INFORMATION NOTE 004: 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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Status

Version 1.0 Effective from January 2021

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1 DEFINITIONS

Act	Insurance Act (18 of 2017), including relevant amendments, Prudential Standards, regulations, Prudential Authority directives and guidance notes
Actuary or *Actuaries*	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
AdjDT	Adjustment factor for the loss-absorbing capacity of deferred taxes as defined in *FSI* 4, Attachment 5
$AdjDT_{SVG}$	Adjustment factor for the loss-absorbing capacity of deferred taxes under the selective mass lapse event as defined in *FSI* 2.3, Attachment 4
Basic Own Funds	As defined in the *Act*
Best Estimate Liability	As defined in *FSI* 1
CF	Corporate Fund as defined in the Income Tax Act
CGT	Capital Gains Tax
CPF	Corporate Policyholder Fund as defined in the Income Tax Act
DTA	Deferred Tax Asset
DTL	Deferred Tax Liability
FSI	Financial Soundness Standard for Insurers
IFRS	International Financial Reporting Standard
Income Tax Act	Income Tax Act (58 of 1962)
Insurer	The insurance company (including mutual societies) writing life or non-life insurance business (as defined in the *Act*) in respect of which the *actuary* or *actuaries* are calculating or reviewing *LACDT*
IPF	Individual Policyholder Fund as defined in the Income Tax Act
LACDT	Loss-absorbing capacity of deferred taxes as defined in *FSI* 4, Attachment 5
MCR	The minimum capital requirement as determined in terms of the *Act*
ORSA	Own Risk and Solvency Assessment as defined in terms of the *Act*
PSR	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
RFP	Risk Policyholder Fund as defined in the Income Tax Act

SCR	The solvency capital requirement as determined in terms of the *Act*
Technical provisions	As defined in *FSI* 1
UPF	Untaxed Policyholder Fund as defined in the Income Tax 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. This complexity arises partly due to the various tax rules applicable to insurers and partly due to the *LACDT* calculation usually requiring various simplifications and significant professional judgment to be applied.

This information 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 relevant for each aspect.

This document is intended as a guide to support actuaries in fulfilling their responsibilities and is not intended to prescribe requirements nor provide formal actuarial guidance.

2.2 Scope of this information note

The information 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 information 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 information 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 (Sections 5.17 to 5.24) and Attachment 4 thereto.

– This information note only considers *LACDT* within the South African context. For other jurisdictions it is thus worth considering the impact of the local tax and regulatory requirements on *LACDT*.

– While this information 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 *LACDT* to consider any tax, regulatory and other factors that may be relevant, as well as how these factors affect *LACDT*.

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 results in 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 *PSR* Basic Own Funds being lower than the *IFRS* Excess Assets, which results in an additional *DTA* to be raised. Any *DTAs* raised in this manner reduce loss-absorbing capacity for the *SCR*.

This information note refers to the above items as the "base *DTL*/*DTA* adjustments".

The *LACDT* is also affected by existing, historically generated *DTLs* or *DTAs* 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 information 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 information note starts with general considerations in Section 3.

More specific considerations are then 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, considerations relating to each aspect of complexity, as well as other considerations. The section also contains a summary of the tax rules applicable to insurers.

- **Recoverability of post-stress *DTAs***
  FSI 4, Attachment 5, Item 3 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 usually entails 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*, considerations relating to each aspect of complexity, as well as other considerations.

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 example methodologies to calculate post-stress profits.

2.6 Other relevant sources of information

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

- SAM Position Paper 112 version 3 https://www.fsca.co.za/Regulated%20Entities/SAM%20DOCUMENTS/Position%20Paper%20112%20(v%203)%20FINAL.pdf
- 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_final_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 worth considering consistency in the modelling of the *SCR*, base *DTL/DTA* adjustment, 1-in-200 year loss and projected post-stress 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 worth considering 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 of Attachment 5 requires an appropriate allowance for the tax funds in which the loss is expected to occur.

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 and 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.

The appropriateness of the *LACDT* calculation could thus depend on making an appropriate allowance for the abovementioned constraints and assessing whether 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

Market risk asset stresses and potentially other stresses could affect "I-E tax" and *CGT* within policyholder funds, thus affecting the *LACDT* calculation.

Also, the *FSIs* do not state explicitly whether *LACDT* relating to "I-E tax" and *CGT* in policyholder funds should be allowed for at an aggregate level within *AdjDT* or rather

within the relevant market risk sub-modules, e.g. within the equity risk or participation risk calculations.

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

A useful consideration when calculating or reviewing LACDT is the implications of the relevant tax legislation and regulation as it would apply to the individual insurer under a stress scenario, i.e. any 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 worth considering 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 in Section 4.3.5.

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 and 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 and 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* Basic 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

Under the market risk module, assumed changes in asset prices and yield curves can give rise to "I-E tax" and/or *CGT* impacts in policyholder funds. 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.

Similarly, other stresses could also give rise to "I-E tax" and *CGT* impacts in policyholder funds, e.g. stresses affecting expenses, inflation or the projected number of policies.

When allowing post-stress "I-E tax" and *CGT* within policyholder funds a consideration affecting *LACDT* could thus be the impact of the relevant tax rules.

The *FSIs* require that all policyholder tax is included in the best estimate liability (*FSI* 2.2, Section 16.2 as well as Attachment 2, Items B.1 and B.11 to B.13) which implies that any changes to "I-E tax" or *CGT* as a result of market risk stresses is also captured in the stressing of the best estimate liability. To be consistent with these regulatory requirements an approach that could be followed is 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 or participation risk calculations, 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 (as at this information note's effective date), these summaries do not replace the requirements set out in the Income Tax Act. The most recent Income Tax Act itself thus remains the appropriate reference for actuaries needing to familiarise themselves with the taxation requirements as it relates to the insurer they are acting for.

Also see section 6, which is an appendix containing 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 for life insurers 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**
CF	Corporate Fund	28%	80%	22.4%
RPF	Risk Policyholder Fund	0%	N/A	0.0%
IPF	Individual Policyholder Fund excluding risk business	30%	40%	12.0%
CPF	Company Policyholder Fund excluding risk business	28%	80%	22.4%
UPF	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 28%, but the profit is calculated in each tax fund where the business is written (i.e. *RPF*, *IPF*, *CPF* and *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 Item 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 whether the insurer remains a going concern after the 1-in-200 year loss. Both the assumptions made to project post-stress profits, as well as the assumed post-stress management actions may 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 *DTAs* could entail 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 could be useful 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 is also worth considering whether the approach and basis should be approved by an appropriate governance forum within the insurer.

5.3.2 Aspect 1: Assumption of Going Concern

Whether an insurer can be considered a going concern would depend on the insurer's post-stress solvency. In particular, a relevant consideration could be 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 *MCR* and/or *SCR* requirements. The following could be considered in this regard:

- Where recapitalisation is assumed to support the insurer in meeting the *MCR* and/or *SCR* requirements, this would constitute an assumed post-stress management action.
- The amount of recapitalisation 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 worth considering 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 worth considering:

- Consistency between different elements of the post-stress projections, e.g. between the projected income statement and balance sheet; and
- Consistency between the pre-stress assumptions underlying the post-stress projections and those underlying other business projections, including but not limited to business projections within the *ORSA*.

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.

As mentioned in Section 3 of this document, the *FSIs* require valuation of post-stress *DTAs* in line with *IFRS*, which could affect the sources of post-stress profitability. Within this context, the following could be potential 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; and
    - 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.

Where additional *DTAs* are created post-stress, it would be double counting future profits if such additional *DTAs* are supported by the same future profits that are already supporting the existing *DTAs* on the pre-stress 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 worth considering 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 could thus require 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 the 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 worth considering. 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.

For more details on post-stress management actions see Section 5.3.4 below.

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 could depend on the extent to which the 1-in-200 year loss 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, which may require 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 the insurer. 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 6.40; and
- 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 *IPF* generates a "transfer tax" loss of R100m and the *UPF* generates a "transfer tax" profit of R50m.	Life	The *CF* will pay tax at 28% on the R50m from the *UPF* and will not be able to offset it against and utilise the R100m "transfer tax" loss from the *IPF*. This R100m "transfer tax" loss (or "return transfer credit") in the *IPF* is ring-fenced for utilisation by future "transfer tax" profits from the *IPF* and only once this "transfer tax" loss is depleted would the excess "transfer tax" profit generated in the *IPF* be taxable in the *CF* at 28%. "Transfer tax" losses cannot be utilised by "I-E tax" profits or *CGT* profits.
2.	"I-E tax" losses	The *CPF* generates an "I-E tax" profit of R10m. The *IPF* generates an "I-E tax" loss of R100m and a *CGT* profit of R40m.	Life	The *CPF* will pay tax at 28% on the R10m profit, and will not be able to set it off against the R100m "I-E tax" loss in the *IPF*. The *CGT* profit in the *IPF* of R16m (R40m x 40% inclusion rate) can be offset against the R100m "I-E tax" loss in the *IPF*. The remaining R84m (R100m – R16m) "I-E tax" loss in the *IPF* is ring-fenced for utilisation by future "I-E tax" profits (as well as *CGT* profits) from the *IPF*. "I-E tax" losses in any of the three policyholder tax funds (*IPF*, *CPF* and *UPF*) cannot be utilised by "transfer tax" profits generated from that respective tax fund (since "transfer tax" profits are essentially a profit of the *CF* and taxable in the *CF*).

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 *IPF* generates an "I-E tax" loss of R100m and a "transfer tax" profit of R20m.	Life	The *CF* will pay tax at 28% on the R20m "transfer tax" profit from the *IPF* and will not be able to offset against it the "I-E tax" loss of R100m. The R100m "I-E tax" loss in the *IPF* is ring-fenced for utilisation by future "I-E tax" profits (as well as *CGT* profits) from the *IPF*.
4.	"I-E tax" losses	The *CF* generates an "I-E tax" loss of R30m. The *IPF* generates a "transfer tax" profit of R100m.	Life	The "I-E tax" loss of R30m in the *CF* can be offset against the "transfer tax" profit of R100m from the *IPF*. The *CF* will pay tax at 28% on the remaining tax profit of R70m (R100m – R30m).
5.	*CGT* profits add to I-E profits	The *CPF* generates a *CGT* profit of R50m and an "I-E tax" profit of R100m.	Life	The *CPF* will pay 28% 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 *CPF* generates a *CGT* profit of R100m and an "I-E tax" loss of R60m.	Life	The *CPF* will pay 28% 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 *IPF* generates a *CGT* loss of R50m and an "I-E tax" profit of R100m.	Life	The *CGT* loss of R50m in the *IPF* is ring-fenced for utilisation by future *CGT* profits in the *IPF* and cannot be utilised against the "I-E tax" profit. The *IPF* 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 *IPF* generates a "transfer tax" profit of R30m. The *CF* generates a *CGT* loss of R10m.	Life	The *CGT* loss of R10m in the *CF* is ring-fenced for utilisation by future *CGT* profits in the *CF* and cannot be utilised against the "transfer tax" profit from the *IPF*. The *CF* thus pays 28% tax on the full R30m "transfer tax" profit generated by the *IPF*.

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 28% 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 28% 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 worth considering the future new business volumes and pricing assumptions that could reasonably be achieved in the post-stress environment.

In addition to the specific supply and demand aspects in Sections 7.2 and 7.3, 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.

The pricing assumptions for future new business could be impacted by the extent to which stress impacts are assumed to persist over time.

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 impact:
    - 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 of 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 and future pool of insurable assets due to partial or 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.

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 may 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 may be different from those that apply in aggregate at a licence level, and this 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.

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 above by disregarding any references to "tax funds".

8.3 High level methodologies to calculate post-stress profits

Three examples of approaches to calculate post-stress profits are described below:

8.3.1.1 Change in profit projections

This approach considers the impact of each individual risk module on pre-stress projections and hence calculates the change in projected profits due to that module. This provides an undiversified impact of the given module on the pre-stress projected profits. These changes in projected 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 worth considering whether the post-stress projections appropriately reflect any balance sheet impacts, including *MCR* and *SCR* impacts.

8.3.1.2 Pre-stress profits adjustment

This methodology aims to estimate post-stress profits by directly adjusting the insurer's pre-stress profit projections to allow for the expected impacts of the 1-in-200 year loss. This is done by adjusting the assumptions underlying the insurer's pre-stress projections, taking into account the post-stress balance sheet and the relevant considerations described elsewhere in this information note, especially those in Section 5.3 relating to:

- Persistence of stress factors;
- Insurer-specific, industry-wide and economic impacts; and
- Post-stress management actions.

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

8.3.1.3 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 could be 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.