SAM Pillar 1
Requirements for Solo Insurers and Insurance Groups
Training Manual
## Introduction

The training manual provides a concise high level overview of Pillar 1 of the South African Solvency Assessment and Management framework (SAM) for solo insurers and insurance groups.

### Disclaimers

At the time of creating this training manual the Insurance Bill was not yet enacted and the Prudential Standards were not yet finalised. While the training manual is based on the most recent versions of these documents, it is possible that the final Insurance Bill and Prudential Standards will be different from what is described in this training manual.

This training manual is based on the Insurance Prudential Standards released in November 2016 for comment. Specifically, it is based the following Insurance Prudential Standards:

- The Financial Soundness Standards for Insurers (FSIs)
- The Financial Soundness Standards for Groups (FSGs)

This document does not replace the Insurance Bill or the Insurance Prudential Standards and should there be any discrepancies between this document and the Insurance Bill or the Insurance Prudential Standards, then the Insurance Bill or the Insurance Prudential Standards shall prevail.

The following Insurance Prudential Standards also relate to Pillar 1, but are not covered in this training manual:

- The Financial Soundness Standards for Micro-insurers (FSMs)
- The Financial Soundness Standards for Branches of Foreign Reinsurers (FSBs)
- The Financial Soundness Standards for Lloyd’s (FSLs)

### Terms and abbreviations used in this training manual

Various technical terms are used throughout this document. Whilst this training manual explains many of these terms, a more comprehensive list of terms and their associated definitions is set out in Attachment 1 of FSI 1.

Important abbreviations that are used throughout this document are shown below.

- **MCR** = Minimum Capital Requirement
- **SCR** = Solvency Capital Requirement

SAM applies to both insurers and reinsurers, so where the training manual refers to “insurers” it should be read as applying to both insurers and reinsurers, unless specified otherwise.
Overview of SAM

SAM Overview
The SAM framework is the new risk-based financial soundness regulatory framework, due to commence during 2017. The Insurance Bill will cover SAM in the form of a framework legislation, while the details of the SAM framework will be provided in subordinate legislation that will be termed the Insurance Prudential Standards.

Relationship to Solvency II
SAM is largely based on Solvency II, which is Europe's new risk-based regulatory framework. While Solvency II formed the starting point when SAM was developed, it was adapted for features unique to the South African market and economic environment. As a result of these adaptations, there are some important differences between SAM and Solvency II. However, Solvency II allows for other regulatory frameworks to be classified as being "third country equivalent" to Solvency II, and it is the intention that SAM will attain this third country equivalence.

Overview of SAM

Pillar 1 sets out the quantitative regulatory requirements that insurers need to comply with. At a high level, Pillar 1 requires insurers to determine their balance sheet and capital requirements on a SAM basis, which are used to determine their financial soundness from a regulatory perspective.

Pillar 2 deals with the qualitative requirements and rules on supervision of insurers. It aims to establish a system of sound governance and risk management.

Pillar 3 sets out the regulatory reporting and public disclosures required by insurers. Insurers will have to disclose private information to the Prudential Authority and public information to the market.

FSI Overview
The Insurance Prudential Standards that relate to Pillar 1 for solo insurers are the Financial Soundness Standards for Insurers (FSIs). The FSIs are supported by Guidance Notes (GNs) that aim to assist insurers in complying with the requirements outlined in the FSIs. The following is a summary of FSIs and associated GNs.

FSI 1 Framework for Financial Soundness of Insurers
FSI 2 Valuation of Assets, Liabilities and Eligible Own Funds:
  • FSI 2.1 Valuation of Assets and Liabilities Other than Technical Provisions
  • FSI 2.2 Valuation of Technical Provisions
  • FSI 2.3 Determination of Eligible Own Funds
FSI 3 Calculation of MCR
FSI 4 Calculation of the SCR Using the Standardised Formula:
  • FSI 4.1 Market Risk Capital Requirement
  • FSI 4.2 Life Underwriting Risk Capital Requirement
  • FSI 4.3 Non-Life Underwriting Risk Capital Requirement
  • FSI 4.4 Operational Risk Capital Requirement
FSI 5 Calculation of the SCR Using a Full or Partial Internal Model
FSI 6 Liquidity Risk Assessment

GN on FSI 2.2 Valuation of Technical Provisions

FSG Overview
The Insurance Prudential Standards that relate to Pillar 1 for insurance group are the Financial Soundness Standards for Groups (FSGs). The following is a summary of FSGs.

FSG 1 Framework for Financial Soundness of Insurance Groups
FSG 2 Assessing Financial Soundness using the Deduction and Aggregation Method
FSG 3 Assessing Financial Soundness using the Accounting Consolidation Method
Overview
The SAM framework requires individuals within insurers to fulfill certain roles and responsibilities. This section provides an overview of these roles and responsibilities, as they relate to Pillar 1. Specifically, it covers the roles and responsibilities of an insurer’s board of directors, Actuarial Function and auditor.

Roles and responsibilities

Board of directors
An insurer’s board of directors is ultimately responsible for the prudent management of the insurer’s financial soundness (FSI 1) and liquidity (FSI 6). Related to this overarching role, the board of directors also has the following responsibilities.

• Ensure the insurer maintains an appropriate level and quality of Own Funds commensurate with the type, amount and concentration of risks to which the insurer is exposed. (FSI 1)

• Ensure that the insurer maintains sufficient liquid assets to meet its cash flow obligations as and when they fall due. (FSI 6)

• Ensure that adequate systems are in place to do the following.
  – Monitor the insurer’s financial soundness and identify any deterioration in its actual or expected capital resources or business conditions. The board of directors must alert the Prudential Authority of any such deteriorating circumstances that could lead to a breach of the financial soundness requirements within the following three months. (FSI 1)
  – Monitor the insurer’s Liquidity Shortfall Indicator. (FSI 6)

• Ensure that where approvals are required from the Prudential Authority, including the approval of an Internal Model to calculate the SCR, those approvals have been obtained. (FSI 1 and FSI 5)

• Ultimately responsible that appropriate controls are in place to ensure that the following items comply with the principles and requirements of the FSIs.
  – Valuation of assets, liabilities and Eligible Own Funds (FSI 2)
  – Calculation of MCR (FSI 3) and SCR (FSI 4)
  – Calculation of Liquidity Shortfall Indicator (FSI 6)

• Where the Standardised Formula for the SCR provides a choice of methodologies, including the possible use of simplifications, the board of directors is responsible for assessing and approving these changes. (FSI 4)

• The board of directors must approve the key methodologies used in the Internal Model. (FSI 5)

• The board of directors must seek and receive approval from the Prudential Authority before effecting any capital reductions other than through normal dividend payments. (FSI 1)

Actuarial Function
An insurer’s (or branch’s) Head of Actuarial Control is responsible for providing assurance to the board of directors regarding the accuracy of the calculations and the appropriateness of the assumptions underlying the following items.

• Valuation of technical provisions (FSI 2)
• Calculation of MCR (FSI 3) and SCR (FSI 4)
• Calculation of Liquidity Shortfall Indicator (FSI 6)
• Internal Model (FSI 5)

The Head of Actuarial Control is also responsible for providing assurance to the board of directors regarding the impact of the above items on an insurer’s financial soundness. (FSI 2.1)

The Head of Actuarial Control needs to have regard to the principles and requirements of the FSIs, as well as any relevant professional standards issued by the Actuarial Society of South Africa.

Auditor
An insurer’s auditor is responsible for auditing the financial soundness of the insurer in accordance with its legal and regulatory obligations. The auditor must report to the board of directors and Prudential Authority any matters identified during the performance of its responsibilities that may cause the insurer to be not financially sound. (FSI 1)
SAM Balance sheet (FSI 2 and 2.1)

SAM requires insurers to recalculate the assets and liabilities on their balance sheet in line with the requirements set out in the FSIs. This section gives an overview of the items contained in a SAM balance sheet.

Overview of SAM balance sheet
The SAM balance sheet values insurers on an economic, market-consistent basis. At a high level, this means the following:
- Assets should be valued at the amount for which they could be exchanged between knowledgeable willing parties in an arm’s length transaction.
- Liabilities should be valued at the amount for which they could be transferred, or settled, between knowledgeable willing parties in an arm’s length transaction.

In addition to valuing assets and liabilities, insurers also need to calculate two capital requirements: the MCR and SCR.

This SAM balance sheet is illustrated by the below graph, after which each item is explained briefly. Detailed explanations of each item are contained in the later sections of this training manual.

Assets and other liabilities
Assets and liabilities other than technical provisions should be valued using an economic, market-consistent approach. In most cases this means that the valuation of all assets and liabilities other than technical provisions should be carried out in accordance with International Financial Reporting Standards (IFRS). Deviations from IFRS might be required in certain cases.

Technical provisions
Technical provisions represent the market consistent value of policyholder liabilities. They should be calculated on a best estimate basis and should reflect the probability-weighted average of future cash flows, having regard to the time value of money. It should consist of a best estimate and a risk margin (RM).

Own Funds
Own Funds refer to the “capital resources” of a company that are available to absorb losses, and consist of Basic Own Funds and Ancillary Own Funds:
- Basic Own Funds are defined as the excess of assets over liabilities plus subordinated liabilities less any regulatory adjustments (deductions) as set out in FSI 2.3. For example, to calculate Basic Own Funds a proportion of intangible assets are deducted from the excess of assets over liabilities.
- Ancillary Own Funds are off balance sheet capital resources that can be called upon to absorb losses, for example letters of credit and guarantees. In other words, these are capital resources in addition to those that are already included under Basic Own Funds.

Furthermore, Own Funds are classified into different tiers, which reflect the quality of the different sources of Own Funds.

Solvency Capital Requirement
The Solvency Capital Requirement (SCR) is the main regulatory capital requirement under SAM and reflects the amount of Own Funds that a company requires to survive a 1-in-200 year loss event. The SCR is thus a Value-at-Risk of the Own Funds, calculated at a 99.5% confidence level over a one-year period, i.e. it is the amount of Own Funds that will allow a company to absorb a 1-in-200 year loss event.

The SCR represents the minimum level of Own Funds a company requires to operate as a going-concern with no regulatory intervention. The SCR may be calculated using a Standardised Formula or, subject to prior regulatory approval, an insurer’s Internal Model, or a combination of the two methods.

Minimum Capital Requirements
The Minimum Capital Requirement (MCR) represents the absolute minimum level of Own Funds that is required to protect policyholders. The MCR can be seen as the final threshold and a breach of the MCR would trigger the strongest regulatory measures (Section 4.2 of FSI 3).

Additional Information
In calculating the technical provisions and SCR, insurers should apply the principle of proportionality. This broadly means that the insurers should use a valuation methodology that reflects the scale, nature and complexity of the underlying risks that are involved in the business. As a result, insurers are permitted to use simplifications in the calculation of these items.

Insurers are required to monitor and assess their financial soundness on an ongoing basis. The MCR and SCR must be calculated at least annually, but also following material changes in an insurer’s risk profile, or if requested to do so by the Prudential Authority (Sections 7.1 and 7.2 of FSI 1).
Assets and liabilities other than technical provisions  
(FSI 2 and 2.1)

This section outlines how assets and liabilities other than technical provisions need to be valued, explaining the general principles as well as considerations specific to recoverables and participations.

General principles
In most cases, the valuation of all assets and liabilities other than technical provisions should be carried out in accordance with IFRS. The values used for IFRS reporting are therefore considered a suitable proxy to the extent that they reflect the economic valuation principles of SAM. There are some exceptions to this, as outlined in FSI 2.1. For example, a goodwill on acquisition asset must be valued at nil for financial soundness purposes.

IFRS sometimes allows a choice of valuation methodologies, including both market consistent and non-market consistent methodologies (such as book value). Where a non-market consistent methodology is used for IFRS reporting, this may result in a different valuation methodology being required for the SAM balance sheet to ensure that the SAM results are still market consistent.

Generally speaking, the use of the mark-to-market approach, which relates to quoted market prices in active markets, is the default valuation approach in determining the economic value of assets and liabilities. Where a mark-to-market approach is not possible, mark-to-model techniques should be used, i.e. valuation techniques which have to be benchmarked, extrapolated or otherwise calculated as far as possible from market inputs.

Deferred taxes (Section 4.4 of FSI 2.1)
Deferred taxes should be allowed for based on the difference between the following.
• Values of assets and liabilities on the SAM basis.
• Values of assets and liabilities for tax purposes.

For example, if profits are released when moving from the tax basis to the SAM basis, then a deferred tax liability needs to be raised on the SAM basis. This deferred tax liability reflects the taxes that are payable on the additional profits that were released when moving the SAM basis.

Participations (Section 5.3 to 5.7 of FSI 2.1)
Participations are investments in companies in which the insurer owns a significant proportion of the issued share capital or over which it exerts significant influence/ control. For financial soundness purposes, all participations in subsidiaries, associates and joint ventures must be valued on an economic basis, using the following hierarchy.
• For listed participations, the valuation must be based on the quoted market value using the listed prices.
• If a quoted market value is not available, then the participation must be valued according to the "equity" method. For all non-insurance entities the "equity" method sets the participation’s value equal to the net asset value, excluding goodwill and intangible assets. For insurance entities the "equity" method sets the participation’s value equal to the Basic Own Funds as calculated under SAM.
• Where a quoted market value is not available and the "equity" method is not possible, the insurer can use the value reported in the financial accounts, again excluding goodwill and intangible assets not recognised under SAM.
• If the above approaches are not possible, the insurer can use either quoted prices of similar assets or a mark-to-model approach.

For participations in asset holding intermediaries, insurers should look-through to the underlying assets and liabilities. In other words, the assets and liabilities of the asset holding intermediaries should be treated as if they were the assets and liabilities of the insurer.
Technical provisions (FSI 2.2 and GN on FSI 2.2)

This section explains how technical provisions need to be calculated, covering the best estimate and risk margin separately, after which various other considerations are discussed.

General principles (Section 4 of FSI 2.2)
The technical provisions should represent the amount a company would have to pay in order to immediately transfer its current insurance obligations, i.e. its policyholder liabilities, to another insurer. The technical provisions consist of a best estimate and a risk margin. These items can either be calculated separately or as a whole.

The technical provisions should be segmented into homogeneous risk groups, and as a minimum by the lines of business specified in FSI 2.2 Attachment 1.

Best estimate (Section 6 of FSI 2.2)
The best estimate is effectively the present value of the projected future cash flows of the existing business on a best estimate basis. Specifically:

- The best estimate is the probability weighted average of future cash flows from insurance business, taking into account the time value of money by discounting the cash flows using an appropriate risk-free interest rate (as set out in Section 13 of FSI 2.2).
- The risk-free interest rate needs to reflect the term structure of interest rates, as opposed to using a single rate over the whole projection period.
- The cash flows are projected up to the contract boundary of each policy, which is the point up to which the insurer is exposed to losses from that policy.

For non-life insurance obligations:
- Claims provisions relate to claim events having occurred before or at the valuation date, irrespective of whether the claims arising from these events have been reported or not. These provisions should cover claims as well as the associated claim administration expenses.

For life insurance obligations:
- Cash flow calculations should be performed on a policy-by-policy basis, but reasonable actuarial methods and approximations may be used. Certain criteria must be met before using suitable model points.
- Insurers should identify and allow for the value of financial guarantees and any contractual options included in the policies when they calculate the best estimate, as set out in Section 10 of FSI 2.2.
- Future discretionary benefits such as cash-back bonuses and other loyalty benefits should also be taken into account when calculating the technical provisions, as set out in Section 11 of FSI 2.2.

Risk margin (Section 14 of FSI 2.2)
Overview
The risk margin ensures that the technical provisions is equivalent to the amount another insurer would be expected to pay to take over and meet the insurance obligations of the insurer, where these obligations are net of reinsurance and other risk mitigating contracts. Because of the uncertainty inherent in insurance obligations another insurer will need to be compensated for accepting this risk when they take over a book of insurance business. This means that the risk margin increases the value of a company’s policyholder obligations, such that the total value of the policyholder obligations is equal to the best estimate plus the risk margin.

These provisions should reflect the following expected future cash flows:
- claim payments related to these claim events, claims administration expenses, ongoing administration expenses of existing policies and premiums stemming from existing policies.
- Claims provisions relate to claim events having occurred before or at the valuation date, irrespective of whether the claims arising from these events have been reported or not. These provisions should cover claims as well as the associated claim administration expenses.

For life insurance obligations:
- Cash flow calculations should be performed on a policy-by-policy basis, but reasonable actuarial methods and approximations may be used. Certain criteria must be met before using suitable model points.
- Insurers should identify and allow for the value of financial guarantees and any contractual options included in the policies when they calculate the best estimate, as set out in Section 10 of FSI 2.2.
- Future discretionary benefits such as cash-back bonuses and other loyalty benefits should also be taken into account when calculating the technical provisions, as set out in Section 11 of FSI 2.2.

For non-life insurance obligations:
- Claims provisions relate to claim events having occurred before or at the valuation date, irrespective of whether the claims arising from these events have been reported or not. These provisions should cover claims as well as the associated claim administration expenses.

The best estimate should be calculated gross of recoverables from reinsurance contracts and other risk mitigation instruments, with the amounts for these recoverables being calculated separately.

For non-life insurance obligations the premium and claims provisions should be calculated separately:
- Premium provisions relate to claim events occurring after the valuation date and during the remaining in-force period.
Calculation methodology

The risk margin must be calculated under a transfer scenario, as specified in section 14.3 of FSI 2.2. The calculation thus represents the compensation that a “reference insurer” would require, over and above the best estimate, to take over the insurance obligations of the insurer under consideration.

If the reference insurer were to take over the insurance obligations, then they would need to be compensated for the riskiness associated with these obligations. Since the SCR represents the riskiness of these insurance obligations, the risk margin is based on the cost of holding Eligible Own Funds equal to the SCR that is necessary to support the insurance obligations over their lifetime. This cost is required to be standardised across all insurers, and is set equal to 6% of the SCR per year.

The above means that the risk margin needs to be calculated using the following methodology:

• The SCR is projected over the lifetime of the insurance obligations.
• For each year the cost of holding the SCR is calculated as 6% of the projected SCR for that year.
• Each of these costs are discounted using the term structure of risk-free rates.
• The risk margin is equal to the sum of these costs across all the projection years and is added to the best estimate to obtain the technical provisions.

Insurers are allowed to apply a simplified method for calculating the risk margin provided the method satisfies the principle of proportionality. There are four levels of simplification, which are detailed in Chapter 3 of GN on FSI 2.2.

Calculating technical provisions as a whole (Section 15 of FSI 2.2)

It is possible for cash flows of insurance obligations to be replicated reliably using financial instruments for which a market value is observable, the technical provisions of such cash flows should be set equal to the market value of the replicating financial instruments.

In these cases a separate calculation of the best estimate and risk margin is required and the technical provision is “calculated as a whole”, i.e. the technical provisions is equal to the market value of the replicating financial instruments, without it being split between a best estimate and a risk margin. This is due to the market value of the replicating financial instruments already reflecting the riskiness of the insurance obligations, and hence there being no need to calculate a separate risk margin.

Certain criteria must be met in determining whether insurance obligations can be reliably replicated. These criteria are set out in Sections 15.5 to 15.7 of FSI 2.2. In addition, further guidance on cases when technical provisions can be calculated as a whole are provided in Chapter 4 of GN for FSI 2.2.

Negative technical provisions

It is acceptable for life and non-life insurers to hold negative technical provisions. Further details of this is contained in FSI 2.2, Sections 6.11 for life business and Section 6.15 for non-life business.

Simplifications for valuing technical provisions (Section 17 of FSI 2.2)

Simplifications can be applied in determining the technical provisions. The valuation method followed in the simplification must follow the principle of proportionality, i.e. it must reflect the scale, nature and complexity of the risks inherent in the business.

Section 17 of FSI 2.2 discusses simplifications for valuing technical provisions, with the following sections in the GN of FSI 2.2 providing more detail on simplifications:

• Chapter 3: Possible simplifications for calculating the risk margin
• Chapter 4: Principle of proportionality
• Chapter 6: Possible simplifications for best estimate on life insurance
• Chapter 7: Possible simplifications for best estimate on non-life insurance
• Chapter 8: Possible simplifications for reinsurance recoverables.

Contract boundaries (Section 8 of FSI 2.2)

The cash flows used in the best estimate calculation must be projected up to the contract boundary. The contract boundary is set so as to ensure that the calculation of the best estimate reflects all known material risks under the policy.

As a result, at a high level, the contract boundary should be set to the date at which the insurer has the unilateral right to:

• Terminate the contract
• Reject the premiums payable under the contract, or
• Amend the premiums or benefits payable under the contract at a future date so that the premiums fully reflect the risks to which the insurer is exposed.

For example, any cash flows expected to occur after the date at which the insurer can terminate the contract are not included in the calculation of the best estimate, because the insurer can terminate the contract before these cash flows occur and is thus not at risk of suffering losses as a result of adverse deviations in these cash flows.

Chapter 2 of the GN on FSI 2.2 provides further guidance on determining contract boundaries, including guidance on specific products.

Recoverables (Section 12 of FSI 2.2)

Recoverables from reinsurers and other risk mitigation instruments must be calculated separately from the gross amounts and must take account of expected losses due to default of the counterparty. Attachment 3 of FSI 2.2 sets out further details on adjusting recoverables for counterparty default.

Recoverables should be calculated separately for premium and claims provisions for non-life insurance obligations.

It is not necessary for companies to calculate a risk margin for reinsurance recoverables, since the risk margin is calculated only on a net of reinsurance basis.

Other considerations

Insurers should also consider the following items when calculating technical provisions.

• Segmenting business, including the application of the principle of “substance over form”, which requires segmentation to be based on the nature of risks underlying the insurance obligation, rather than the legal form of the insurance contract, (Section 5.3 of FSI 2.2 and Chapter 1 of GN on FSI 2.2).
• Unbundling of contracts between life and non-life insurance contracts. (Section 5.4 of FSI 2.2)
• Management actions which could potentially affect future discretionary benefits or premiums charged (Sections 6.36 to 6.49 of FSI 2.2)
• Tax bases to be used in the SAM calculations (Section 16 of FSI 2.2)
• Recognition of insurance contracts: at a high level the best estimate should only reflect cash flows for existing insurance policies, with Section 7 of FSI 2.2 containing details hereof.
• Recognition of insurance premiums, i.e. the extent to which future premiums should be reflected in the technical provisions, (Section 9 of FSI 2.2)
• The valuation of options and guarantee, for which either stochastic or deterministic modelling can be used. (Section 10 of FSI 2.2)
• For annuity policies, the risk free yield curve used to calculate the best estimate can be increased by an illiquidity premium, if certain conditions are met. (Section 13.7 of FSI 2.2)
Own funds

(FSI 2.3)

Overview

Own Funds refers to the capital resources of a company that are deemed eligible to cover the capital requirements under Solvency Capital Requirement (SCR) and Minimum Capital Requirement (MCR), and consist of Basic Own Funds and Ancillary Own Funds.

- Basic Own Funds are defined in the SAM balance sheet as the excess of assets over liabilities, plus subordinated liabilities less any regulatory deductions as set out in FSI 2.3.

- Ancillary Own Funds are off-balance sheet capital resources that can be called upon to absorb losses. This includes unpaid share capital or initial funds that have not been called up, letters of credit and guarantees and other legally binding commitments received by an insurer, provided these are not Basic Own Funds. Note that an insurer must seek prior approval from the Prudential Authority for an item to be included as Ancillary Own Funds.

Tiering of Own Funds

Own Funds are split into 3 Tiers based on characteristics such as loss absorbency and subordination, with Tier 1 representing the highest quality and Tier 3 representing the lowest quality.

- For example, Tier 1 capital represents items which are deeply subordinated; they are undated or have a remaining duration of at least 10 years at the valuation date and will not cause or accelerate the insolvency of the insurer. They enable the insurer to continue as a going concern. Examples of Tier 1 capital include the following:
  - Paid-up ordinary shareholder capital
  - Retained earnings
  - Preference shares that meet the Tier 1 criteria

- Examples of Tier 2 Own Funds items include the following:
  - Called-up but not paid-in ordinary share capital
  - Own Funds in excess of amounts being used to cover related risks in the case of restricted reserves
  - Preference shares meeting the Tier 2 criteria

- Tier 3 items include the following:
  - Not deferred tax assets
  - Remaining preference shares, i.e. preference shares that don’t meet the Tier 1 or Tier 2 criteria

- Ancillary Own Funds may only be classified as Tier 2 or Tier 3, meaning that Ancillary Own Funds may not be classified as Tier 1.

The characteristics that are required for an item to be classified into a specific Tier are set out in FSI 2.3, with Section 6 containing the characteristics for Basic Own Funds and Section 7 containing the characteristics for Ancillary Own Funds. The full list of criteria for classifying Own Funds items into different tiers can be found in Attachments 1 to 3 of FSI 2.3.

Eligibility of Own Funds in meeting the SCR and MCR

The amount of Own Funds that is eligible to cover the SCR and MCR depends on the quality of the Own Funds, i.e. it depends on the tiering of thereof, and is referred to as Eligible Own Funds.

At least 50% of the SCR must be covered by Tier 1 Own Funds, and no more than 15% of the SCR may be covered by Tier 3 Own Funds. In addition to this, the sum of the Tier 2 and Tier 3 Basic Own Funds shall exceed 50% of the SCR.

- For the MCR, only Tier 1 and Tier 2 Basic Own Funds are eligible. At least 80% of the MCR must be covered by Tier 1 Basic Own Funds. Tier 3 Basic Own Funds and Ancillary Own Funds are not eligible for to cover the MCR.

These requirements are illustrated in the diagram above.

Deductions from Own Funds

There are various deductions that must be made from the Basic Own Funds to determine the Eligible Own Funds that may be used to meet the SCR and MCR. Some of these are described below, with a more detailed list in Section 8 of FSI 2.3.

- Intangible assets
  - Intangible assets are reduced by 80% when being included in Eligible Own Funds.
  - The remaining 20% of intangible assets must be classified as Tier 3 Own Funds.

- Investments in holding company shares
  - The following items relating to holding company shares need to be deducted from the Basic Own Funds.
    - Unlisted ordinary shares held by an insurer that holds a direct or indirect controlling stake in that insurer needs to be deducted in full.
    - Listed holding company shares held by an insurer that holds a direct or indirect controlling stake in that insurer, need to be deducted to the extent that it is in excess of 5% of the insurer’s non-linked assets.

- Participations in financial and credit institutions
  - Participations in financial institutions and credit institutions (other than insurers) must be deducted from Basic Own Funds and are also excluded from the SCR calculation.

For the MCR, only Tier 1 and Tier 2 Basic Own Funds are eligible. At least 80% of the MCR must be covered by Tier 1 Basic Own Funds. Tier 3 Basic Own Funds and Ancillary Own Funds are not eligible for to cover the MCR.

Only Tiers 1 & 2 Basic Own Funds

At least 80% from Tier 1

No more than 15% from Tier 3

No more than 50% from Tiers 2 and 3
The Solvency Capital Requirement (SCR) is the main regulatory capital requirement under SAM and reflects the amount of Own Funds that a company requires to survive a 1-in-200 year loss event. The SCR is thus a Value-at-Risk of the Own Funds, calculated at a 99.5% confidence level over a one year period, i.e. it is the amount of Own Funds that will allow a company to absorb a 1-in-200 year loss event.

The SCR represents the minimum level of Own Funds a company requires to operate as a going-concern with no regulatory intervention. The SCR may be calculated using a Standardised Formula or, subject to prior regulatory approval, an insurer’s Internal Model, or a combination of the two methods.

The Standardised Formula approach is described in this section, with further details being contained in Sections 9 to 12 of this training manual. The Internal Model approach, and the requirements to use an Internal Model is described briefly in Section 13 of this training.

Calculation methodology

The Standardised Formula for calculating the SCR takes a modular approach, which can be described as follows:

- It calculates a capital requirement for each risk that is covered by the Standardised Formula, i.e. it calculates a capital requirement for each “risk module”. This capital requirement represents the loss that the company is expected to suffer as a result of that specific risk at a 99.5% confidence level, i.e. it represents a 1-in-200 year loss.
- The capital requirements for all the risks are then aggregated into a single capital requirement, allowing for interactions between the different risks.
- Specifically, it is assumed that not all the risks will happen simultaneously, as this would result in a too onerous capital requirement. In other words, assuming that all the 1-in-200 year loss events happen simultaneously would result in the total capital requirement representing a loss event that is even more extreme than a 1-in-200 year event. This assumption that not all risks occur simultaneously is effectively allowing for diversification benefits across the different risks.
- While it is unlikely for all the risks to occur simultaneously there is some dependence between the different risks, since some risks are more likely to occur if another risk has occurred already. For example, it is more likely that lapses will increase after a market crash than in the absence of a market crash, meaning that there is a dependency between these two risks. The Standardised Formula allows for this dependence via correlations, which reflect the relationships between the different risks. The correlations are presented in the form of a correlation matrix.

This modular approach enables insurers to identify capital requirements for individual risks, and provides a method for aggregating these individual capital requirements in order to calculate the overall SCR.

Individual risks

For the majority of risks the capital requirement is calculated using a specific stress scenario to the insurer’s assets and liabilities, which is used to assess the impact on the insurer’s Basic Own Funds. In other words, in most cases, the capital requirement for a specific risk module is determined using the following scenario based approach:

01. Recalculate the insurer’s assets, liabilities and Basic Own Funds for the specified stress scenario, and
02. Set the capital requirement for the risk under consideration equal to the decrease in Basic Own Funds due to the stress scenario.

The stress scenario represents a 1-in-200 year loss event for that risk.

For risk modules where a scenario based approach is not used, the Standardised Formula uses a formula based approach. These formulae are such that they estimate the impact on an insurer’s Basic Own Funds of a 1-in-200 year loss event.

SCR structure

The SCR calculated using the Standardised Formula is made up of four components, each of which are described later in this document. These components are outlined below.

- The Basic Solvency Capital Requirement (BSCR), reflecting the following modules, each of which makes allowance for a number of risks:
  - Market risk
  - Life underwriting risk
  - Non-life underwriting risk
  - The adjustment for the loss absorbing capacity of deferred taxes (AdjDT)
  - The capital requirement for operational risk
  - The capital requirement for insurance participations in the same sector

The diagram on the following page illustrates the structure of the SCR Standardised Formula.

As can be seen from the diagram, each of the three major modules that make up the BSCR are divided into further risk modules.

The following abbreviations are used in the diagram:

- AdjDT: Adjustment for loss absorbing capacity of deferred taxes
- AdjSES: Adjustment for potential double counting of loss absorbing capacity of deferred taxes
- CAT: Catastrophe
- RM: Risk mitigation
General features of the SCR
Standardised Formula include the following:
- If the calculation of the SCR for equity risk and property risk results in a negative SCR, the insurer should replace the stress with an equal but opposite stress (Sections 6.13 and 7.6 of FSI 4.1). For all other negative SCRs, the insurer should not recognise negative SCRs and should replace them with zero values (Section 5.2 of FSI 4).
- It is important to note that management action can be taken into account in the calculation of the SCR (Section 5.8 of FSI 4). The FSIs specify how to interpret the stresses for the purposes of determining management actions, i.e. the FSIs state what proportion of the stress is assumed to be as a result of a company-specific event versus an industry-wide event. This is important, since the management action and the impact thereof will differ depending on whether an event is company-specific or industry-wide. This guidance is included separately for each risk, for example for mortality risk it is included in Section 5.5 of FSI 4.2.
- Policyholder behaviour should be considered when calculating the SCR, e.g. exercising of policyholder options, including lapses. It is also important to consider this in conjunction with the allowance for management action, since taking management action can result in certain policyholder behaviours being triggered. For example, if an insurer increases premiums on existing business to account for poor underwriting experience then it might result in higher lapse rates on this business (Sections 5.9 and 5.10 of FSI 4).
- When calculating the capital requirements for individual risks, allowance may be made for the risk mitigating effect of reinsurance contracts and other risk mitigation instruments that the insurer has in place. However, the risk of counterparty default must be taken into account within the capital requirement calculation, by impairing the impact of the reinsurance contract or risk mitigation instrument. Details of how to assess the impairment are set out in Attachment 2 of FSI 4.
- Simplications are allowed when calculating the SCR. In general, the principle of proportionality should be applied in determining whether to apply simplifications. Further details on applying simplifications to the SCR calculation can be found in Section 5 of FSI 4.
- Any references to technical provisions in the Standardised Formula should be interpreted as excluding the risk margin. If the risk margin is included then a circularity arises in the calculation, since the SCR depends on the risk margin, which in turn depends on the SCR. This is illustrated in the diagram below. Despite this circularity, insurers are allowed to include the risk margin in the calculation of their SCR, although the following should then be noted:
  - This will require an iterative approach to determine the SCR and risk margin, and insurers need to ensure that the iterative results from this approach stabilise.
  - Insurers require the Prudential Authority’s approval to use the iterative approach.
- The Standardised Formula for the SCR makes no allowance for liquidity risk, but all life insurers are required to perform and disclose to the Prudential Authority an assessment of liquidity risk, called the Liquidity Shortfall Indicator. This is discussed in Section 15.4 of this training manual, as well as in FSI 6.
SCR Market Risk
(FSI 4.1)

Market risk is the risk of loss arising from movements in the market prices of an insurer’s assets and liabilities, or of loss arising from the default of the insurer’s counterparties. Exposure to market risk is measured by the impact of movements in the level of financial variables such as stock prices, interest rates, real estate prices and exchange rates. FSI 4.1 sets out the details for calculating the market risk capital requirement.

Calculation methodology
The SCR for market risk is derived by combining the capital requirements for the various market risk modules using a correlation matrix. An allowance is made for the impact of risk mitigating instruments within each market risk module, with an allowance for the counterparty default risk associated with these risk mitigating instruments. Further, an adjustment is made for potential double-counting of the loss absorbing capacity of technical provisions, as outlined in Section 9.4.2 of this training manual.

Risk modules
The tables below contain the following information for each risk in the market risk module:
- Definition of the risk
- Methodology used to calculate the capital requirement
- Other points to note

- Interest rate risk
  - Section 5 of FSI 4.1
  - Definition: Interest rate risk arises when the market values of assets and liabilities are sensitive to changes in the market yield curves or interest rate volatilities. This includes both the nominal and real yield curves.
  - Methodology: The capital requirement is taken as the total of the curve and volatility interest rate risk modules after allowing for diversification.
  - The curve interest rate risk module consists of the nominal and real interest rate risk module and allows for diversification between the two risks. The nominal and real interest rate risk capital requirements are calculated according to pre-defined upward and downward stresses to the yield curves.
  - The volatility risk capital requirement is calculated according to a pre-defined shock to the swaption implied volatility assumptions.
  - For each of the risk modules, the capital requirement is taken as the change in Basic Own Funds as a result of a specified scenario.
  - Important points to note:
    - When determining future management action to be applied following the stress, insurers should assume that the stresses result entirely from industry-wide events.
    - The magnitude of the up- and downward shocks to be applied to the nominal and real interest rates are set out in Attachment 3 of FSI 4.1.

- Equity risk
  - Section 6 of FSI 4.1
  - Definition: Equity risk arises from changes in the level or volatility of market prices for equities.
  - Methodology: The capital requirement is taken as the total of the price and volatility risk modules after allowing for diversification.
  - The equity price risk module allows separately for risks associated with global equities, South African equities and other equities. Each of these equity classes are stressed by a different proportion and there is also an allowance for diversification between equities in the different categories.
  - If the equity price risk stress causes an increase in Basic Own Funds then the direction of the stress should be reversed (Section 6.13 FSI 4.1).
  - The volatility risk capital requirement is calculated as the change in Basic Own Funds as a result of applying a shock to the equity implied volatility assumptions.
  - Important points to note:
    - Where insurers hold short positions in equity, these should be netted off against long equity positions only if the short position meets the requirements to be considered as an eligible risk mitigation instrument (as outlined in Attachment 1 of FSI 4). Otherwise, these positions should be disregarded.
    - Where a causal relationship exists between equity risk and changes to policyholder behaviour, the calculation of equity risk should take account these changes.
    - For equity price risk, the prescribed fall of equities in a specific equity class is set equal to the base equity shock for that category plus a symmetric adjustment. The calculation for the symmetric adjustment is detailed in section 6.12 of FSI 4.1.
    - Indirect property-related investments outlined in section 7.3 of FSI 4.1 should be treated as equity and included in the calculation of the equity risk capital requirement.
    - All equity participations, other than insurance participations in the same sector, should be stressed in the relevant equity risk module.
    - When determining future management action to be applied following the stress, insurers should assume that the stresses result entirely from industry-wide events.

- Property risk
  - Section 7 of FSI 4.1
  - Definition: Property risk arises as a result of sensitivity of assets, liabilities and financial investments to the level or volatility of market prices of property.
  - Methodology: The capital requirement is calculated as the change in Basic Own Funds after applying an instantaneous change of 25% in the value of investments in real estate, taking account of all the participant’s individual direct exposures to property prices.
  - If the property stress causes an increase in Basic Own Funds then the stress should be reversed (Section 7.6 of FSI 4.1).
  - Important points to note:
    - Where insurers hold short positions in property, e.g. through holdings in listed property trusts, these should be netted off against long property positions only if the short position meets the requirements to be considered as an eligible risk mitigation instrument (set out in Attachment 1 of FSI 4). Otherwise, these positions should be disregarded.
    - When determining future management action to be applied following the stress, insurers should assume that the stresses result entirely from industry-wide events.
    - Section 7.3 of FSI 4.1 details the assets and liabilities that are and aren’t included in the calculation of the property risk capital requirement.
### Spread and Default Risk

**Section 9 of FSI 4.1**

**Definition**
- Spread risk results from the sensitivity of the value of assets, liabilities and financial instruments to changes in the level or in the volatility of credit spreads over the risk-free interest rate term structure.
- Default risk results from potential losses due to credit default events relating to assets.

**Methodology**
- The capital requirements for this module is calculated as the sum of the capital requirements for spread risk and default risk respectively.
- The method for calculating the capital requirements for spread risk is detailed in Section 9.11 of FSI 4.1. Broadly, it is the sum of the capital requirements resulting from applying shocks to the credit spreads on interest bearing instruments, structured credit products and credit derivatives.
- The method for calculating the capital requirements for default risk is detailed in Section 9.15 of FSI 4.1. Broadly, it is calculated as the aggregate capital charge for type 1, type 2 and type 3 default risk exposures, allowing for diversification.
  - Type 1 refers to exposures for which a credit rating is available, but excludes cash held at banks.
  - Type 2 refers to exposures for which a credit rating is not available.
  - Type 3 refers only to cash held at banks.

**Important points to note**
- Spread and default risk factors are based on Credit Quality Steps which reflect long term historic probabilities of default, and allows for different external and internal ratings to be used in a consistent manner.
- Spread and default risk components should cover mutually exclusive sets of assets.
- Section 9.4 of FSI 4.1 outlines some of the assets and liabilities that must be included in the spread risk module.

### Currency Risk

**Section 8 of FSI 4.1**

**Definition**
- Currency risk arises due to the sensitivity of assets and liabilities to changes in the level or volatility of currency exchange rates.

**Methodology**
- The capital requirement is taken as the maximum capital requirement resulting from a 50% upward shock and a 30% downward shocks, where the shocks refer to an instantaneous rise/fall in the value of all currencies relative to the Rand.

**Important points to note**
- Section 8.2 of FSI 4.1 provides clarification with regard to the assets and liabilities to be included in the currency risk calculation.
- No capital is required for exposures where the currency risk is hedged through an eligible risk mitigation instrument.
- When determining future management action to be applied following the stress, insurers should assume that the stresses result entirely from industry wide events.

### Concentration Risk

**Section 10 of FSI 4.1**

**Definition**
- Concentration risk is defined as the risk of potential losses on investments over and above the systematic risks arising from portfolios of investments that are not sufficiently diversified. It does not include other types of concentrations, for example it excludes geographical concentrations and concentrations by industry.

**Methodology**
- The capital requirement is calculated in three steps:
  - Calculate the exposure per counterparty that is in excess of a concentration threshold, where this threshold depends on the Credit Quality Step of the counterparty and the type of investment. This is the “excess exposure”.
  - Determine the concentration risk capital requirement per counterparty, by applying an instantaneous downwards stress to the value of each excess exposure. The size of this stress depends on the Credit Quality Step of the counterparty.
  - Aggregate the concentration risk capital requirement across all counterparties. The aggregation formula allows for diversification between different counterparties.

**Important points to note**
- Section 10.3 of FSI 4.1 outlines the assets that should be excluded from the concentration risk module.
- The concentration risk on some assets is assessed using a different calculation from that outlined above. Details of these requirements are included in Attachment 5 of FSI 4.1.
- When determining future management action to be applied following the stress, insurers should assume that the stresses result entirely from company specific events, except for concentrations to South African banks, where they may assume the cause to be industry wide.

### Illiquidity premium Risk

**Section 11 of FSI 4.1**

**Definition**
- Illiquidity premium risk refers to the risk of a decrease in Basic Own Funds resulting from a decrease in the illiquidity premium used in the valuation of technical provisions.

**Methodology**
- When valuing technical provisions for annuities, the risk free yield curve can be adjusted by an illiquidity premium if certain criteria are met.
- The capital requirement is calculated as the change in the value of Basic Own Funds after a 65% fall in the value of the illiquidity premium used in the valuation of technical provisions.

**Important points to note**
- This module does not capture the effect of an increase in the illiquidity premium, since this is already captured in the spread risk module.
Other considerations

Further to the above, FSI 4.1 has the following attachments.

Attachment 1: Treatment of specific instruments

This includes specific details on capital required for collective investment vehicles and clarifies some grey areas for other assets and investment instruments, e.g. it provides information for cases where an asset has characteristics associated with both interest rate risk and equity risk.

Attachment 2: Adjustment for potential double-counting of loss absorbing capacity of technical provisions

For certain policies the technical provisions have the ability to absorb losses arising from the different stresses in each risk module. This includes with profit policies where past and/or future policyholder bonuses can be reduced following the stress scenario. The modular methodology underlying the Standardised Formula can result in double counting of this ability, potentially understating the SCR. In other words, since the loss absorbing capacity of technical provisions is allowed for separately within each risk module and then aggregated using correlation matrices, it is possible that the aggregated impact of these allowances is greater than the maximum loss absorbing capacity that is actually available.

To avoid understating the SCR in this manner, an adjustment is required. The adjustment approximates, at a group/fund level, the extent to which the total allowance for loss absorbing capacity exceeds the maximum loss absorbing capacity that is available. The sum of these amounts across all groups/funds is then the adjustment for double counting of loss absorbing capacity of technical provisions, and is used to increase the SCR.

Under SAM this adjustment is only required for the Market Risk SCR and is only required for with profits business.

The attachment highlights the details of how this adjustment needs to be calculated.

Attachment 3: Shocks to apply for interest rate curve risk

This attachment includes tables for interest rate shocks, where the shock percentage depends on the term of the instrument. These percentages must be applied to the spot curve.

Attachment 4: Spread risk factors

This attachment contains the spread risk and loss given default factors that need to be used when calculating the spread risk capital requirement for interest bearing instruments. It also describes a simplified capital requirement calculation for the spread risk on interest bearing instruments.

This attachment also contains the credit spread stresses that need to be used when calculating the spread risk capital requirement for credit derivatives.

Attachment 5: Adjustments to standard concentration risk requirements

This attachment details the treatment of specific asset classes in the concentration risk module, including those that need to be treated differently from the standard requirements.
Life underwriting risk is the risk arising from life insurance obligations such as from poor claims experience, expense over-runs and policy lapses.

**Calculation methodology**
The capital requirement for life underwriting risk is derived by combining the capital requirement for each risk module using a correlation matrix. The capital requirement for each risk module is taken as the impact on the Basic Own Funds of the shock event for that risk module. Within each risk module an allowance is made for risk mitigation impacts and the associated risk of counterparty default risk.

The capital requirement for life underwriting risk allows for risks arising from existing insurance obligations, and also makes an implicit allowance for risks arising from new business that is expected to be written over the following 12 months.

**Risk modules**
The tables below contain the following information for each risk in the life underwriting risk module:
- Definition of the risk
- Methodology used to calculate the capital requirement
- Other points to note

### SCR Life

#### Underwriting Risk

- **Definition**
  - Life underwriting risk is the risk of loss or of adverse change in the value of insurance obligations, resulting from an increase in mortality rates.

- **Methodology**
  - The capital requirement is based on a permanent 15% increase in mortality rates for each age for each policy where the payment of benefits is affected by changes in the mortality rates.
  - The insurer should also apply this stress to any policies that are indirectly affected by mortality risk. For example, it should be applied to disability products, since the run-off for these products depends on the number of deaths.

- **Important points to note**
  - For obligations that provide benefits in case of both death and survival of the same insured person, there is a natural hedge between mortality and longevity risk and the mortality stress may allow for the netting effect provided by this natural hedge.
  - When allowing for management action insurers should calculate the mortality risk capital requirement for different combinations of insurer-specific and industry-wide events, covering scenarios in the range (25:75) to (75:25). The insurer should then use the mix that results in the highest capital requirement net of allowing for management action.
  - Attachment 1 of FSI 4.2 sets out the details for the simplified method for calculating mortality risk capital requirements.
  - For policies with an original contract boundary of less than one year the capital requirement must be determined using the simplification.

### BSCR

- **Market**
- **Life**
- **Non-Life**

### Longevity Risk

- **Definition**
  - Longevity risk is the risk of loss or of adverse change in the value of insurance liabilities, resulting from a decrease in mortality rates.

- **Methodology**
  - The capital requirement is based on a permanent 10% relative decrease in mortality rates and a permanent 1% absolute increase in future mortality improvements for each age, for each policy where the payment of benefits is contingent on longevity risk.

- **Important points to note**
  - For obligations that provide benefits in case of both death and survival of the same insured person, there is a natural hedge between mortality and longevity risk and the longevity stress may allow for the netting effect provided by this natural hedge.
  - When allowing for management action insurers should calculate the longevity risk capital requirement for different combinations of insurer-specific and industry-wide events, covering scenarios in the range (25:75) to (75:25). The insurer should then use the mix that results in the highest capital requirement net of allowing for management action.
  - Attachment 2 of FSI 4.2 sets out the details for the simplified method for calculating longevity risk capital requirements.
  - For policies with an original contract boundary of less than one year the capital requirement must be determined using the simplification.
**Disability / Morbidity Risk**

**Section 7 of FSI 4.2**

**Definition**

- Morbidity and disability risk is the risk of loss of or adverse changes in the value of insurance liabilities, resulting from changes in the level, trend or volatility of disability and morbidity rates as well as changes to medical inflation relating to medical expenses insurance.

**Methodology**

- The capital requirement for disability risk is calculated as the sum of the capital requirement for the following two modules:
  - Medical expense insurance: the capital requirement is calculated as the maximum capital requirement resulting from either an upward or downward shock, where the claims inflation and claims rate assumptions are shocked upwards/downwards by a pre-defined percentage.
  - Income protection and lump sum disability/morbidity insurance: the SCR is based on a stressed scenario where disability/morbidity inception rates are permanently increased by 25% and the disability/morbidity recovery rates are permanently decreased by 20%.

**Important points to note**

- When allowing for management action insurers should calculate the disability/morbidity risk capital requirement for different combinations of insurer-specific and industry-wide events, covering scenarios in the range (25:75) to (75:25). The insurer should then use the mix that results in the highest capital requirement net of allowing for management action.
- Attachment 3 of FSI 4.1 sets out the simplified method for calculating the capital requirement for income protection and lump sum disability/morbidity insurance obligations.
- For policies with an original contract boundary of less than one year the capital requirement must be determined using the simplification.

**Lapse Risk**

**Section 8 of FSI 4.2**

**Definition**

- Lapse risk is the risk of loss or of adverse change in the value of insurance obligations due to a change in the expected exercise rates of contractual options.

**Methodology**

- The capital requirement is calculated separately for each homogenous group of policies, where “homogenous group” is defined sufficiently granularly to accurately determine the insurer's exposure to lapse risk. The results are then summed across all the homogenous groups.
- For each homogenous group the capital requirement is calculated as the maximum loss resulting from the following scenarios.
  - A prescribed “mass lapse” scenario, with a 40% immediate lapse rate for individual policies and a 70% immediate lapse rate for group policies.
  - A “level stress” scenario, with a permanent increase or decrease in the option exercise rates of 50%, depending on which direction is more prudent.
  - A “combined stress” scenario, which is a combination of the mass lapse and level stress scenarios.

**Important points to note**

- For the mass lapse scenario, total expenses for each homogenous group (excluding acquisition costs) must remain constant for one year after the mass lapse event and no management actions that reduce per policy expenses are permitted.
- When allowing for management action insurers should calculate the lapse risk capital requirement allowing for different combinations of insurer-specific and industry-wide events. The insurer should then use the mix that results in the highest capital requirement net of allowing for management action.
- For lapse risk the following ranges should be considered:
  - The mass lapse scenario should consider the range (25:75) to (75:25), and
  - The level stress and combined stress scenarios should consider the range (50:50) to (75:25).
- Attachment 4 of FSI 4.1 sets out the simplified method for calculating the capital requirement for the level stress scenario.
- For policies with an original contract boundary of less than one year the level stress capital requirement must be determined using the simplification.

**Expense Risk**

**Section 9 of FSI 4.2**

**Definition**

- Expense risk arises from variations in the expenses incurred in servicing insurance and reinsurance contracts. This includes the risk arising from variation in the growth of expenses over and above the expected rate of inflation.

**Methodology**

- The capital requirement is based on a pre-defined scenario of a 10% increase in future expenses relative to best estimate assumptions, plus a change in the best estimate inflation assumption equal to the greater of:
  - An absolute increase in inflation of 2% and
  - A relative increase in inflation of 20%.

**Important points to note**

- When allowing for management action insurers should calculate the expense risk capital requirement for different combinations of insurer-specific and industry-wide events, covering scenarios in the range (25:75) to (75:25). The insurer should then use the mix that results in the highest capital requirement net of allowing for management action.
- Attachment 5 of FSI 4.2 sets out the simplified method for calculating the expense risk capital requirement.
- For policies with an original contract boundary of less than one year the capital requirement must be determined using the simplification.
Life catastrophe Risk: Section 10 of FSI 4.2

**Definition**
- Life catastrophe risk is the risk of loss or of adverse change in the value of insurance obligations resulting from extreme or irregular events whose effects are not sufficiently captured by the other items in the life underwriting risk module.

**Methodology**
- The SCR is derived by combining the SCRs for the mortality catastrophe risk and morbidity catastrophe risk, with an allowance for diversification.
- The mortality catastrophe risk capital requirement is calculated by allowing for an instantaneous increase in the rate of policyholders dying in the first projection month, followed by a return to the best estimate mortality assumption thereafter. Section 10.5 of FSI 4.2 provides the formula for calculating the stressed mortality rate.
- The morbidity catastrophe risk capital requirement is calculated by allowing for an instantaneous increase in the morbidity inception rate in the first projection month, followed by a return to the best estimate morbidity inception assumption thereafter. The formula for calculating the stressed morbidity inception rate is given in Section 10.6 of FSI 4.2.

**Important points to note**
- The effect of risk mitigation instruments may be taken into account, based on the assumption that 10% of the catastrophe stresses are as a result of man-made or natural catastrophe events and 90% are as a result of epidemic and pandemic causes.
- The allowance for management action when calculating the capital requirement for life catastrophe risk should assume that the loss arises entirely from industry-wide events.
- Attachment 6 of FSI 4.2 sets out the detailed conditions and methodology for applying a simplification to the calculation of these catastrophe capital requirements.

Retrenchment Risk: Section 11 of FSI 4.2

**Definition**
- Retrenchment risk is the risk of loss or of adverse changes in the value of insurance liabilities, resulting from changes in the level, trend or volatility of retrenchment inception rates.

**Methodology**
- The capital requirement is calculated allowing for a permanent 50% increase in retrenchment inception rates, for each age, for each policy where the payment of benefits is contingent on retrenchment risk.
- This stress is applied to both lump sum and income retrenchment benefits.

**Important points to note**
- When allowing for management action insurers should calculate the retrenchment risk capital requirement for different combinations of insurer-specific and industry-wide events, covering scenarios in the range (25:75) to (75:25).
- The insurer should then use the mix that results in the highest capital requirement net of allowing for management action.
- Attachment 7 sets out the conditions and methodology for applying a simplification to the calculation of the retrenchment risk capital requirement.

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SCR Non-Life Underwriting Risk (FSI 4.3)

Non-life underwriting risk is the risk arising from non-life insurance obligations, such as from poor claims experience, expense over-runs and policy lapses. The non-life underwriting risk module takes account of the uncertainty in the results of insurers having regard to existing insurance and reinsurance obligations, as well as to the new business expected to be written over the following 12 months.

**Calculation methodology**
- The SCR for non-life underwriting risk is determined by aggregating the capital requirements for the individual non-life underwriting risks using a correlation matrix. The capital requirement for each risk module is taken as the impact on the Basic Own Funds of the shock event for that module. Within each risk module an allowance is made for risk mitigation impacts and the associated risk of counterparty default risk.

In addition to the abovementioned risk modules, the non-life underwriting SCR also contains the following components.
- An allowance for any risk mitigation that would apply to a combination of premium, reserve and catastrophe risk losses, to the extent that this is not allowed for elsewhere in the non-life underwriting module. Insurers should be careful that this allowance does not result in any double counting of risk mitigation.
- An allowance for any risk mitigation that would apply to a combination of premium, reserve and catastrophe risk losses, to the extent that this is not allowed for elsewhere in the non-life underwriting module.
- An impairment for the counterparty default risk associated with the abovementioned risk mitigation from stop loss reinsurance and other risk mitigation arrangements.
- An optional adjustment to reflect any features of the business that are not captured elsewhere in the non-life underwriting module. This adjustment can relate to product features, risk mitigation agreements or any other aspect of the business that has a loss absorbing or amplifying impact on the insurer’s risk exposure, and is not allowed for elsewhere in the module. The following are important considerations relating to this adjustment, which is discussed in detail in Attachment 2 of FSI 4.3:
  - It can either increase or decrease the non-life underwriting capital requirement, depending on the nature of the features that it captures.
  - This adjustment needs to be accompanied by a dedicated annual report issued by the insurer’s Head of Actuarial Control, setting out the appropriateness of this adjustment.
  - The adjustment may not increase the insurer’s solvency ratio by more than 25%, where solvency ratio is equal to the insurer’s Eligible Own Funds expressed as a percentage of its SCR. The Prudential Authority may prescribe a lower percentage on a case by case basis.
- The capital requirement for the non-life underwriting risk in first party insurance structures, where insurers use the prescribed simplified methodology to calculate this capital requirement. The result from this simplified approach replaces the capital requirement that would usually be calculated for these risks. The simplification is calculated separately for each first party structure within an insurer and uses a factor based approach that is based on the sum assured net of reinsurance, the written premium net of reinsurance and the experience account balance. Attachment 1 of FSI 4.3 contains details of these simplifications, including the conditions that need to be satisfied for these simplifications to be used.

**Risk modules**
- The tables below contain the following information for each risk in the non-life underwriting module:
  - **Definition of the risk**
  - **Methodology used to calculate the capital requirement**
  - **Other points to note**
**Premium & Reserve Risk**

**Section 6 of FSI 4.3**

**Definition**
- Premium risk results from fluctuations in the timing, frequency and severity of insured events. Premium risk relates to policies to be written (including renewals) during the period, and to unexpired risks on existing contracts and includes the risk that premium provisions need to be increased or that they turn out to be insufficient to meet claims.
- Reserve risk results from fluctuations in the timing and amount of claims incurred at the valuation date.

**Methodology**
- Volume measures are calculated per risk and per line of business, for both premium and reserve risk.
- Standard deviations are specified in Attachment 4 of FSI 4.3.
- The volume measures and standard deviations are then aggregated across lines of business to obtain a total volume measure and total standard deviation, allowing for diversification between the different lines of business.
- The total volume measure and total standard deviation are then used to calculate the capital requirement for premium and reserve risk.

**Important points to note**
- The volume measures should include cash flows that are allowed for in “Other Technical Provisions” calculated under Section 6.18 of FSI 2.2. These cash flows are listed below.
  - Cash-back and other loyalty payments
  - Contingent commission payments
  - Other contingent payments
- In calculating the volume measures insurers may choose for certain lines of business not to estimate the premiums it expects to earn over the next 12 months, as long as these lines of business meet the conditions set out in section 5.11 of FSI 4.3.
- Insurers may apply for approval from the Prudential Authority to replace the standard parameters for premium and reserve risk with their own insurer specific parameters. This is discussed in Sections 5.23 to 5.26 of FSI 4.3, with further details being provided in Attachment 7 of the same FSI.

**Non-life Catastrophe Risk**

**Section 7 of FSI 4.3**

**Definition**
- Non-life catastrophe (CAT) risk is the risk of loss or of adverse change in the value of insurance liabilities, resulting from significant uncertainty of pricing and provisioning assumptions related to extreme or exceptional events. It stems from extreme or irregular events that are not sufficiently captured by the capital requirements for premium and reserve risk.

**Methodology**
- The non-life CAT risk capital requirements can be calculated by using either one or a combination of the following two methods.
  - Method 1: Standardised scenarios (Sections 7.6 to 7.25 of FSI 4.3).
    - This method entails calculating the greatest loss, net of risk mitigation resulting from a variety of catastrophic scenarios. These scenarios cover natural catastrophes, man-made catastrophes and catastrophes specific to inwards non-proportional reinsurance.
  - Method 2: Factor-based methods (Sections 7.26 to 7.28 of FSI 4.3).
    - This method calculates the CAT capital requirement as a proportion of the gross premiums expected to be earned over the next 12 months. The proportion applied to the gross premiums differ by line of business.
- Section 7.4 of FSI 4.3 describes the main criteria that should be used to determine which of the above methods should be used for different non-life CAT risk exposures. Where possible, insurers should use Method 1, noting that Method 2 is required where an insurer has:
  - Circumstances where the standardised scenarios under Method 1 do not adequately assess the risk profile of their insurance obligations,
  - Exposures outside South Africa, or
  - Insurance business that is classified in the Miscellaneous, Agriculture - Equipment or Agriculture - Other (sub-)lines of business.
- Where insurers use a combination of the two methods, the capital requirements for the two methods are aggregated, with an allowance for diversification, to obtain the total non-life CAT capital requirement.

**Important points to note**
- The natural and man-made catastrophe scenarios required for Method 1 are described in Attachments 8 and 9 of FSI 4.3.

**Lapse Risk**

**Section 6 of FSI 4.3**

**Definition**
- Lapse risk is the risk that these assumptions turn out to be wrong or need to be changed.

**Methodology**
- The SCR is calculated as the change in the Basic Own Funds when the two lapse shocks specified in section 6.3 of FSI 4.3 are applied. These lapse shocks are outlined below:
  - Lapse shock 1: Lapsing of 40% of all in-force insurance policies for which lapsing assumptions about the exercise rate of such options have no material influence on premium provisions, such policies do not need to be included in the calculation of the lapse risk capital requirement.
  - Lapse shock 2: A 40% decrease in the number of future insurance policies or renewal contracts according to previously agreed conditions. A 40% decrease in future insurance policies or renewal contracts would result in an increase in technical provisions excluding the risk margin.

**Important points to note**
- Where non-life insurance policies do not include contractual options, or where the assumptions about the exercise rate of such options have no material influence on premium provisions, such policies do not need to be included in the calculation of the lapse risk capital requirement.
SCR Other items

To calculate an SCR insurers need to calculate a number of items in addition to the BSCR. These additional items are described in this section.

Adjustment for loss absorbing capacity of deferred taxes

The adjustment for the loss absorbing capacity for deferred taxes is a global adjustment to the SCR.

Losses as a result of an SCR event may reduce the value of deferred tax liabilities on the SAM balance sheet, and could even result in the setting up of a deferred tax asset after the SCR event. This would reduce the impact of an SCR event on the insurer’s Basic Own Funds. The maximum amount of deferred tax assets that may be assumed for these purposes is limited to the amount of tax that can be recovered from the profits that are expected in the three years following the aggregated SCR loss event. Guidelines on the calculation of the loss absorbing capacity of deferred taxes are given in Attachment 5 of FSI 4.

Operational Risk (FSI 4.4)

Operational risk is the risk of loss arising from inadequate or failed internal processes, people and systems or from external events. Operational risk includes legal risks, but excludes risks arising from strategic decisions and also excludes reputational risks.

The methodology for calculating the capital requirement related to operational risk uses a simple linear measure of operational risk based on the scale of an insurer’s operations. For linked insurance obligations, the SCR calculation for operational risk is based on the expenses incurred in respect of linked business and the volume of linked assets under management. For all other insurance obligations it is calculated based on earned premiums and technical provisions, and is limited to a maximum of 30% of the BSCR.

Treatment of participations

Section 4.11 of FSI 4 outlines four different approaches to calculate the SCR associated with participations. The applicable approach depends on the nature and activities of the participation, as outlined below.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Participations in</th>
<th>SCR Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach 1</td>
<td>Participations in Asset Holding Intermediaries</td>
<td>Adjust DT BSCR Operational Participations</td>
</tr>
<tr>
<td>Approach 2</td>
<td>Participations in financial activities (excluding insurers)</td>
<td>The value of the participation is deducted from Own Funds and these participations attract a zero capital charge for the purposes of calculating the SCR.</td>
</tr>
<tr>
<td>Approach 3</td>
<td>Participations in insurance activity with assets within the same sector as the insurer</td>
<td>The capital requirement for such participations must be calculated in the participations risk module, using the methodology outlined in Attachment 3 of FSI 4. No allowance for diversification with other risks is made.</td>
</tr>
<tr>
<td>Approach 4</td>
<td>All other participations</td>
<td>Treated in the same way as other equity investments.</td>
</tr>
</tbody>
</table>

SCR Internal Models

(FSI 5)

Insurers may use the Standardised Formula (as described in Sections 8 to 12 of this training manual) to calculate the SCR, or may apply to the Prudential Authority for approval to calculate the SCR using an Internal Model. This can be a Full Internal Model or a Partial Internal Model, where the latter applies only to certain risks or business units of an insurer. The process for applying for approval of an Internal Model is set out in Section 5 of FSI 5.

The key requirements to obtain and maintain approval for the use of an Internal Model are:

- Insurers must adequately document the design and operational details of their Internal Model
- Partial Internal Models may be approved provided they are sufficiently justified and integrated into the Standardised Formula.

These requirements are summarised below. Refer to the relevant section in FSI 5 for the full details of each requirement.

Model governance (section 6 of FSI 5)

Insurers are required to establish minimum systems of governance for the Internal Model. The insurer must note that the board of directors retains ultimate responsibility for the Internal Model. The insurer must establish effective communications between all parties involved in the model, and must review and validate the model on an ongoing basis. There should be clear roles and responsibilities for the day-to-day operation of the Internal Model.
The use test (Section 7 of FSI 5)

Insurers must demonstrate that the model is widely used and plays an important role in their systems of governance. This should include the use of the model in decision-making processes, business planning, risk management, capital assessment and allocation processes, and the Own Risk and Solvency Assessment (ORSA).

The board of directors should have a general understanding of the Internal Model, whereas any of senior management who is responsible for the Internal Model, a component of the model, or whose responsibilities are impacted by the model, should have a detailed understanding and operating knowledge of the areas of the model relevant to them.

Methodology and statistical quality (Section 8 of FSI 5)

Any methodology that evaluates the financial impact of future events must meet the FSIs statistical quality requirements in terms of the calculation framework as well as the quantitative methods and associated techniques. The method used should be:

- Based on adequate, applicable and relevant actuarial and statistical techniques
- Consistent with the methods used to calculate technical provisions as set out in FSI 2.2
- Based upon current and credible information
- Based on realistic assumptions.

The Internal Model should cover all of the material risks to which the insurer is exposed, and at a minimum, the risk categories and components covered by the Standardised Formula. Insurers should also be able to rank all material risks covered by the model.

Insurers may allow for diversification and dependencies in the Internal Model, provided the measuring systems are adequate.

The model may include the effect of risk mitigation instruments, as long as they satisfy the same requirements as for the Standardised Formula.

Insurers must accurately assess the risks, guarantees and any contractual options in the Internal Model, in a manner consistent with the methods used to value the technical provisions.

Allowance for reasonable future management action should be taken into account, allowing for the time necessary to implement the management action, and in a manner that is consistent with the criteria and methods used to value the technical provisions. Assumptions must be supported by a documented Future Management Action Plan approved by the board of directors.

Future profits may be partially recognized upon application by an insurer, subject to the conditions set out in Section 8.19 of FSI 5.

The SCR derived from the Internal Model must meet the 99.5% confidence level, one-year value-at-risk calibration requirement.

Data (Section 9 of FSI 5)

Data quality standards should be developed and an insurer should compile a directory of all data used in the model, specifying its source, characteristics and usage. They must perform regular data quality reviews to ensure the data used remain accurate, complete, appropriate and current. Expert judgement may be used to complement or substitute data in the Internal Model.

A policy on data quality and data updates in respect of data used in the Internal Model must be established.

External models or data may be used if they are appropriate, understood, and the associated risks are documented.

Validation (Section 10 of FSI 5)

Insurers must have a regular cycle of model validation, including the use of back-testing, sensitivity analysis, stress/scenario testing and profit and loss attribution.

In order to ensure independence of the model validation process, the unit carrying out the validation must be free from influence from those responsible for the development and operation of the model. The board of directors retains ultimate responsibility for approving the validation process.

Insurers must have a documented validation policy setting out the validation approach and reason for choosing the validation approach.

Documentation (Section 11 of FSI 5)

Insurers must document the design and operational details of their Internal Model in sufficient detail so that a third party can understand, judge and assess the model. A third party must also be able to reproduce the outputs from the Internal Model using only the documentation and the inputs to the model.

Partial Internal Models (Section 12 of FSI 5)

Insurers must integrate the results of Partial Internal Models with those of the Standardised Formula. As a default approach, insurers should adopt the Standardised Formula correlation matrices to integrate the Partial Internal Model whenever this approach is feasible and there is no strong evidence to suggest that it would lead to inappropriate outcomes.

The other requirements for Internal Models apply equally to Partial Internal Models, with some adjustments or clarification specific to Partial Internal Models. These adjustments and clarifications are set out in Sections 12.6 to 12.19 of FSI 5.
Minimum Capital Requirements (FSI 3)

The Minimum Capital Requirement (MCR) is a relatively simple measure that establishes the absolute minimum level of Eligible Own Funds that the Prudential Authority considers necessary to protect policyholders which, if breached, is likely to result in the strongest regulatory intervention. It consists of a simply linear formula linked to the scale of an insurer’s business. This is described in detail in Section 9 of FSI 3.

For composite insurers the AMCR is the greater of R30 million and 25% of gross annualised operating expenses. (Section 9.1 of FSI 3)

MCR for life insurers (Section 7 of FSI 3)
The MCR for life insurers is a linear formula based on the net of reinsurance best estimate liability and capital-at-risk, where capital-at-risk is the financial strain on claim. The factors applied to the best estimate liabilities and capital-at-risk differ depending on the features of the underlying business. (Section 7 of FSI 3)

MCR for composite insurers (Section 9 of FSI 3)
The MCR for composite insurers is a combination of the MCRs for life insurers and non-life insurers. This is described in detail in Section 9 of FSI 3.

AMCR
For both life and non-life insurers the AMCR is the greater of R15 million and 25% of gross annualised operating expenses, where operating expenses exclude (amongst other items) acquisition expenses and asset management fees. (Section 5.3 of FSI 3)

Risk mitigation
• Requirements for ring-fenced funds
• Risk mitigation
• Liquidity risk assessment

Ring-fenced funds (Attachment 4 of FSI 4)
Overview
Ring fenced funds arise where there are restricted Own Funds that have a reduced capacity to fully absorb losses on a going concern basis due to their lack of transferability within the insurer. This lack of transferability may arise because the restricted own funds can only be used to cover the following:
• Only cover losses on a defined portion of the insurer’s business
• Only cover losses in respect of particular policyholders or beneficiaries
• Only cover losses in relation to particular risks

Examples of ring-fenced funds include cell arrangements, as well as some business with discretionary participation features.

Calculation methodology
Calculating the SCR for an insurer with ring-fenced funds involves calculating a notional SCR for each ring-fenced fund and for the insurer as a whole. Details of this is set out in Attachment 4 of FSI 4.

A high level explanation of the SCR calculation for insurers with ring fenced funds is given below:
• Calculate separate notional SCRs for each of the ring-fenced funds, as well as a notional SCR for the remaining business that is not ring-fenced.
• If the ring-fenced arrangements don’t involve a cell structure, the SCR for the insurer as a whole is the simple sum of the notional SCRs for the ring-fenced funds and the notional SCR for the business outside the ring-fenced funds. This means that there is no allowance for diversification between the ring-fenced funds, and also no allowance for diversification between the ring-fenced funds and the business outside the ring-fenced funds.
• For cell business the SCR should be calculated as set out in Part C of Attachment 4 of FSI 4. The main characteristics of this approach is given below:
  – Each cell to hold a minimum SCR of R1 million.
  – Allowance is made for some diversification between the insurer’s promoter environment and the risks in its cells.

Other items to be considered under Pillar 1
This section discusses other items that need to be considered as part of SAM’s Pillar 1 requirements. Specifically, it covers the following items:

• Requirements for ring-fenced funds
• Risk mitigation
• Liquidity risk assessment

• Calculation methodology
• Other items to be considered under Pillar 1
Risk mitigation
Risk mitigation is split into financial and insurance risk mitigation:
- Financial risk mitigation refers to the use of financial instruments, such as derivatives, that transfer risk to financial markets.
- Insurance risk mitigation refers to the use of reinsurance contracts or special purpose vehicles to transfer underwriting risks.
- Attachment 1 of FSI 4 sets out eligibility conditions for using risk mitigation instruments in calculating the SCR. These include:
  - General qualitative provisions
  - Requirements for insurance risk mitigation arrangements to be incorporated in the SCR
  - Requirements for financial risk mitigation arrangements to be incorporated in the SCR
  - Requirements to be met by the risk mitigation counterparties for the arrangement to be incorporated in the SCR.

Whenever the SCR is reduced to allow for the impact of risk mitigation arrangements an adjustment needs to be made for the default risk associated with the counterparty to the risk mitigation arrangement. Details of this allowance for counterparty default risk is outlined in Attachment 2 of FSI 4.

Liquidity risk assessment (FSI 6)
A Liquidity Shortfall Indicator is calculated by comparing the available liquid assets with the cash flow requirements after a combined SCR loss event. This means that the Liquidity Shortfall Indicator is calculated at a 1-in-200 year confidence level, i.e. at the same confidence level as the SCR. The Liquidity Shortfall Indicator does not feed into an insurer’s SCR calculation, but provides the Prudential Authority with information on the insurer’s ability to remain liquid following a severely adverse event. As part of the ORSA, which falls under SAM’s Pillar 2 requirements, insurers need to perform a more sophisticated assessment of their exposure to liquidity risk.

The Liquidity Shortfall Indicator only applies to life insurance companies and is not required to be completed by non-life insurers. Furthermore, the calculation only applies to the assets and cash flows relating to non-linked business of life insurers.

Insurance Groups
The Financial Soundness Standards for Groups (FSGs) apply to all insurance groups, as designated under Section 10 of the Insurance Bill.

Insurance groups are analysed at group level taking into account all the subsidiaries that are considered material by the Prudential Authority.

Roles and Responsibilities for Groups (FSG 1)
The SAM Pillar 1 responsibilities for groups is very similar to that for solo insurers. Specifically, at a group level the Board of Directors, the Head of Actuarial Control and the Auditor of the controlling company have responsibilities that are similar to the equivalent responsibilities for solo insurers. In addition to these responsibilities the Board of Directors of a controlling company must also consider the extent to which Own Funds is transferrable between different entities within the group to absorb losses.

Further details regarding the roles and responsibilities for groups can be found in FSG 1.
Determination of Own Funds and SCR for Groups (FSG 1)

Insurance groups need to calculate aggregate Own Funds and SCR at a group level and can use any of the following three methods to perform these calculations:

• Deduction and Aggregation (D&A) method
• Accounting Consolidation (AC) method or
• Internal Model or Partial Internal Model

Prior approval is required to use the AC method, and Internal Model or a Partial Internal Model. An Internal Model or Partial Internal Model should comply with the requirements of an internal model for solo insurers, as set out in FSI 5.

Deduction and Aggregation method (FSG 2)

The Deduction and Aggregation (D&A) method calculates group Own Funds and group SCR by aggregating the adjusted solo Own Funds and adjusted solo SCRs of the controlling company and its participations. The solo Own Funds and solo SCRs are adjusted by removing the impact of intra-group transactions between entities in the insurance group. The following are examples of intra-group arrangements for which the impacts excluded:

• Loans
• Guarantees and off balance sheet transactions
• Capital investments
• Reinsurance arrangements
• Cost sharing arrangements
• Risk transfer transactions

The group’s total Own Funds is calculated by adding together the adjusted Own Funds of the controlling company and the adjusted Own Funds of the entities within which the group has significant interests, where the latter is pro-rated by the insurance group’s economic interest in the relevant participation. The group’s total SCR is calculated similarly.

In cases where there are restrictions which limit Own Funds to be only available for a specific purpose or for a specific participation, such solo Own Funds can only be included in the group Own Funds up to the amount required to meet the relevant solo SCR.

If a participation within the insurance group holds solo Own Funds less than its solo SCR, the full deficit is taken into account in the group calculation, i.e. for such a participation the group SCR includes the full solo SCR, even though the related solo Own Funds that is included in the group aggregation is less than the solo SCR.

Any solo entity capital add-ons required by the Prudential Authority must be included in the calculation of the group SCR.

The insurance group’s Eligible Own Funds are based on the same eligibility criteria as for solo insurers, except that for some specified entities the eligibility of Own Funds must be based on the regulatory requirements relating those entities.

Treatment of entity types

Entities where the insurance group has no significant influence, e.g. entities where the insurance group holds a holding of less than 20%, must be treated as an equity investment for the purposes of group calculations. That is, such investments must be recognised as an asset on the insurance group’s balance sheet, and the relevant equity risk stresses must be applied to that asset when calculating the group SCR.

For all other entities within the insurance group, i.e. for the controlling company and all entities where the insurance group has significant influence, the treatment depends on the type of entity. The below table summarises how to determine the solo Own Funds and solo SCR for different entity types.

<table>
<thead>
<tr>
<th>Type of entity</th>
<th>Own Funds</th>
<th>SCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>South African insurer licensed by the Prudential Authority</td>
<td>Solo Own Funds as determined under FSI 2.3 (Determination of Eligible Own Funds)</td>
<td>Solo SCR as determined under FSI 4 (Calculation of the SCR Using the Standardised Formula) or, for insurers where an Internal Model was approved, FSI 5 (Calculation of the SCR Using a Full or Partial Internal Model)</td>
</tr>
<tr>
<td>Non-South African insurer regulated in an equivalent jurisdiction</td>
<td>Solo capital resources as determined under local regulatory requirements in the equivalent jurisdiction</td>
<td>Solo capital requirement as determined under local regulatory requirements in the equivalent jurisdiction</td>
</tr>
<tr>
<td>Non-South African insurer regulated in a non-equivalent jurisdiction</td>
<td>Solo Own Funds as determined under the Financial Soundness Standards for Insurers, although insurance groups can apply to the Prudential Authority to apply alternative methods</td>
<td>Solo SCR as determined under the Financial Soundness Standards for Insurers, although insurance groups can apply to the Prudential Authority to apply alternative methods</td>
</tr>
<tr>
<td>Controlling company which is not an insurer licensed by the Prudential Authority</td>
<td>Adjusted Net Asset Value as calculated on the basis of valuation requirements for participations in Sections 5.5 and 5.6 of FSI 2.1 (Valuation of Assets and Liabilities Other than Technical Provisions)</td>
<td>The capital requirement derived by applying the equity stress prescribed in Section 6.11 of FSI 4.1 (Market Risk Capital Requirement), or zero where the Adjusted Net Asset Value of the entity is less than zero</td>
</tr>
<tr>
<td>Regulated financial or credit institution, excluding insurers</td>
<td>Regulatory capital resources as per the relevant sectoral rules</td>
<td>Regulatory capital requirements as per the relevant sectoral rules. Where the regulated financial or credit institution has no specific capital requirement under sectoral rules, the regulated institution should be treated as a “non-regulated entity” (see below)</td>
</tr>
<tr>
<td>Non-regulated entity</td>
<td>Adjusted Net Asset Value as calculated on the basis of valuation requirements for participations in Sections 5.5 and 5.6 of FSI 2.1 (Valuation of Assets and Liabilities Other than Technical Provisions)</td>
<td>The capital requirement derived by applying the equity stress prescribed in Section 6.11 of FSI 4.1 (Market Risk Capital Requirement), or zero where the Adjusted Net Asset Value of the entity is less than zero</td>
</tr>
</tbody>
</table>
The Accounting Consolidation method (FSG 3)

Insurance groups require approval from the Prudential Authority in order to use the Accounting Consolidation (AC) method. This method can only be applied to licensed insurers within the group, with these entities being collectively called “the AC group”, while all other entities must be assessed using the Deduction and Aggregation method.

The Accounting Consolidation method requires the construction of a single, consolidated balance sheet for the AC group, with this being based on the consolidation rules in IFRS 10. The solo requirements set out in the Financial Soundness Standards for Insurers must then be applied to this consolidated balance sheet to determine the AC group’s Own Funds and SCR. Using this approach, the Accounting and Consolidation method treats the AC group as if it were a single entity, and assumes full fungibility and transferability of Own Funds between within the AC group.

The AC group is then aggregated with the other entities in the group using the Deduction and Aggregation method to determine the group’s total Own Funds and total SCR. This aggregation should allow for fungibility and transferability restrictions in line with the requirements for the Deduction and Aggregation method.