibility of scope to react to adverse circumstances as they unfold.

It is currently envisaged that insurers would be required under SAM to calculate and report the SCR annually and the MCR quarterly. The SCR should be continuously maintained. To this end, insurers must develop systems to calculate capital requirements and monitor compliance on a continuous basis.

Q10: How do you think insurers could best demonstrate compliance with the Pillar 1 requirements on a continuous basis?

- *Quantitative Impact Studies (QIS)*

The foregoing Pillar 1 quantitative requirements are based largely on the Solvency II requirements. Naturally these cannot in every instance be summarily adopted in South Africa. For example, the parameter employed for the cost of capital in the risk margin calculation was set at 600 basis points by CEIOPS in QIS4. This needs to be determined in the context of South African capital markets. Further guidance will be issued in respect of all such adaptations, as appropriate, to take account of local conditions following the work of the SAM structures.

It must also be remembered that the determination of South African standard formula calibrations and correlations must still take place. It is intended that a South African QIS (SA QIS1) will be issued in mid-2011. SA QIS1 will be based on the initial proposals of the various SAM task groups, which should be provided by May 2011. Insurers will be encouraged to complete SA QIS1 and submit the results in the second half of 2011.

Given that the 2013 parallel run should approximate as closely as possible the final structure of SAM, refinements to the SAM requirements following the results of QIS1 will need to be assessed through an SA QIS2, which should be available early in 2012. If necessary an SA QIS3 will be issued in the second half of 2012.

- *Interim Measures and Parallel Run*

Interim quantitative requirements will be introduced for short-term insurers in 2012, to provide for a staged progression to a risk-based approach to technical provisions and capital requirements in 2014. Quantitative requirements for long-term insurers already encompass some risk-based elements; hence no interim measures for long-term insurers will be required prior to full implementation of SAM in 2014. Interim quantitative requirements for short-term insurers are discussed in section 7: Interim Measures Implementation.

All insurers will be required to do a parallel run on the SAM basis in 2013. All insurers, including those seeking internal model approvals, will be required to report on both the applicable statutory basis (the current method for long-term insurers; the 2012 interim basis for short-term insurers) and the SAM standard formula during 2013. A parallel run is accepted practice in transitioning to a new regime as it allows the outputs under a new regime to be compared with the existing regime. During 2013, all insurers will be required to submit annual statutory returns for their audited financial year-end results on both bases, applicable to all financial years ending on or after 1 January 2013. In addition, all

insurers will be required to submit unaudited quarterly returns on both bases, applicable to all quarters ending on or after 30 June 2013.

Irrespective of formal approval for an internal model under SAM from 2014, insurers will be required to calculate regulatory capital requirements using the standard formula and report thereon for a period of at least 2 years after the implementation date. Insurers will also be expected to show how the results of the standard formula SCR differ from that derived by the internal model.

## 6. Risk Management and Governance (Pillar 2), Reporting and Disclosure (Pillar 3) under SAM

### Pillar 2

#### Stakeholder Engagement

Board / senior management	Key responsibility
Risk management	Functional responsibility
Finance	Contribution is required
Actuaries	Contribution is required
Internal audit	Contribution is required

Pillar 1 capital requirements are essential, but not the only prerequisite for continuously meeting solvency requirements. Effective risk management and sound governance structures are of equal importance to an insurer's solvency. Weaknesses in these areas may create susceptibility to an external 'trigger event', ultimately resulting in a solvency problem.

A shortcoming in regulatory frameworks highlighted by the global financial crisis has been the lack of sufficient mechanisms to provide supervisors with an early warning of a potential solvency concerns, or sufficient powers to intervene. Pillar 2 addresses this issue by assessing the effectiveness of corporate governance and risk management. Pillar 2 serves as a major link between Pillar 1 and Pillar 3 of SAM by considering the extent to which the corporate governance structure is embedded in the day-to-day running of the business. The systems of governance that insurers are required to maintain as proposed in Solvency II, and under consideration for adoption in SAM, are:

#### ■ Pillar 2 Early Warning Mechanism

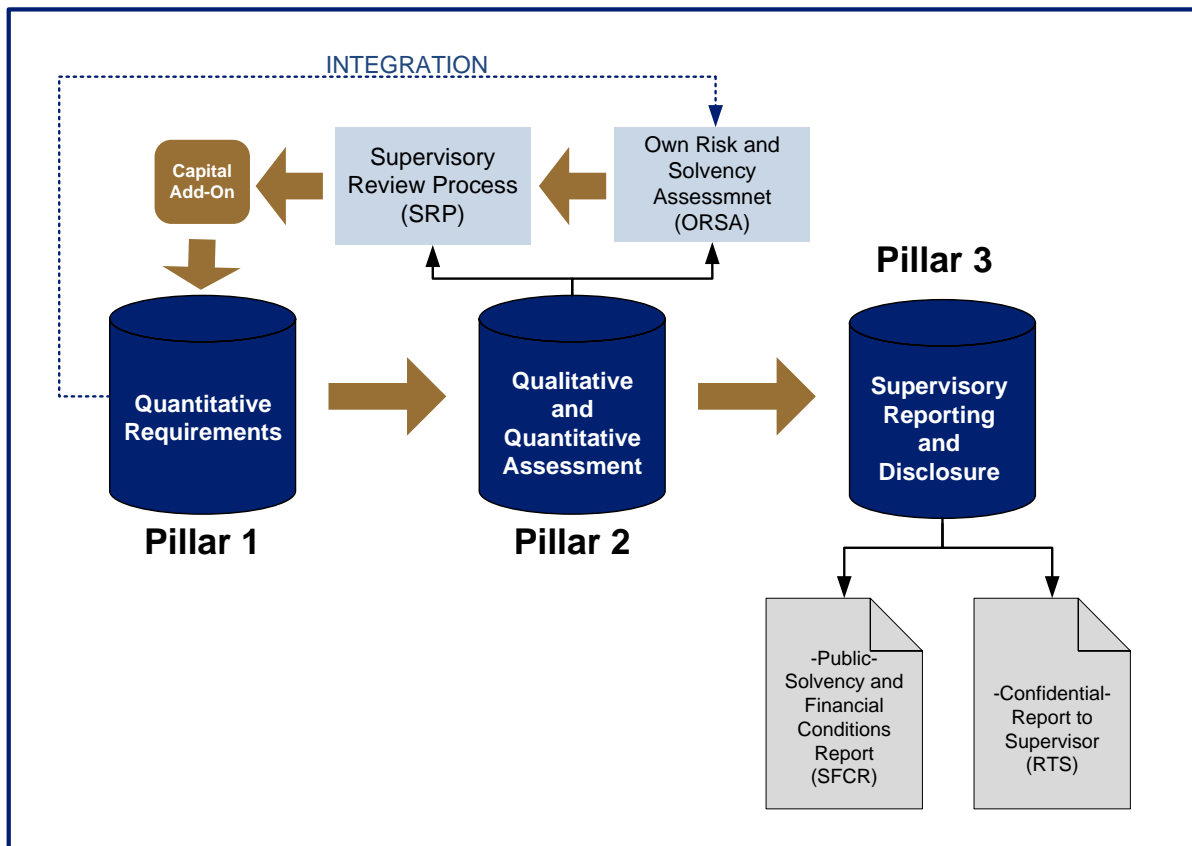
- General governance
- Fit and proper requirements
- Risk management system
- Internal control
- Internal audit
- Actuarial function
- Outsourcing

In line with the principle of proportionality, an insurer's systems of governance and risk management should be commensurate to the nature, scale and complexity of its risks.

SAM will necessitate the integration of risk management and capital management to satisfy the use test. All insurers will have to demonstrate that the risk management system is embedded in key business decisions. In addition,

insurers wishing to use an internal model will have to ensure that the internal model is embedded in the day-to-day running of the business. The use test is a particularly crucial governance concept for internal models, further elaborated on in section 9: Internal Model Approval Process. The diagram below illustrates the interlinkages between the three pillars and the integration of risk and capital management under Solvency II, which is likely to be replicated under SAM.

**Figure 7: Solvency II Pillar Linkages**



The two main elements contained in Pillar 2 of Solvency II are the Own Risk and Solvency Assessment (ORSA) and the Supervisory Review Process (SRP). It is unclear as yet to what extent SAM will emulate the Solvency II requirements, but the rationale and approach followed will be similar in principle. Further guidance will be provided as to the detailed nature of the requirements as these are developed by the SAM structures.

- **Own Risk & Solvency Assessment (ORSA)**

Maintenance of the risk management system, demonstration of the use test, forward looking capital planning and management, stress and scenario testing, and emerging risk management are evaluated via the ORSA process, the outcomes of which are documented in the ORSA report. Under the ORSA process, insurers are required to conduct at least annually, and at any instance of a material change in the risk profile of the business, a self-assessment of their risks and the level of solvency needed to cushion those risks. The ORSA is

intended to identify, assess, monitor, manage, and report all material and complex risks that the insurer faces; it is intended to enable the insurer to determine the own funds necessary to ensure its solvency needs are met at all times. To fulfil its function in the assessment of prospective risks, the ORSA should include at least a three year capital projection, and relevant key performance and key risk indicators consistent with economic scenario and growth assumptions made by the board and senior management.

Q11: Do you already have a process similar to the ORSA in place? If not, what progress are you making in preparing to develop an ORSA?

The ORSA integrates risk and capital management because it reflects an insurer's own risk appetite. In many instances the ORSA may indicate the insurer's wish to target a higher confidence level or longer time horizon than the 99,5% over one year stipulated in Solvency II. It is important that an insurer is able to demonstrate that the ORSA is an integral part of managing the business against the chosen strategy, and that any changes to strategy or risk appetite consider the effects on solvency needs. The principle of the ORSA process is that it should facilitate managing the business based on sound and prudent principles. As such the process should be designed with the aim to assist insurers in deriving their economic capital, because this is the capital that is used in managing the business. Where economic capital and the SCR differ, the ORSA should clarify such differences.

Insurers wishing to use an internal model will have to demonstrate integration of the ORSA and the internal model. Although different outputs may be required for economic capital requirements under ORSA as opposed to the SCR, the same assumptions must be used in the ORSA and the internal model to ensure consistency.

Whether the standard formula or internal models approach is followed, the ORSA should enable the FSB to draw a conclusion as to whether the insurer is able to review its own risks. Insurers should take note that there is interdependency with Pillar 1 in implementing the ORSA, because of the possibility that a capital add-on may be imposed if governance deficiencies are identified. In addition, where an internal model is used, the ORSA may function as an early indicator of a capital breach, as the economic capital target may be breached before the SCR.

Q12: How do you consider supervisors should respond to a breach of targeted economic capital requirements?

The sophistication and scope of the ORSA should be proportionate to the nature, scale and complexity of the risks faced by the insurer. Insurers with complex business using the standard formula should also follow a relatively sophisticated ORSA process. Further guidance around how the principle of proportionality will be applied to the ORSA will be issued following the work of the SAM structures.

- *Other Risk Management Oversight Functions*

Solvency II will require each insurer to have an internal audit function. Should this function be outsourced, the insurer would still be required to have the capacity to monitor the organisation to which this has been outsourced.

Actuarial knowledge is regarded as indispensable to an adequate governance system. Solvency II will require each insurer to have an actuarial function. In the EU this function does not have to be carried out by a professionally trained actuary *per se*, but those responsible for this function should be able to demonstrate their experience and expertise. While Solvency II makes no provision for the role of a statutory actuary, currently every long-term insurer in South Africa must have a statutory actuary. The role of the statutory actuary with respect to all three pillars of SAM still needs to be clarified, although it is envisaged that the role of the statutory actuary will be retained for long-term insurers and introduced for short-term insurers. Further guidance will follow the work of the SAM structures.

Solvency II will require that insurers remain fully responsible for discharging their obligations under the regime irrespective of whether functions or insurance activities have been outsourced.
- *Supervisory Review Process*

The FSB will use the Supervisory Review Process (SRP) to assess the ability of an insurer's system of governance to identify, assess, monitor, and manage the risks and potential risks it faces. The SRP considers an insurer's:

  - System of governance and risk assessment
  - Technical provisions
  - Capital requirements
  - Investment rules
  - Quality and quantity of own funds
  - Use of a full or partial internal models

On the basis of the SRP the FSB may compel insurers to remedy any deficiencies identified in their systems of governance. The goal of such remedies is to establish greater confidence in the overall solvency position. In exceptional circumstances this may necessitate the imposition of a capital add-on, which will require the insurer to hold capital in addition to the SCR, until such time as the identified weaknesses have been remedied.
- *Interim Measures and Parallel Run*

Governance and risk management requirements will follow a phased progression to the 2014 implementation. Interim measures for implementation in 2012 are discussed in section 7: Interim Measures Implementation. A mock ORSA and SRP may also be conducted as part of the parallel run during 2013, prior to full implementation in 2014. Further guidance will be provided as the details are finalised by the SAM structures.

### Pillar 3:

Stakeholder Engagement	
Board / senior management	Key responsibility
Risk management	Functional responsibility
Finance	Key responsibility
Actuaries	Functional responsibility
Internal audit	Contribution is required

#### ■ Pillar 3 – Market Discipline

Pillar 3 seeks to create transparency with the aim of harnessing market discipline in support of regulatory objectives. Pillar 3 reports will require insurers to describe how risks are managed.

The new disclosure documents required as part of Pillar 3 of Solvency II are the confidential Report to Supervisor (RTS) and the public Solvency and Financial Condition Report (SFCR). Both reports are required for each regulated solo insurer, as well as at an insurance group level.

Proposals are still being developed in the SAM structures on what standardised regulatory reporting will form part of SAM, but it is likely to exceed existing requirements.

Insurers may be required to disclose capital management details annually in the SFCR, including any material breaches of the MCR and SCR, even if subsequently resolved, and the imposition of any capital add-ons. Other information that may be required to be disclosed may include:

- The basis of and valuation methods for assets and technical provisions, including any significant differences between those presented in the financial statements.
- A description of the risk exposure, concentration, and mitigation for each risk category.
- Financial performance.
- Governance.
- Certification of compliance with investment requirements.

Sensitive information, disclosure of which would result in significant undue competitive disadvantage, or which is subject to policyholder or other counterparty confidentiality obligations, may be reported confidentially to the FSB in the equivalent of the RTS.

Further guidance to the SFCR and RTS requirements will be issued following the work of the SAM task groups.

SAM Pillar 3 supervisory reporting and public disclosure requirements aim to enhance transparency of insurers by complementing Pillar 1 and 2 requirements and through harnessing market discipline. It should be clear from the provisional Pillar 3 information requirements listed above that the reporting process may

require the allocation of additional resources. Insurers should already start preparing for this eventuality.

- *Interim*

- Measures and  
Parallel Run*

Certain risk-based statutory reporting requirements will be introduced as interim measures from 2011, so there will be a staged progression to the 2014 requirements. It is not yet clear whether the SFCR and RTS reports will be required for the parallel run in 2013, but further guidance will be issued as these details are finalised within the SAM structures.

## 7. Interim Measures Implementation

### Stakeholder Engagement

Board / senior management	Key responsibility
Risk management	Functional responsibility
Finance	Functional responsibility
Actuaries	Functional responsibility
Internal audit	Contribution is required

Current insurance regulation and supervision in South Africa does not fully comply with all the criteria of the Insurance Core Principles of the IAIS. Interim measures will be introduced prior to 2014 to deal with 'burning platform' issues in the short-term and long-term insurance sectors that have become urgent regulatory priorities. These interim measures will also assist SAM implementation in 2014 by providing a staged progression to implementing the revised regulatory requirements.

Interim measures that are envisaged include:

- Pillar 1 for short-term insurers: changes to the technical provisions and capital requirements for short-term insurers
- Pillar 2: changes to the system of governance, including: corporate governance, internal controls, and risk management requirements for both short-term and long-term insurers
- Pillar 3: new reporting requirements for short-term and long-term insurers
- Insurance group regulations

■ *Pillar 1 –  
Interim  
Measures for  
Short-term  
Insurers*

Interim quantitative requirements will be introduced for short-term insurers in 2012, to move from a simple factor-based approach to capital requirements to a more risk-based approach to technical provisions and capital requirements. The interim measures will utilise elements of analysis previously undertaken as part of the Financial Condition Reporting (FCR) initiative.

The interim quantitative requirements for short-term insurers will be simpler than anticipated under SAM. The interim approach to technical provisions is expected to be more risk-based than the current requirements. Interim capital requirements will be based on a combination of the results from the most recent FCR QIS (sent out in August 2010), previous FCR calibrations and actuarial judgement. Although the precise details of the interim SCR quantification have yet to be determined, it will represent a progression towards the principle of a risk-based capital requirement. It is also expected that an MCR will be introduced for short-term insurers to bring capital requirements in line with IAIS standards.

In order to give short-term insurers sufficient time to prepare for the interim measures, it is intended to issue a final Board Notice outlining interim quantitative requirements by September 2011 for implementation in 2012. To make provision for a sufficient consultation period, a first draft Board Notice should be available by March 2011.

Regulatory capital requirements for short term insurers will be determined according to the current method until the end of 2011; interim measures will be implemented 1 January 2012 and will apply from that date until 2014.

The FSB's aim is to ensure that the interim measures form a transitional step to the eventual requirements under SAM; as such, the interim method will be calibrated to moderate the impact of the changes on capital requirements across the industry. However, results may vary between individual insurance companies. Transition mechanisms will be put in place for insurers that are significantly impacted; those insurers that do not meet the SCR will be able to apply for a temporary relaxation, subject to an agreed transition to the SCR. Since the MCR is the minimum capital requirement, lower available capital than the MCR could put policyholders at risk, so any applications will in most instances be limited to a relaxation of the SCR. However, given that the interim MCR will be an approximation, there may be exceptional circumstances in which a temporary relaxation of the MCR would be considered.

■ *Pillar 2 –  
Interim  
Measures*

Currently in South Africa there are limited statutory requirements around governance, internal controls, and risk management in both the long-term and short-term insurance sectors. The implementation of enhanced requirements in these areas cannot be postponed until 2014, and as such the relevant task groups under the Pillar 2 Governance and Risk Management Sub-Committee are currently developing recommendations on interim requirements in the areas of:

- Governance
- Internal controls
- Risk management
- Stress testing

High level principles-based guidance around corporate governance, risk management, and internal controls will be issued for consultation during 2011 with implementation in 2012. These requirements for both short term and long term insurers will follow a staged progression to the 2014 SAM requirements, as the interim measures will be more principles-based, but will exclude ORSA, internal models disclosure, and SRP requirements. A mock ORSA and SRP may however be conducted as part of the parallel run in 2013.

Interim proposals on stress testing to determine the effect on statutory capital of risks materialising under plausible but extreme scenarios were issued for comment in September 2010 for implementation by the end of 2010.

■ *Pillar 3 –  
Interim  
Measures*

Interim amendments will be made to statutory returns from 2011 to enable a more risk-based approach to regulatory reporting. Proposed amendments were issued for comment in October 2010 for implementation in 2011.

Interim measures are being drafted for the regulation of insurance groups as described in section 4: Insurance Group Regulation.

## 8. 2014 Implementation Transition Arrangements

### Stakeholder Engagement

Board / senior management	Awareness
Risk management	Awareness
Finance	Awareness
Actuaries	Awareness
Internal audit	Awareness

Pillars 1, 2, and 3 requirements of the SAM regime must be in place by 1 January 2014. Amendments to insurance legislation will require that all insurers comply with these requirements on a continuous basis from this date.

#### ■ *Transition Arrangements*

Certain transitional arrangements are however envisaged with respect to the Pillar 1 capital requirement.

In cases where the SCR output from an internal model indicates a regulatory capital requirement that is lower than existing requirements, no reduction in capital will be permitted in the 12 month period following the implementation date, as the results will still need to be validated. Validation is an iterative process, implying that at least one back-test will be required to demonstrate that the internal model generates robust risk estimates which conform to statistical quality standards, and also to confirm that the processes for assigning risk estimates are reliable. For management and the Board to develop sufficient faith in the internal model to the point that it does in fact inform decision making, and hence satisfy the use test, it must first be understood and confirmed as a robust representation of prospective risk at an insurer-wide and portfolio level. Following the initial 12 month period, any significant capital decreases may be further phased in over a period of up to two years.

In the event of a significant increase in the required regulatory capital for a particular insurer under SAM, the FSB may consider transition mechanisms on a case-by-case basis that will allow the insurer to move toward the SCR, phased in over a period of up to 3 years, depending on the materiality of the capital increase, and taking into account the impact of SAM on the insurer's technical provisions. Exact details, such as the maximum period and increments over which the ramp up to the SCR will be permitted, and the capital instruments allowed for this purpose, are not yet available. Further guidance will be issued after due consideration by the SAM task groups.

## 9. Internal Model Approval Process

### Stakeholder Engagement

Board / senior management	Key responsibility
Risk management	Key responsibility
Finance	Active involvement
Actuaries	Key responsibility
Internal audit	Contribution is required

#### Internal Model Development

Under SAM insurers will be able to calculate the SCR using their own full or partial internal model as an alternative to the standard formula, subject to approval by the FSB through an application process, as outlined below. Partial internal models may be used to calculate the SCR for one or more risk modules, risk sub-modules, or business units, provided that the insurer is able to justify why the partial internal model is a better reflection of the true risk profile in that instance than the standard formula. 'Cherry picking' of partial internal models to derive lower capital requirements will not be allowed.

Insurers wishing to use an internal model from 2014 should already have made substantial progress in the development of their model, as developing and embedding the internal model is a long-term project which can take up to 5 years. Because the development of an internal model is an iterative process, final approval for the use of an internal model under SAM will be dependent on the insurer having completed the approval process of pre-application, followed by the application to use an internal model, as described below.

Q13: In the event you answered 'yes' to question 4, please indicate both your current level of progress in developing the model and whether you are prepared to make your development work available to the FSB

While the details have yet to be finalised through the work of the SAM structures, the approval to use an internal model to derive the SCR will in principle be similar to the tests as set forth in Articles 120 to 126 of the level 1 Solvency II text, the concepts of which are introduced below. A key requirement for approval is the integration of the internal model with the insurer's risk management system, as described in section 6.

The IAIS defines internal models as follows: '... internal model refers to "a risk management system developed by an insurer to analyse the overall risk position, to quantify risks and to determine the economic capital required meeting those risks." An internal model may also be used to determine the insurer's regulatory capital requirements on the basis of the insurer's specific risk profile and the defined level of safety of the solvency regime.'

Q14: To what extent does this description reflect insurers' current and planned future internal models?

■ *Internal Model Advantages*

The advantage of internal models is their ability to capture the impact of the combination of each component of the insurer's risks dynamically in a non-linear and solvency dependent manner. Internal models are able to provide a more accurate reflection of an insurer's true risk profile than the standard formula because the process of setting the parameters of the underlying portfolio models and the aggregation thereof to the total SCR are insurer-specific. Insights gleaned from the internal model outputs can be applied in various ways, including monitoring and managing risk appetite, asset liability management, capital allocation, and as an operational tool in underwriting policies and performance measurement.

The benefits of using an internal model far outweigh the mere benefit of a possible reduction in capital requirements over the standard formula. However, insurers considering developing an internal model should balance the considerable effort and expense involved against the substantial similarities envisaged under SAM between internal models and the standard formula:

- The same economic balance sheet applies to both internal models and the standard formula
- Both approaches need to accurately describe and reflect the value of underlying businesses
- Both approaches require detailed assumptions with respect to risk types
- Similar tests and standards apply to the risk control frameworks of both approaches

Insurers using an internal model should use the same model to determine economic and regulatory capital. Because the internal model approach is intended to serve as a wider risk and capital management tool, rather than merely to calculate regulatory capital, insurers need to show that the internal model is used for more than regulatory capital assessment. While no internal modelling approach will be specified, in terms of the principle of proportionality the complexity of the internal model should at least reflect the nature, scale and complexity of the insurer's risk profile. Where differences exist between economic and regulatory capital requirements, insurers will be required to recalibrate their economic capital model to the SCR 99,5% VaR over one year.

Q15: SAM is likely to require clear and demonstrable integration between capital measurement systems and capital management. How should insurers demonstrate the link between or integration of their internal model and their risk management framework, in particular to the ORSA?

■ *Use Test*

The most important criterion for internal model approval is the 'use test'. The use test requires the insurer to be able to demonstrate that the internal model is integrated with the day-to-day running of the business of the insurer. Insurers will be required to document how the risk management system and capital management activities are integrated in the internal model, and how the inputs to

and outputs from the internal model link to day-to-day decision making in the business. The use test will play an important role in the relationship that insurers have with the FSB. Key decision makers will have to be able to demonstrate their understanding of the internal model and its outputs. CEIOPS regards the use test in Solvency II as so important that it has developed a set of nine principles that supervisory authorities will use to assess compliance.<sup>6</sup>

These tests and standards for internal model approval will be evaluated using an integrated, holistic approach. The Board of Directors should be able to demonstrate adequate understanding of the process, use, and results of their internal model, i.e. what they are used for, what their scope is, what part of the balance sheet they apply to, and how they are applied in day-to-day decision making. Such evaluations may take place by desk-based review, on-site inspections of the internal model and its use, requests for further information, and *ad hoc* conversations.

Q16: Does the use test reflect capital management practice within the industry? If not, how do the use test prescriptions differ from current practice?

■ *Statistical  
Quality  
Standards*

The second 'test' or criterion mandated by the Solvency II directive is compliance with a set of statistical quality standards. Whereas the use test is more concerned with the purpose and application of the internal model, the goal of statistical quality tests is to set standards for the components of the internal model and its inputs. In Article 121 there are nine statistical quality standards covering:

1. Calculation of the probability distribution function to be based on appropriate techniques, consistent with valuation methodologies employed in calculating technical provisions
2. Information that is used in the calculation
3. Data
4. Risk ranking and model coverage
5. Recognition of diversification effects
6. Recognition of risk mitigation
7. Financial guarantees and contractual options
8. Future management actions
9. Payments to policyholders and beneficiaries

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<sup>6</sup> CEIOPS Advice for Level 2 Implementing Measures on Solvency II: "Articles 120 to 126 Tests and Standards for Internal Model Approval."

Q17: What are insurers doing to evaluate and improve data?

Q18: What further work (including industry-wide initiatives) might be helpful to improve the completeness of insurer data?

Q19: What further guidance would be useful on good practice in respect of data?

Q20: Which approaches do insurers use within their capital model? How and why are these approaches used? ('Approaches' can be defined or applied at a high level, e.g., stochastic/deterministic)

Q21: Do you consider that there are areas where industry or the profession should be focusing their research capabilities to improve internal models? Please provide examples.

According to the required calibration standards of Solvency II, insurers using a different time horizon or confidence level to the 99,5% VaR over one year must be able to demonstrate that policyholders and beneficiaries are provided with an equivalent level of protection. It is uncertain as yet whether insurers will be required to run benchmark portfolios through their internal model, or whether a sensitivity testing approach will be employed whereby the impact of changing key assumptions and/or variables within the internal model will be employed.

## ■ *Tests & Standards*

Q22: How do you think the FSB should test the adequacy of internal models – for example, should we require evidence of peer review, benchmark by industry sector, require external audit review, run benchmark portfolios, or develop our own capital model? What other possibilities do you consider appropriate?

The profit and loss attribution provision under Solvency II requires insurers to show at least annually how their sources and causes of profit and loss are explained by the internal model risk categorisations. The provision also relates to the need for internal models to be back-tested to demonstrate on an ongoing basis that the output values are consistent with actual experience.

Q23: How do insurers presently carry out profit and loss attribution and how will it be developed toward SAM implementation?

The validation standard under Solvency II mandates insurers to demonstrate that they have appropriate risk and capital management processes in place. By demonstrating the robustness of the internal model as a representation of prospective risk at an insurer-wide and portfolio level, through an iterative process of correctly deriving and assigning risk estimates, model validation furnishes senior management with the confidence to employ the internal model in decision making. The validation standard hence links to the use test. Responsibility for the continued operation and design of the internal model, including a regular cycle of validation, lies with the Board and the risk management function.

Q24: How do insurers validate internal models currently and to what extent do their processes meet the above indicated criteria?

Under Solvency II insurers must comply with comprehensive internal model documentation standards. All the aforementioned tests, standards, and methodology should be documented to the extent that a relevant component or area of the insurer's internal model should be clear to a 3<sup>rd</sup> party.

Solvency II allows insurers to use external models and data in the development of an internal model, with the proviso that such use does not exempt the insurer from complying with any other internal model provisions. Any instance in which an external model or data is supplemented by expert judgment will have to be documented.

Q25: A simple documentation standard might require that it is extensive enough for the insurer to replicate its model in a different platform and in the absence of original developers. To what extent do insurers already have this in place?

■ *Internal Model Governance*

CEIOPS' implementing advice also introduces internal model governance principles with respect to internal model provisions. There are specific requirements which the Board, internal audit function, and actuarial function will have to comply with.

The Board is responsible for the design and operation of the internal model, including the responsibility to ensure that the internal model continues to reflect the risk profile of the insurer. The Board should be capable of demonstrating an understanding of how the model works, and how it is applied in day-to-day decision making.

While the Board assumes responsibility for the overall governance of the internal model, CEIOPS advises that ownership of the internal model is delegated to the risk management function. According to Article 44 of the Solvency II directive, *"the risk management function shall cover the following additional tasks:*

- (a) to design and implement the internal model;*
- (b) to test and validate the internal model;*
- (c) to document the internal model and any subsequent changes made to it;*
- (d) to analyse the performance of the internal model and to produce summary reports thereof;*
- (e) to inform the administrative, management or supervisory body about the performance of the internal model, suggesting areas needing improvement, and up-dating that body on the status of efforts to improve previously identified weaknesses."*

It is the responsibility of the insurer's internal audit function to review internal model control procedures as part of its duties to evaluate the internal controls of the insurer.

It is the responsibility of the insurer's actuarial function to contribute to the design, calibration, and build of the internal model. A feedback loop should be employed to improve the model, using the outputs of the internal model, for example, to gain insights into reserve volatility, or to assess the insurer's technical provisions.

Q26: How might insurers ensure that senior executives and the Board of Directors acquire the relevant knowledge to fulfil their duties in respect of model governance? How can this best be demonstrated?

It is not yet clear how the tests and standards as set forth in Articles 120 to 126 of the Solvency II tests and standards for internal model approval will be applied under SAM. Further guidance will be forthcoming following the work of the SAM structures.

Demanding standards will be applied to internal model recognition. The FSB is committed to working with the industry, to help insurers understand what is required, to give useful guidance to help insurers with their preparations, and for the FSB to develop its own knowledge base in the process. In light thereof, the internal model approval process will run concurrently with the development of the internal model standards and the drafting of relevant provisions in subordinate legislation.

To realise the full benefit of this engagement with the FSB, the internal model approval process is to be split into a pre-application and application phase. Pre-application will enable insurers who are quite advanced in their internal model preparations to receive early feedback on and progressive certainty with respect to the suitability of their internal model development, bearing in mind that formal approval can only be given once the relevant legislative provisions have been enacted by Parliament.

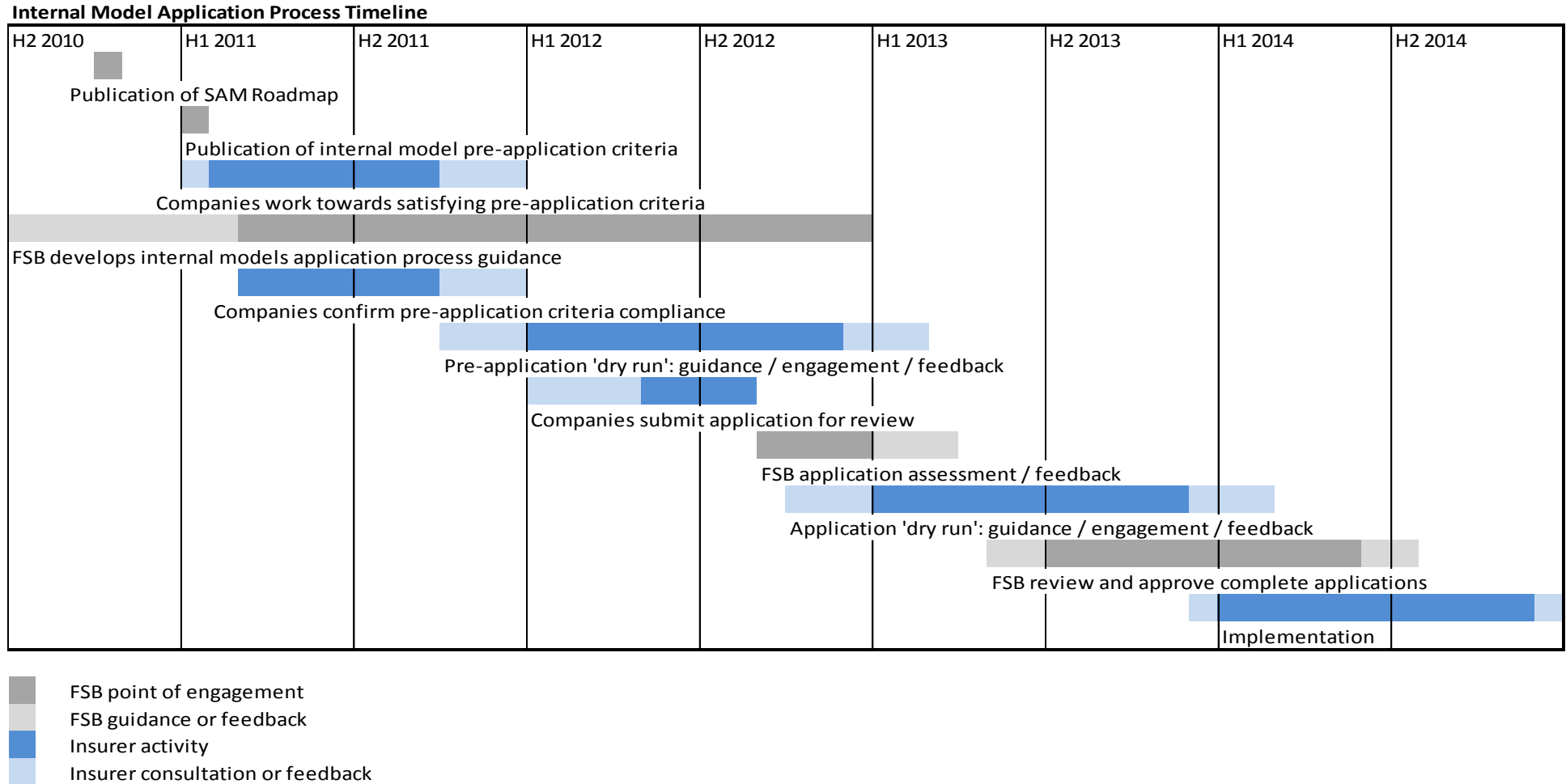
■ *Application and Pre-Application*

Insurers considering submitting a pre-application for internal model approval should begin the process of liaising with the FSB early in 2011 to explain the methodology of the internal model and the role it plays in decision making. These insurers will have to comply with pre-application criteria which will be published by the FSB by the beginning of 2011. As per the internal model application process timeline illustrated below, the first submissions for pre-application are due by September 2011. Insurers complying with the pre-application criteria will be invited by the FSB to conduct and demonstrate a 'dry-run' of their internal model for the 2012 reporting period. It is envisaged that a second opportunity for submission for pre-application may take place in 2012 for those insurers who missed the 2011 date, also to dry-run their internal model for the 2012 reporting period. Insurers who did not pre-apply are unlikely to receive approval to calculate their SCR using an internal model for SAM implementation in 2014. The completion of the QIS's will form a necessary part of an insurer's motivation in the pre-application process. Figure 8 below provides an indicative internal model application process timeline; final details will be provided as part of an Internal Model Approval Process (IMAP) document to be published in early 2011.

Pre-application increases the likelihood of successfully completing the internal model approval process, as the FSB will already have developed a view of the model methodology and application of the model in decision making, as well as internal model output being available for model validation. The FSB will engage with insurers during the second half of 2013 as to the status of their internal model approval.

Pre-application does not guarantee ultimate formal approval after the application is submitted. Insurers should also prepare for the eventuality that their internal model is not approved. As highlighted in section 6: Quantitative Requirements (Pillar 1), irrespective of formal approval for an internal model under SAM from 2014, insurers will be required to calculate regulatory capital requirements using the standard formula and report thereon for a period of at least 2 years after the implementation date. Insurers will also be expected to show how the results of the standard formula SCR differ from that derived by the internal model.

**Figure 8: Internal Model Application Process Timeline**



## 10. Summary of Timelines

### ■ *Roadmap Summary*

This Roadmap document has endeavoured to provide a basic background to the new SAM regime, summarise its most salient points, and make insurers aware of the most important processes and deadlines.

The legislative timeline of the Road to Parliament in section 3: Policy Approach should highlight that insurers and other stakeholders cannot delay taking active implementation steps, including: participating in the SAM structures, assessing the likely impact of the SAM regime on their business, understanding what preparations are required, and using the SAM forums to voice any concerns they may have.

The internal model application process timeline in section 9: Internal Model Approval Process provides a summary of the milestones insurers seeking approval for an internal model need to be aware of in their engagement with the FSB. This section has made clear that demanding standards must be met before an internal model can be approved for statutory purposes.

Other sections have highlighted key aspects of the three pillar structure of SAM, provisions that will be made with respect to group supervision, and the broad policy approach adopted by the FSB in driving the SAM process.

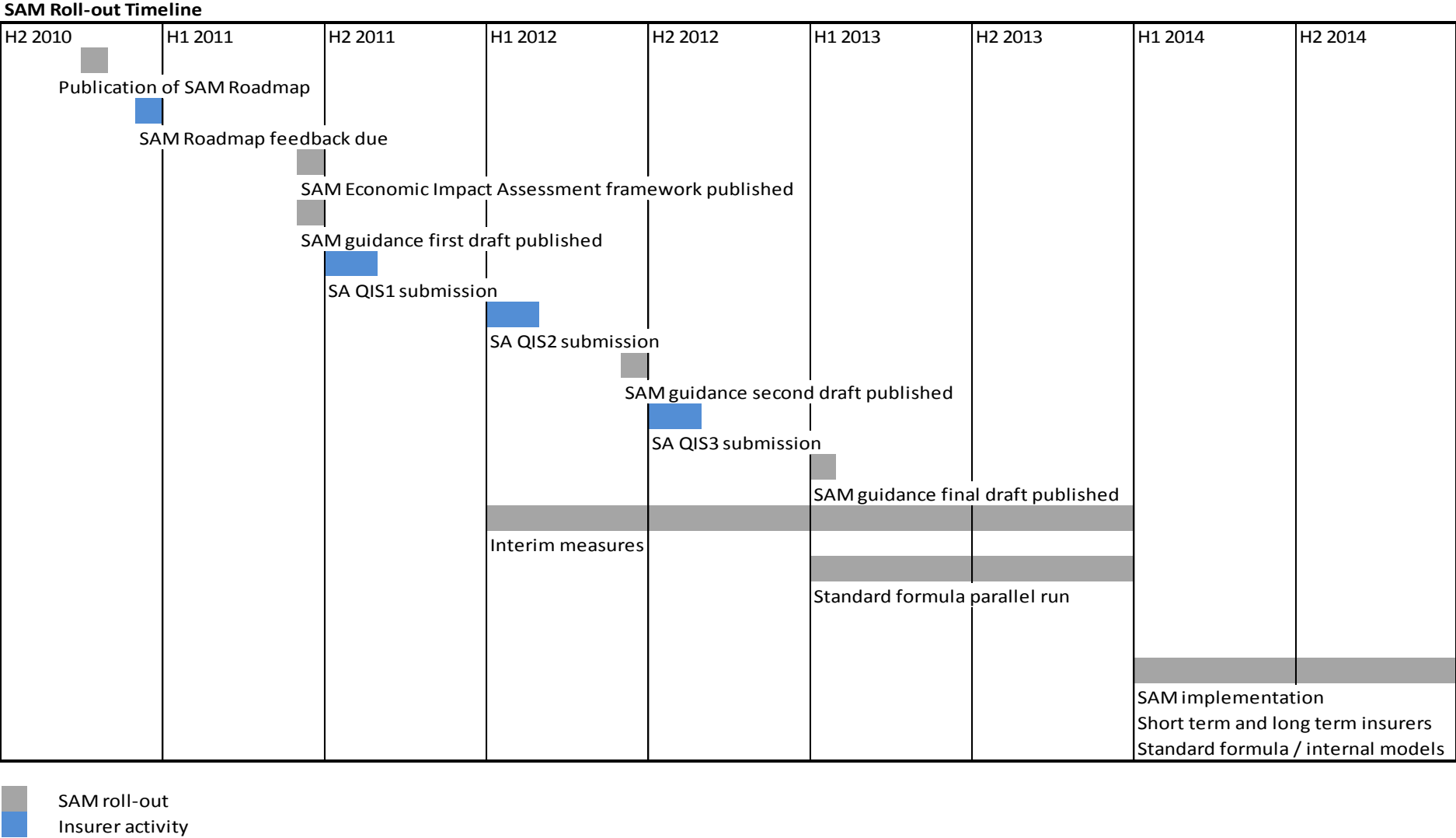
The high level timeline illustrated below represents the phases that all insurers will be subject to as SAM is rolled out. Interim measures will be in force from the beginning of 2012 to the end of 2013. The standard formula parallel run will commence in January 2013. SAM will be implemented on 1 January 2014.

In addition, the FSB encourages insurers to complete the questions posed in this Roadmap, using the template provided, and the forthcoming QIS's, as these are issued. There will be a minimum of two South African QIS's – completion of these will assist the FSB in refining both quantitative and qualitative aspects of the SAM regime.

While the finer details of the SAM regime are yet to be finalised, enough is known now in terms of the principles which will inform the legislation that insurers can already begin their planning and preparation for implementation, thereby avoiding incurring significant costs and risks later on. Insurers that have not already started planning for SAM are already behind schedule.

Q27: Are there any particular issues or concerns you would like to raise with the FSB? Please provide details.

**Figure 9: SAM High Level Roll-out Timeline**



## Annexure 1: Questions for Feedback

Q1: Have you begun planning for SAM implementation?

Q2: Have you set an internal deadline to perform a gap analysis to determine the transition requirements to SAM? If so, by when?

Q3: Have you allowed in your planning of SAM implementation the necessary resources and time to complete the South African Quantitative Impact Studies?

Q4: Do you intend applying to use an internal model?

Q5: Have you nominated a champion to drive SAM implementation?

Q6: Which of the issues: governance arrangements, capital adequacy, use and approval of internal models do you expect to generate significant additional costs and how do you intend to quantify these costs?

Q7: Where these issues are likely to add to your current regulatory commitments, what do you think the benefits are to insurers and their customers?

Q8: What steps are you taking to develop the appropriate valuation systems to calculate technical provisions under SAM? How is this work linked to the implementation of IFRS Phase 2 standards?

Q9: What steps have you taken to consider whether you have the right quality capital to meet the capital requirements?

Q10: How do you think insurers could best demonstrate compliance with the Pillar 1 requirements on a continuous basis?

Q11: Do you already have a process similar to the ORSA in place? If not, what progress are you making in preparing to develop an ORSA?

Q12: How do you consider supervisors should respond to a breach of targeted economic capital requirements?

Q13: In the event you answered 'yes' to question 4, please indicate both your current level of progress in developing the model and whether you are prepared to make your development work available to the FSB.

Q14: To what extent does this description reflect insurers' current and planned future internal models?

Q15: SAM is likely to require clear and demonstrable integration between capital measurement systems and capital management. How should insurers demonstrate the link between or integration of their internal model and their risk management framework, in particular to the ORSA?

Q16: Does the use test reflect capital management practice within the industry? If not, how do the use test prescriptions differ from current practice?

Q17: What are insurers doing to evaluate and improve data?

Q18: What further work (including industry-wide initiatives) might be helpful to improve the completeness of insurer data?

Q19: What further guidance would be useful on good practice in respect of data?

Q20: Which approaches do insurers use within their capital model? How and why are these approaches used? ('Approaches' can be defined or applied at a high level, e.g., stochastic/deterministic)

Q21: Do you consider that there are areas where industry or the profession should be focusing their research capabilities to improve internal models? Please provide examples.

Q22: How do you think the FSB should test the adequacy of internal models – for example, should we require evidence of peer review, benchmark by industry sector, require external audit review, run benchmark portfolios, or develop our own capital model? What other possibilities do you consider appropriate?

Q23: How do insurers presently carry out profit and loss attribution and how will it be developed toward SAM implementation?

Q24: How do insurers validate internal models currently and to what extent do their processes meet the above indicated criteria?

Q25: A simple documentation standard might require that it is extensive enough for the insurer to replicate its model in a different platform and in the absence of original developers. To what extent do insurers already have this in place?

Q26: How might insurers ensure that senior executives and the Board of Directors acquire the relevant knowledge to fulfil their duties in respect of model governance? How can this best be demonstrated?

Q27: Are there any particular issues or concerns you would like to raise with the FSB? Please provide details.

## Annexure 2: Useful Publications

1. Comité Européen des Assurances, Groupe Consultatif, “Solvency Glossary”, 2007, available online at:  
<http://www.cea.eu/uploads/DocumentsLibrary/documents/Glossary%20Final.pdf>
2. Committee of European Insurance and Occupational Pensions Supervisors, “Solvency II—Final Advice on Level 2 Implementing” (Consultation Papers 1-81), 2009 – 2010, available online at:  
<https://www.ceiops.eu/consultations/consultation-papers/2010-2009-closed-consultations/index.html>
3. Committee of European Insurance and Occupational Pensions Supervisors, “QIS Technical Specifications” (QIS 1-5), available online at:  
<https://www.ceiops.eu/consultations/qis/index.html>
4. Council of the European Parliament, “Directive of the European Parliament and of the Council on the Taking Up and Pursuit of the Business of Insurance and Reinsurance (Solvency II) (Recast)”, 2009, available online at:  
<http://register.consilium.europa.eu/pdf/en/09/st03/st03643-re06.en09.pdf>
5. Financial Services Authority, “Insurance Risk Management: The Path to Solvency II”, 2008, available online at: [http://www.fsa.gov.uk/pubs/discussion/dp08\\_04.pdf](http://www.fsa.gov.uk/pubs/discussion/dp08_04.pdf)
6. International Actuarial Association, Insurance Solvency Assessment Working Party, “A Global Framework for Insurer Solvency Assessment”, 2004, available online at:  
[http://www.actuaries.org/LIBRARY/papers/global\\_framework\\_insurer\\_solvency\\_assessment-public.pdf](http://www.actuaries.org/LIBRARY/papers/global_framework_insurer_solvency_assessment-public.pdf)
7. International Association of Insurance Supervisors, “Guidance Paper on the Use of Internal Models for Risk and Capital Management Purposes by Insurers”, 2007, available online at:  
[http://www.iaisweb.org/temp/2\\_2\\_7\\_Guidance\\_paper\\_on\\_the\\_use\\_of\\_internal\\_models\\_for\\_risk\\_and\\_capital\\_management\\_by\\_insurers.pdf](http://www.iaisweb.org/temp/2_2_7_Guidance_paper_on_the_use_of_internal_models_for_risk_and_capital_management_by_insurers.pdf)
8. International Association of Insurance Supervisors, “Guidance Paper on the Use of Internal Models for Regulatory Capital Purposes by Insurers”, 2007, available online at:  
[http://www.iaisweb.org/temp/15\\_Guidance\\_paper\\_No\\_2\\_2\\_6\\_on\\_the\\_use\\_of\\_Internal\\_Models\\_for\\_regulatory\\_capital\\_purposes.pdf](http://www.iaisweb.org/temp/15_Guidance_paper_No_2_2_6_on_the_use_of_Internal_Models_for_regulatory_capital_purposes.pdf)
9. International Association of Insurance Supervisors, “Insurance Core Principles”, (Forthcoming).
10. Sharma, P., (chairman) et al, “Report: Prudential Supervision of Insurance Undertakings”, Conference of the Insurance Supervisory Services of the Member States of the European Union, 2002, available online at:  
[http://ec.europa.eu/internal\\_market/insurance/docs/solvency/solvency2-conference-report\\_en.pdf](http://ec.europa.eu/internal_market/insurance/docs/solvency/solvency2-conference-report_en.pdf)

## Annexure 3: Abbreviations

### Abbreviations

BCBS	Basel Committee on Banking Supervision
BSD	Banking Supervision Department
CEIOPS	Committee of European Insurance and Occupational Pensions Supervisors
EEA	European Economic Area
EU	European Union
EIOPA	European Insurance and Occupational Pensions Authority
FSA	Financial Services Authority
FSB	Financial Services Board
FSAP	Financial Sector Assessment Program
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
ICP	Insurance Core Principles
IMF	International Monetary Fund
IOSCO	International Organisation of Security Commissions
MCR	Minimum Capital Requirement
ORSA	Own Risk and Solvency Assessment
QIS	Quantitative Impact Study
RTS	Report to Supervisor
SAM	Solvency and Assessment Management regime
SARB	South African Reserve Bank
SCR	Solvency Capital Requirement
SFCR	Solvency and Financial Condition Report
SRP	Supervisory Review Process
VaR	Value at Risk