

INFORMATION NOTE: LOSS-ABSORBING CAPACITY OF DEFERRED TAXES CONSIDERATIONS

Classification

This document is classified as an Information Note.

Abstract

This information note outlines considerations with respect to the loss-absorbing capacity of deferred taxes for actuaries calculating or reviewing the Solvency Capital Requirement for regulatory reporting under the Insurance Act (18 of 2017).

Purpose

This document is intended as a guide to support actuaries in fulfilling their responsibilities and is not a complete list of all possible considerations. It is not intended to prescribe requirements nor provide formal actuarial guidance.

Legislation or Authority

The Actuarial Society of South Africa.

Application

Members calculating or reviewing the Solvency Capital Requirement for regulatory reporting under the Insurance Act (18 of 2017).

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1 DEFINITIONS

<i>Actuary or Actuaries</i>	A member of the Actuarial Society of South Africa as defined in the Code of Professional Conduct, or a member of another recognised actuarial association to whom this Information Note applies
<i>Act</i>	Insurance Act (18 of 2017), including relevant amendments, Prudential Standards, regulations, Prudential Authority directives and guidance notes
<i>AdjDT</i>	Adjustment factor for the loss-absorbing capacity of deferred taxes, as defined in FSI 4, Attachment 5
<i>AdjDT_{SVG}</i>	The adjustment factor for the loss-absorbing capacity of deferred taxes, as defined in FSI 4, Attachment 5
<i>CF</i>	Corporate Fund, as defined in the Income Tax Act
<i>CGT</i>	Capital Gains Tax
<i>CPF</i>	Corporate Policyholder Fund, as defined in the Income Tax Act
<i>DTA</i>	Deferred Tax Asset
<i>DTL</i>	Deferred Tax Liability
<i>FSI</i>	Financial Soundness Standard for Insurers
<i>GOI</i>	Governance and Operational Standard for Insurers
<i>IFRS</i>	International Financial Reporting Standard
<i>IPF</i>	Individual Policyholder Fund, as defined in the Income Tax Act
<i>LACDT</i>	Loss-absorbing capacity of deferred taxes
<i>MCR</i>	The minimum capital requirement as determined in terms of the Act
<i>ORSA</i>	Own Risk and Solvency Assessment, as defined in GOI 3.1
<i>PSR</i>	Prudential Supervision Reporting, which refers to results calculated for prudential supervision purposes as determined in terms of the Act, including any such results in the ORSA report.
<i>RFP</i>	Risk Policyholder Fund, as defined in the Income Tax Act
<i>SCR</i>	The solvency capital requirement as determined in terms of the Act

2 INTRODUCTION

2.1 Background

The *LACDT* often has a large impact on the standardised formula *SCR* defined in the *FSIs*.

The methodology to calculate the *LACDT* is outlined as high-level principles in the *FSIs*, but the *LACDT* calculation is very complex, in part due to the various tax rules applicable to insurers, as well as the *LACDT* calculation often requiring various simplifications and significant professional judgment to be applied.

This note aims to:

- Increase awareness of the abovementioned complexities;
- Support actuaries in performing this complex calculation and applying simplifications and judgement appropriately; and
- Encourage a consistent *LACDT* allowance across insurers.

This is done through describing aspects of the *LACDT* calculation that are particularly complex and considerations that could be considered for each aspect.

While this note contains various considerations it is not exhaustive and is not intended to cover all the situations that may arise in practice. It thus remains the responsibility of each actuary calculating or reviewing a *LACDT* calculation to consider any regulatory and other factors that may be relevant, as well as how these factors affect the *LACDT*.

2.2 Scope of this note

The note applies to actuaries calculating or reviewing the *LACDT* of insurers and controlling companies of insurance groups. It does not consider branches of foreign reinsurers, microinsurers, Lloyd's or any entity that does not pay tax, as *LACDT* is not applicable to these entities.

2.3 Limitations

The following limitations apply to this information note:

- The note considers *LACDT* within the context of the standardised formula *SCR*. It does not consider the context of an approved internal model or economic capital model.
- The note focuses on the main application of *LACDT* within the *SCR* calculation and does not consider the $AdjDT_{SVG}$ adjustment that forms part of the Surrender Value Gap calculation in *FSI* 2.3, Attachment 4 nor the application of *LACDT* to ring-fenced funds, as described in *FSI* 4 (Section 5.17 – Section 5.24) and Attachment 4 thereto.

2.4 Overview of *LACDT*

The *LACDT* is designed to allow for the ability of deferred taxes to absorb the 1-in-200 year loss that underlies the calculation of the *SCR* ("1-in-200 year loss").

Tax is paid on the *IFRS* basis (after appropriate adjustments).

There are asset and liability valuation differences between *IFRS* and *PSR* bases with the combined impact usually leading to an accelerated release of profits on the *PSR* basis, resulting in additional DTLs, as per *FSI* 2.1 (Section 4.4). Specifically:

- *PSR* liabilities are usually lower than the *IFRS* liabilities resulting in a release of profits on the *PSR* basis that have not yet been taxed, which requires setting up an additional DTL for the tax on these released profits that is to be paid in future. An additional DTL could also be generated by any other differences between the *IFRS* and *PSR* bases that result in taxable

profits being released. Any DTLs raised in this manner create loss-absorbing capacity for the SCR.

- Conversely, it is possible that valuation differences between the *IFRS* and *PSR* bases result in Basic Own Funds being lower than the *IFRS* Excess Assets, which requires an additional DTA to be raised. Any DTAs raised in this manner reduce loss-absorbing capacity for the SCR.

This note refers to the above items as the “base DTL/DTA adjustments”.

The *LACDT* is also affected by existing, historically generated DTL or DTA on the *IFRS* balance sheet other than those defined as base DTL/DTA adjustments. In particular, the existing, historically generated DTL (DTA) on the *IFRS* balance sheet may increase (reduce) the loss-absorbing capacity for the SCR.

The SCR may be reduced to the extent that the 1-in-200 year loss will result in a reduction of the DTLs on the *PSR* basis. Furthermore, a DTA may be raised in the event that the insurer expects to make profits after the stress event, i.e. depending on the expected level of “post-stress profits” the SCR may be reduced further through raising of a “post-stress DTA”.

2.5 Structure of this note

The note contains considerations for the key aspects of complexity within the *LACDT* calculation. Not all these aspects apply equally to life insurers and non-life insurers and the appropriate approaches can differ between life and non-life insurers.

The note starts with general considerations in Section 3.

More specific considerations are categorised into two categories, firstly those relating to the application of tax rules and secondly those relating to the recoverability of post-stress DTAs.

- Allowance for tax rules

The tax rules governing insurers are complex in the ordinary course of business and even more so under stressed conditions. If this complexity is not adequately considered it can result in insurers using approximations which could under- or overstate the *LACDT* adjustment to the SCR.

Section 4 contains the relevant regulatory background, the aspects of complexity relating to the application of tax rules, as well as considerations relating to each aspect of complexity. The section also contains a summary of the tax rules applicable to insurers.

- Recoverability of post-stress DTAs

The *LACDT* calculation requires that any post-stress DTA is recoverable from post-stress profits in the three years after the 1-in-200 year loss. Assessing this recoverability requires various decisions and the application of judgement to several areas related to expected future profits and the nature of these profits.

Section 5 contains the relevant regulatory background, the aspects of complexity relating to the recoverability of post-stress DTAs, as well as considerations relating to each aspect of complexity.

Section 6 is an appendix that contains various examples of how tax rules apply to insurers.

Section 7 is an appendix with examples of considerations relating to post-stress profits.

Section 8 is an appendix with example methodologies to disaggregate the SCR between tax funds/tax types, as well as high level methodologies to calculate post-stress profits.

2.6 Other relevant sources of information

The following are other sources of information relevant to *LACDT*.

- Position Paper 112 version 3
- Even though *LACDT* considerations are unique within each jurisdiction, principles could be gleaned from international practice:
 - EIOPA guidelines:
https://www.eiopa.europa.eu/sites/default/files/publications/eiopa_guidelines/lac_financial_document_en.pdf
 - Guidance by De Nederlandsche Bank:
<https://www.toezicht.dnb.nl/3/50-233202.jsp>

3 GENERAL CONSIDERATIONS

This section contains general considerations relating to the calculation of *LACDT*.

Accurate allowance for *LACDT* is complex and the principle of proportionality may be appropriate when performing the calculation and when applying the considerations within this information note.

It is important to consider consistency in the modelling of the *SCR*, base DTL/DTA adjustment, 1-in-200 year loss and projected profits, especially where there are differing methodologies between these items.

FSI 2.1 (Section 4.1), which requires valuation of deferred taxes in line with *IFRS*, is an important consideration for the assessment of both pre-stress and post-stress DTLs/DTAs.

4 APPLICATION OF TAX RULES

This section describes considerations on applying the tax rules, as set out in the Income Tax Act, to the LACDT.

4.1 Relevant background from Prudential Standards for Insurers

The base DTL/DTA adjustment is described in FSI 2.1, Section 4.4:

"Deferred taxes should be calculated based on the difference between the values ascribed to assets and liabilities in accordance with the principles of this Standard and FSI 2 (Valuation of Assets, Liabilities and Eligible Own Funds), and the value ascribed to the same assets and liabilities reported for tax purposes."

The LACDT calculation is set out in FSI 4, Attachment 5, with item 4 specifically stating that the calculation should make appropriate allowance for the tax fund in which the loss is expected to occur.

4.2 Aspects of complexity

This section identifies three aspects of complexity relating to the application of tax rules.

4.2.1 Aspect 1: Allowing for constraints on LACDT to reflect the separation of tax funds and tax types

FSI 4, Attachment 5, Item 2 defines LACDT as relating to the change in an insurer's deferred tax assets, which implies that any relevant tax rules need to be considered within the LACDT calculation. Specifically, Item 4 requires consideration of how DTLs, DTAs and the SCR relate to different tax funds.

The base DTL/DTA can easily be split between tax funds and between that arising from capital gains and income, but this is not the case for the SCR nor for any post-stress DTA. The allowance for correlations and diversifications in the SCR calculation means that typically there does not exist a uniquely correct allocation of the SCR and post-stress DTA across the various tax funds/tax types.

The complexity of these constraints creates a risk that they are not fully reflected in the LACDT calculation, which could overstate LACDT and hence understate SCR due to tax profits and tax losses being incorrectly offset against each other.

It is thus important that insurers make an appropriate allowance for the abovementioned constraints and that any simplifications adopted under the principle of proportionality are reasonable and appropriate.

4.2.2 Aspect 2: Calculation of base DTL/DTA adjustments

There are various complexities within the calculation of the base DTL/DTA adjustments when moving from the IFRS basis to the PSR basis.

4.2.3 Aspect 3: Allowance for policyholder tax funds under the market risk module

Under the market risk module, assumed changes in asset prices and yield curves can give rise to income and capital gains tax impacts. Complex tax rules that affect the market risk module include the following:

- How capital gains and capital losses may be offset against one another;
- The offsetting of capital losses against unrealised gains;
- The possible creation of DTAs in respect of unrealised losses; and

- For life insurers, differences in treatment for I-E tax in policyholder funds and tax within the Corporate Fund.

Allowing for I-E tax and capital gains/losses within the policyholder funds following the market risk asset stresses thus require considerations of the relevant tax rules.

4.3 Considerations relating to tax rules

This section contains general and governance considerations, specific considerations that apply to each of the three aspects mentioned above, as well as considerations relating to insurance groups.

4.3.1 General considerations

Allowance for *LACDT* requires consideration of the relevant tax legislation and regulation as it would apply to the individual insurer under a stress scenario, i.e. tax rules that would affect an insurer's tax return could also affect the *LACDT* assessment. For example:

- Tax deductibility of losses;
- Whether capital gains are of a revenue nature or of a capital nature; and
- The taxation of income and capital gains on foreign assets, including the impact of double taxation agreements.

4.3.2 Governance

The following considerations relate to governance:

- Consistency of approach in successive reporting periods;
- Standard governance procedures that could apply to any change in approach;
- Documentation of simplifications and assumptions; and
- Assessing the appropriateness of simplifications and assumptions on an ongoing basis.

4.3.3 Aspect 1: Allowing for constraints on *LACDT* to reflect the separation of tax funds and tax types

As mentioned above it is relatively simple to apply the tax rules to the DTL/DTA on the *IFRS* balance sheet, as well as the base DTL/DTA adjustments. However, applying the tax rules to losses arising from the *SCR* and any subsequent post-stress profits is potentially complex due to the allowance for diversification within the *SCR* calculation which makes it impossible for most insurers to accurately allocate the *SCR* and post-stress profits to the different tax funds and tax types required by the tax rules.

The remainder of this sub-section describes principles to be considered when notionally allocating the SCR_{shock} (as defined in *FSI* 4), as well as considerations relating to simplifications and governance.

"I-E tax" and CGT in policyholder funds are considered separately under Aspect 3 of this section.

4.3.3.1 General principle

Any notional allocation of the diversified *SCR* to tax funds and tax types can be based on the expected contribution of each *SCR* module and sub-module to the different tax funds and tax types, as well as the impact of diversification. Similar considerations apply when notionally allocating any post-stress profits to different tax funds and tax types.

4.3.3.2 Simplifications

The principle of proportionality allows simplified approaches. A non-exhaustive list of possible simplifications for the allocation of SCR and post-stress profits to different tax funds/tax types is shown below:

- The notional allocation of the SCR and/or post-stress profits is performed at a less granular level. For example, if all material contributions to the Life Underwriting Risk SCR relate to a single tax fund/tax type, then it could be deemed unnecessary to disaggregate this component into more granular parts.
- Part or whole of the calculation can also be simplified through the use of average tax rates, whereby the allocation of the diversified SCR or post-stress profits, or parts thereof, is replaced by an average tax rate. Such a tax rate would represent the expected allocations to the different tax funds and tax types.

The appropriateness of any simplification relating to *LACDT* depends on its ability to capture all material implications of the relevant tax rules.

4.3.3.3 LACDT in the CF

It is not unusual for the *CF* to generate *LACDT* equal to zero, since the values of assets and liabilities held in the *CF* are generally the same on the *IFRS* and *PSR* bases. However, there are cases where the *CF* can generate a non-zero impact on *LACDT*, as illustrated by the following examples.

- Where a DTA is created following a capital loss in the *CF*, based on the assumption that asset prices will recover within three years.
- Where losses caused by operational risk events are allocated to the *CF* and not to policyholder funds, e.g. fraud.
- Where assets in the *CF* are recognised on the *IFRS* basis but not on the *PSR* basis.

4.3.4 Aspect 2: Calculation of base DTL/DTA adjustments

Below is a non-exhaustive list of considerations for quantification of the base DTL/DTA on the *PSR* basis:

- The reduction in *PSR* Own Funds relative to *IFRS* Excess Assets that is caused by foreseeable dividends does not affect the base DTL/DTA adjustments, as dividends are paid from post-tax earnings.
- The base DTL/DTA adjustments themselves do not affect the assessment of valuation differences between the *IFRS* and *PSR* bases, as taking it into account causes a circularity and would effectively result in a "tax on tax" situation which is not appropriate.
- The base DTL/DTA adjustments could be affected by the tax funds that give rise thereto.

4.3.5 Aspect 3: Allowance for policyholder tax funds under the market risk module

The FSIs require that all policyholder tax is included in the BEL (*FSI* 2.2, Section 16.2 as well as Attachment 2, Sections B.1 and B.11) which implies that any changes to "I-E tax" as a result of market risk stresses is also captured in the stressing of the BEL. To be consistent with these regulatory requirements it is recommended that the *LACDT* relating to "I-E tax" and CGT in policyholder funds is allowed for within the relevant SCR sub-module, e.g. within the equity risk calculation or within the participation risk calculation, rather than at an aggregate level within *AdjDT*.

This approach creates a risk of utilising the same DTL or expected future profits in different SCR sub-modules, which could require adjustments to prevent double counting of loss-absorbing capacity.

4.3.6 Consideration for insurance groups

Where insurance groups are valued using the Accounting Consolidation method the intra-group fungibility and transferability restrictions could impact the LACDT at a group level, as it is unlikely that tax losses in one entity may be offset against tax profits in another entity.

4.4 Income Tax Act

This section summarises key references to the Income Tax Act relevant to insurers.

To assist actuaries with understanding specific tax rules this section also includes summaries in "layman's" terms of the following tax rules applicable to insurers:

- Taxation of life insurers; and
- Ring-fencing of Capital Gains Tax (CGT) gains and losses.

Importantly, these summaries describe the salient features of the tax provisions and the practical tax outcomes in a simplified manner, and some terms used and explanations given do not necessarily reference the terminology or requirements of the Income Tax Act. While these summaries are an accurate and simplified description of how these specific tax rules operate in practice, these summaries do not replace the requirements set out in the Income Tax Act. It thus remains the responsibility of each actuary to familiarise themselves with the requirements of the Income Tax Act and associated regulations as it relates to the insurer they are acting for.

Section 6 contains various examples illustrating the tax rules that are summarised in this section.

4.4.1 Legislative background

The tax rules for non-life insurers are set out in Section 28 of the Income Tax Act, and specifically covers the ability of non-life insurers (relative to non-insurance companies) to allow for the change in technical provisions when determining corporate tax liabilities.

The tax rules for life insurers are set out in Section 29A of the Income Tax Act.

The tax rules in terms of capital gains are set out in paragraphs 8 and 9 of the Eighth Schedule to the Income Tax Act and apply to a broad range of tax paying entities, not only to insurers.

4.4.2 Overview of taxation of life insurers

The summary discusses separately "transfer tax" losses, "I-E tax" losses and CGT losses, as well as the interaction between these items.

4.4.2.1 Summary of tax funds

Life insurers have five separate tax funds. Non-life insurers have just a single tax fund equivalent to the "Corporate Fund" for life insurers.

The five tax funds are each seen as a separate taxpayer for income tax purposes. The tax rates and CGT inclusion rates for each fund are shown below.

Table 4.1 – Life Insurance Policyholder Tax Funds				
Tax Fund	Description	Effective tax rate on I-E	CGT inclusion rate	Effective CGT tax rate
<i>CF</i>	Corporate Fund	27%	80%	21.6%
<i>RPF</i>	Risk Policyholder Fund	0%	N/A	0.0%
<i>IPF</i>	Individual Policyholder Fund excluding risk business	30%	40%	12.0%
<i>CPF</i>	Company Policyholder Fund excluding risk business	27%	80%	21.6%
<i>UPF</i>	Untaxed policyholder fund	0%	N/A	0.0%

4.4.2.2 “Transfer tax” losses for life insurers

“Transfer tax” is the tax payable on the underwriting profits (for insurance business) and net fee income (for investment business) generated by an insurer from its policyholders.

This tax is a tax for the company and is payable in the *CF* at 27%, but the profit is calculated in each tax fund where the business is written (i.e. *RPF*, *IPF*, *CPF*, or *UPF*).

When a “transfer tax” loss (or otherwise called “return transfer credit”) is generated by a tax fund, this loss is ring-fenced to that tax fund for utilisation by future transfer tax profits from that same tax fund. In other words, the “transfer tax” loss from a specific tax fund cannot be utilised by “transfer tax” profits from other tax funds.

4.4.2.3 I-E tax losses

“Income minus Expenses Tax” (“I-E tax”) is paid on the net investment income (after allowable expenses) generated by the assets held in each of the three policyholder tax funds where the business is written (i.e. *IPF*, *CPF* and *UPF*), also referred to as “policyholder tax” or “trustee tax”.

“I-E tax” is also payable in the *CF* on net income (after allowable expenses) generated from any source other than from “transfer tax” profits already mentioned in the “transfer tax” section above.

The *RPF* operates under complicated rules for “I-E tax” purposes, but in essence it is an untaxed fund for “I-E tax” purposes and there is no need to consider it further.

“I-E tax” losses are ring-fenced for each tax fund for utilisation by future “I-E profits” (as well as CGT profits) from the same tax fund and cannot be utilised by “I-E tax” profits (or CGT profits) from other tax funds.

An “I-E tax” loss in the *CF* can, however, be utilised by “transfer tax” profits generated from the other tax funds, i.e. if the *CF* has an “I-E tax” loss, any “transfer tax” profit generated from any of the other tax funds can be offset against the “I-E tax” loss in the *CF*.

Accumulated “I-E tax” losses in any of the tax funds may not be carried forward to a subsequent period (and are effectively lost) if an insurer has not traded in such tax fund at any time during a financial year. In other words, for an “I-E tax” loss to be carried forward there needs to remain at least some business within the specific tax fund.

4.4.3 Ring fencing of CGT gains and losses

CGT is like "I-E tax" in that it is payable on the investment returns generated by the assets held in each of the tax funds, but only on the **realised** capital gain/loss component of the investment returns.

Unrealised capital gains or losses are not taxed under CGT, but for purposes of the SCR calculation the eventual tax implications of unrealised capital gains and losses could be considered as if they have been realised.

CGT profits in a tax fund (after the relevant inclusion rate has been applied) can also be offset against "I-E tax" losses in the same tax fund.

CGT losses are ring-fenced to the specific tax fund where they occur and can only be utilised by future CGT profits from the same tax fund. CGT losses cannot be utilised by "I-E tax" profits.

5 RECOVERABILITY OF DEFERRED TAX ASSETS

This section contains considerations on recoverability of post-stress DTAs when assessing the LACDT.

5.1 Background from current legislation and regulation

The amount of post-stress DTA that may be raised in setting up the LACDT is limited by point 3 of FSI 4, Attachment 5, as shown below.

"To the extent the calculation of AdjDT results in the raising of a deferred tax asset, the maximum amount which should be raised is that which can be recovered from the insurer's ensuing three years' profit (i.e. profits raised in the three years after the stressed event)."

5.2 Aspects of complexity

This section identifies three aspects of complexity relating to the recoverability of post-stress DTAs.

5.2.1 Aspect 1: Assumption of Going Concern

A fundamental assumption of the LACDT calculation is that of the insurer remaining a going concern after the 1-in-200 year loss. Both the assumptions made to project post-stress profits, as well as post-stress management actions will be influenced by whether an insurer is assumed to be a going concern.

For purposes of this information note "going concern" is only considered to the extent that it relates to an insurer's ability to meet the MCR and SCR requirements after the 1-in-200 year loss

5.2.2 Aspect 2: Post-stress projections

Assessing recoverability of post-stress DTA requires significant judgement in determining both the factors contributing to the 1-in-200 year loss and the subsequent post-stress profits.

5.2.3 Aspect 3: Post-stress Management Actions

Insurers may assume management actions to improve the financial position or profits of the insurer following the 1-in-200 year loss, but the FSIs contain limited guidance on management actions in the context of LACDT.

5.3 Considerations relating to recoverability

This section contains governance considerations, as well as specific considerations relating to each of the aspects identified above.

5.3.1 Governance

Since there is a high degree of judgement involved in assessing the recoverability of post-stress DTAs it is important to document the approach and basis used to determine recoverability, including any assumptions, uncertainty around these assumptions, as well as key areas of judgement.

It could also be deemed necessary for the approach and basis to be approved by an appropriate governance forum.

5.3.2 Aspect 1: Assumption of Going Concern

A fundamental assumption of calculating the SCR is that of the insurer being a going concern. It is reasonable to assume that both the assumptions made for post-stress profits, as well as post-stress management actions will be heavily influenced by whether an insurer is assumed to remain a going concern.

Whether an insurer can be considered a going concern would depend on the insurer's post-stress solvency. In particular, a key requirement is an insurer's ability to meet regulatory requirements related to MCR and SCR, as prescribed in *the Act*. It is possible that after experiencing a 1-in-200 year loss an insurer would breach these SCR and/or MCR requirements. The following could be considered in this regard:

- Where recapitalisation is assumed to support the insurer in meeting the SCR and/or MCR requirements, this would constitute an assumed post-stress management action.
- The amount of capitalisation could be affected by many factors, including the below:
 - The impact of the stress on the risk margin and SCR; and
 - Capital strains relating to future new business that supports the creation of a post-stress DTA.
- The cost and ability to raise capital in a post-stress environment, which could differ for insurer-specific and industry-wide causes of loss.
- Under best estimate conditions the risk margin is designed to provide for the cost of funding selected parts of the SCR relating to existing in force business.
- The likelihood, timing and extent to which regulatory intervention is assumed to apply, in line with *the Act*.
- Any other factors that materially influence the insurer's ability to recapitalise.

5.3.3 Aspect 2: Post-stress Projections

The recoverability of post-stress DTAs on the PSR balance sheet of the insurer is dependent on the expected taxable profits in the three years after the 1-in-200 year loss event ("post-stress profits" as defined earlier in this information note). This could be interpreted as the three years following the valuation date at which the LACDT is being assessed.

In addition to profits, post-stress projections could also be required for other income statement components, as well as for balance sheet components like assets, liabilities, MCR and SCR.

The 1-in-200 year loss is likely to have an impact on any post-stress projections. It is thus important to consider the consistency between such post-stress projections and the composition of the 1-in-200 year loss, i.e. how the 1-in-200 year loss relates to the different risk-modules prescribed in the FSIs.

It is also important to consider consistency between different elements of the post-stress projections, e.g. between the projected income statement and balance sheet.

Furthermore, post-stress projections may need to make an allowance for the extent to which operating conditions are expected to be impacted by the 1-in-200 year loss. This is described in more detail under Aspect 3 below.

When considering post-stress projections it is important to consider consistency between the underlying pre-stress assumptions and those underlying other business projections, including but not limited to business projections within the ORSA.

As mentioned in Section 3 of this document, the FSIs require valuation of post-stress DTAs in line with *IFRS*, which is an important consideration when assessing sources of post-stress profitability. Within this context, the following could be sources of post-stress profitability:

- Future new business, taking into account the impact of the stress on business volumes and profitability.

- Future renewal of existing in force business, i.e. extension of contract boundaries, taking into account the impact of the stress on business volumes and profitability.
- Release of risk margin on existing in force business, but taking into account:
 - The extent to which the risk margin relates to the frictional cost of double taxation, which cannot be offset against losses.
 - Any offsetting risk margin impacts related to future new business and renewal of existing in force business.
- Investment returns expected in excess of the risk-free returns at which technical provisions are valued.

Post-stress DTAs cannot be supported by the same future profits already supporting DTAs on the pre-stress PSR balance sheet.

5.3.3.1 Persistence of stress factors

The post-stress projections are affected by the extent to which the stresses persist over the 3 years following the 1-in-200 year loss event.

For many risks the FSIs define whether a stress is permanent or only applies for a limited period. The following considerations relate to risks where this might not be defined in the FSIs.

- FSI 4.1 (Market Risk), prescribes instantaneous changes to yields, equity prices, credit spreads and other market variables. To the extent that the assessment of post-stress profitability (and therefore recoverability of post-stress DTAs) relies on post-stress market consistent economic assumptions (e.g. CPI or investment returns), it is important to consider consistency between these post-stress economic assumptions and the instantaneous changes to market variables prescribed in the FSIs.
- For life insurers, FSI 4.2 (Life Underwriting Risk) requires permanent stresses to expense and expense inflation assumptions. However, the base expense inflation assumption that is to be stressed in the post-stress projections could be different to the inflation assumption used in the pre-stress best estimate liability calculation, as it would be based on post-stress economic assumptions.
- FSI 4.3 (Non-Life Underwriting Risk) prescribes the calculation of the 1-in-200 year Non-Life Underwriting Risk module using factor based, exposure based and scenario based methods rather than prescribing permanent changes to assumptions underlying the valuation of best estimate liabilities. It thus requires a degree judgement and subjectivity to determine the extent to which the non-life underwriting stresses persist after the 12-month time horizon that underlies the calculation of Non-Life Underwriting Risk module.

Consideration may be given to the extent that risk factors recover over the three-year post-stress period, particularly for market related stresses. If it is assumed that the market will recover from the post-stress levels this represents an area of judgement and the justification of such an assumption is thus important. Recovery assumptions could even be subjected to the same governance process as future management actions.

Although a risk factor may persist over the three-year period, consideration may be given to the extent to which the impact of the stress can be mitigated by future management actions. The choice of the management action could consider the ability to implement the management action in the post-stress scenario, e.g. the ability to reprice may depend on whether the impact of the stress is insurer-specific or industry-wide.

5.3.3.2 Insurer-specific, industry-wide and economic impacts

The post-stress projections are affected by whether the losses underlying the 1-in-200 year SCR event are specific losses borne and experienced by the insurer ("insurer-specific") or are systemic losses experienced by the insurance industry as a whole ("industry-wide"), as well as whether the assumed stresses imply changes to the economic environment, e.g. systemic

economic losses or weakening of the economy as a whole ("economic impacts"). Specifically, the impact of the 1-in-200 year loss on post-stress profits will depend on the extent to which it is insurer-specific, industry-wide and/or implies an economic impact.

For many SCR modules, including the Life Underwriting Risk modules and many Market Risk modules, the FSIs define the extent to which the stress impacts are insurer-specific or industry-wide, but this is not the case for some of the Market Risk modules, the Non-Life Underwriting Risk module nor for the Operational Risk module, requiring assumptions to be made about the nature of the loss.

For examples of considerations in this regard refer to Section 7.

5.3.4 Aspect 3: Post-stress Management Actions

The range of possible management actions is wide and will often reflect the specific circumstances of each insurer.

There are two types of management actions that can be taken in the post-stress projections when assessing the recoverability of post-stress DTAs, namely:

- Firstly, there are management actions where there is no material dependency on the cooperation of parties external to the insurer to execute *the Action*. These management actions may include, for example, revision of premium rates, reduction in expenses, product design changes or changes to bonus rates for participation business. The ability to execute *the Actions* in these examples is within the control of management. However, other parties could be impacted and their likely responses to the management action may need to be considered when assessing the impact of the management action.
- Secondly, there are also management actions that are dependent on the cooperation of parties external to the insurer to execute *the Action*. A consideration when allowing for such management actions is to demonstrate that the respective counterparty to *the Action* is both willing and able to honour their assumed post-stress obligations.

Examples of such management actions are raising capital or entering into a reinsurance contract. In these examples, the ability to execute *the Action* is thus dependent on the provider of capital or the reinsurer being willing and able to provide the capital or enter into the reinsurance contract, respectively, under the stressed conditions.

Any management actions assumed within the context of *LACDT* are subject to the requirements prescribed in the FSIs, including but not limited to:

- The requirements implied by the definition of "future management action / management action" in *FSI 1*.
- The requirements outlined in the relevant parts of *FSI 2.2*, Sections 6.31 to 6.48.
- The requirements outlined in *FSI 4*, Sections 5.3, 5.8 and 5.9.

A specific example of such a requirement is that all future management actions are required to be approved by a governance structure within the insurer (*FSI 2.2*, Section 6.32). Such approval may consider whether the insurer can reasonably be expected to implement the future management actions under the post-stress conditions.

As per the FSIs, assumptions about management actions must take account of the potential impact of such management actions (*FSI 2.2* Section 6.39), which in the context of *LACDT* could also include the impact on future new business.

For management actions already allowed for on the pre-stress basis, e.g. in the best estimate liability or SCR, there is a risk that the impacts of such management actions are double counted when assessing the recoverability of post-stress DTAs. Adjustments could thus be required to prevent double counting.

There may be a number of future management actions assumed in addition to those already allowed for when determining the SCR on a pre-stress basis, e.g. management actions relating to future new business. These additional management actions are also subject to the requirements prescribed in the FSIs.

6 APPENDIX: EXAMPLES OF APPLICATION OF TAX RULES

This section includes examples of the different tax rules for both life and non-life insurers.

Table 6.1 – Examples of tax rule application				
#	Category	Description of scenario	Life/Non-life/Both	Application of tax rules
1.	Transfer tax losses	The <i>IPF</i> generates a “transfer tax” loss of R100m and the <i>UPF</i> generates a “transfer tax” profit of R50m.	Life	The <i>CF</i> will pay tax at 27% on the R50m from the <i>UPF</i> and will not be able to offset it against and utilise the R100m “transfer tax” loss from the <i>IPF</i>. This R100m “transfer tax” loss (or “return transfer credit”) in the <i>IPF</i> is ring-fenced for utilisation by future “transfer tax” profits from the <i>IPF</i> and only once this “transfer tax” loss is depleted would the excess “transfer tax” profit generated in the <i>IPF</i> be taxable in the <i>CF</i> at 27%. “Transfer tax” losses cannot be utilised by “I-E tax” profits or <i>CGT</i> profits.
2.	I-E tax losses	The <i>CPF</i> generates an “I-E tax” profit of R10m. The <i>IPF</i> generates an “I-E tax” loss of R100m and a <i>CGT</i> profit of R40m.	Life	The <i>CPF</i> will pay tax at 27% on the R10m profit, and will not be able to set it off against the R100m “I-E tax” loss in the <i>IPF</i>. The <i>CGT</i> profit in the <i>IPF</i> of R16m (R40m x 40% inclusion rate) can be offset against the R100m “I-E tax” loss in the <i>IPF</i>. The remaining R84m (R100m – R16m) “I-E tax” loss in the <i>IPF</i> is ring-fenced for utilisation by future “I-E tax” profits (as well as <i>CGT</i> profits) from the <i>IPF</i>. “I-E tax” losses in any of the three policyholder tax funds (<i>IPF</i>, <i>CPF</i> and <i>UPF</i>) cannot be utilised by “transfer tax” profits generated from that respective tax fund (since “transfer tax” profits are essentially a profit of the <i>CF</i> and taxable in the <i>CF</i>).

Table 6.1 – Examples of tax rule application				
#	Category	Description of scenario	Life/Non-life/Both	Application of tax rules
3.	I-E tax losses	The <i>IPF</i> generates an "I-E tax" loss of R100m and a "transfer tax" profit of R20m.	Life	The <i>CF</i> will pay tax at 27% on the R20m "transfer tax" profit from the <i>IPF</i> and will not be able to offset against it the "I-E tax" loss of R100m. The R100m "I-E tax" loss in the <i>IPF</i> is ring-fenced for utilisation by future "I-E tax" profits (as well as CGT profits) from the <i>IPF</i>.
4.	I-E tax losses	The <i>CF</i> generates an "I-E tax" loss of R30m. The <i>IPF</i> generates a "transfer tax" profit of R100m.	Life	The "I-E tax" loss of R30m in the <i>CF</i> can be offset against the "transfer tax" profit of R100m from the <i>IPF</i>. The <i>CF</i> will pay tax at 27% on the remaining tax profit of R70m (R100m – R30m).
5.	CGT profits add to I-E profits	The <i>CPF</i> generates a CGT profit of R50m and an "I-E tax" profit of R100m.	Life	The <i>CPF</i> will pay 27% tax on R140m profit, calculated as the sum of the R100m "I-E tax" profit and the CGT profit of R40m (R50m x 80% inclusion rate).
6.	CGT gains can be offset against I-E losses	The <i>CPF</i> generates a CGT profit of R100m and an "I-E tax" loss of R60m.	Life	The <i>CPF</i> will pay 27% tax on R20m profit, calculated as the difference of the R80m CGT profit (R100m x 80% inclusion rate) and "I-E tax" loss of R60m.
7.	CGT losses cannot be offset against I-E profits	The <i>IPF</i> generates a CGT loss of R50m and an "I-E tax" profit of R100m.	Life	The CGT loss of R50m in the <i>IPF</i> is ring-fenced for utilisation by future CGT profits in the <i>IPF</i> and cannot be utilised against the "I-E tax" profit. The <i>IPF</i> will thus pay tax at 30% on the full "I-E tax" profit of R100m.
8.	CGT losses cannot be utilised by "transfer tax" profits	The <i>IPF</i> generates a "transfer tax" profit of R30m. The <i>CF</i> generates a CGT loss of R10m.	Life	The CGT loss of R10m in the <i>CF</i> is ring-fenced for utilisation by future CGT profits in the <i>CF</i> and cannot be utilised against the "transfer tax" profit from the <i>IPF</i>. The <i>CF</i> thus pays 27% tax on the full R30m "transfer tax" profit generated by the <i>IPF</i>.

Table 6.1 – Examples of tax rule application				
#	Category	Description of scenario	Life/Non-life/Both	Application of tax rules
9.	CGT gains and losses vs income profits and losses (for non-life, and for life in CF)	The CF generates a CGT loss of R50m and operating profits of R100m	Both	The CGT loss of R50m is ring-fenced for utilisation by future CGT profits and cannot be utilised against the operating profit for tax purposes. The insurer will thus pay tax at 27% on the full operating profit of R100m.
10.	CGT gains and losses vs income profits and losses (for non-life, and for life in CF)	The CF generates a CGT profit of R100m and an operating loss of R60m.	Both	The insurer will pay 27% tax on R20m profit, calculated as the difference of the included R80m CGT profit (R100m x 80% inclusion rate) and operating loss of R60m.

7 APPENDIX: CONSIDERATIONS AFFECTING PROFITABILITY

This section includes a non-exhaustive list of considerations that actuaries could take into account when assessing post-stress profitability.

7.1 New business considerations

It is important to consider the future new business volumes that could reasonably be achieved in the post-stress environment.

In addition to the specific supply and demand aspects in the remainder of this section, the following are examples of considerations that relate to future new business volumes:

- Limited ability of an insurer to fund new business due to reduced capital resources.
- Restrictions imposed on insurers due to their own risk appetite requirements.

7.2 Insurer-specific considerations

To the extent that the 1-in-200 year loss is insurer-specific, consideration could be given as to the impact of the loss on the demand and supply of an insurer's specific products. Examples of such insurer-specific considerations are as follows:

- Demand side impacts:
 - Change in perceived financial strength of insurer due to lower solvency.
 - Competitiveness of insurer's products following re-pricing.
- Supply side impacts:
 - Regulatory restrictions on business volumes, which may be considered more pertinent where losses are insurer-specific rather than industry-wide.

7.3 Industry-wide considerations

To the extent that the 1-in-200 year loss is industry-wide, consideration could be given as to the impact on the demand and supply insurance products in general. Examples of such industry-wide considerations are as follows:

- Demand side impacts:
 - Change in perceived financial strength of the insurance industry.
 - Change in the demand for insurance in the post-stress environment.
 - Change in the size and value of the current/future pool of insurable assets due to partial/full loss of assets in catastrophe scenarios.
 - Change in the size and nature of the current and future pool of insurable assets due to change in perceived value of insurance following a 1-in-200 year loss.
- Supply side impacts:
 - Regulatory restrictions on business volumes.
 - Capital market capacity being unable to meet capital needs of the insurance industry.
 - The pricing assumptions for future new business could be impacted by the extent to which stress impacts are assumed to persist over time.

7.4 Economic impacts

An example consideration relating to economic impacts is the extent to which any fiscal or monetary response to systemic economic losses could affect the future post-stress profits of the insurer.

8 APPENDIX: EXAMPLE OF METHODOLOGIES

This section includes examples of methodologies to disaggregate the SCR between tax funds/tax types (separately for life and non-life insurers). It also contains high level methodologies to calculate post-stress profits.

The list of examples in this section is not exhaustive and other methodologies could also be appropriate.

8.1 Methodology to disaggregate SCR between tax funds/tax types: Life insurer

The below methodology allows for the diversification benefits at the level of tax fund/tax type. It consists of the following steps:

- Step 1. Disaggregate the total diversified SCR into each of the most granular undiversified risk-modules.
- Step 2. Allocate these components to each tax fund/tax type combination at the most granular level based on their relative contribution, with this resulting in allocations between the following items:
- “Transfer tax” profits and losses from the four different policyholder funds;
 - “I-E tax” profits and losses in the CF ; and
 - CGT profits and losses in the CF.
- “I-E tax” and CGT in policyholder funds are considered separately as part of Section 4.3.5.
- Assumptions will be required to allocate items that do not relate to a specific tax fund, e.g. for operational risk.
- Step 3. Aggregate the components from Step 2 as if each tax fund/tax type is a standalone insurer, using the methodology described in the FSIs (e.g. through correlation matrices), in order to calculate the SCR allocated to each tax fund/tax type.
- Step 4. The SCRs by tax fund/tax type from Step 3 will not sum to the total diversified SCR and may thus need to be scaled up or down to ensure that they sum to the licence level diversified SCR. The reason is that the diversification benefits at a tax fund/tax type level will be different from those that apply in aggregate at a licence level, and will usually result in the sum of the SCRs by tax fund/tax type being larger than the total diversified SCR.
- Step 5. Apply the relevant tax rate to each tax fund/tax type's SCR in order to calculate the change in deferred taxes that will arise from each of the tax fund/tax type combinations. This change in deferred taxes represents the LACDT for each tax fund/tax type, which can then be aggregated to arrive at the total LACDT, subject to applying any relevant tax rules that may apply.

8.2 Methodology to disaggregate SCR between tax types: Non-life insurer

A non-life insurer where tax is calculated at a tax entity level, can follow a simplified version of the methodology outlined in Section 8.1 by disregarding any references to “tax funds”.

8.3 High level methodologies to calculate post-stress profits

Two examples of high level approaches to calculate post-stress profits are shown below:

- **Change in profit projections**

This approach considers the impact of each individual risk module on pre-stress projections and hence calculates the change in profits due to that module. This provides an undiversified impact of the given module on the pre-stress profits. These changes in profits are then aggregated using the same methodology as the *SCR*, as prescribed in the FSIs (e.g. through correlation matrices). This aggregated impact is then applied to the pre-stress profits to estimate the post-stress profits.

Since this approach does not explicitly consider the post-stress balance sheet it is important to consider whether the projections appropriately reflect any balance sheet impacts, including *MCR* and *SCR* impacts.

- **Pre-stress profits adjustment**

This methodology aims to estimate post-stress profits by adjusting the insurer's pre-stress profit projections to allow for the impact of the 1-in-200 year loss, the insurer's post-stress balance sheet and the relevant factors described in Section 5.3 on its post-stress profits. The adjustments are made to the assumptions underlying the insurer's pre-stress projections. These adjustments would aim to consider and reflect the three aspects described in Section 5.3.3. Namely:

- Persistence of stress factors underlying the 1-in-200 year loss.
- Insurer-specific, industry-wide and economic impacts (Non-exhaustive examples of which can be found in Section 7)
- The impact of post-stress management actions.

Since this approach does not explicitly consider the post-stress balance sheet it is important to consider whether the projections appropriately reflect any balance sheet impacts, including *MCR* and *SCR* impacts.

- **Single Equivalent Scenario**

This is a direct estimation of the post-stress balance sheet. It is a technique that uses the 1-in-200 stresses from the standardised formula, along with the correlation matrices, to arrive at a single scenario, which is a linear combination of the individual stresses at a lower severity. There is no unique scenario that meets this requirement, i.e. different linear combinations of the component level 1-in-200 year stresses can be used to arrive at the aggregate 1-in-200 year loss. This means that judgement is required to determine both the criteria that an appropriate single equivalent scenario needs to meet, as well as the single equivalent scenario itself.

Applying the single equivalent scenario thus provides a post-stress balance sheet, which can then be used to derive the post-stress profits.