RESERVE BANK
OF NEW ZEALAND
TE PŪTEA MATUA

Review of Insurance Solvency Standards:

Structure and IFRS 17

Consultation document

November 2020

Current Information Available

Information about the review is available on the Reserve Bank website at:

https://www.rbnz.govt.nz/regulation-and-supervision/insurers/consultations-and-policy-development-for-insurers/active-policy-development/review-of-the-insurance-solvency-standards

Contact details

Website	http://www.rbnz.govt.nz/regulation-and-supervision/insurers
Email	insurancesolvency@rbnz.govt.nz
Mail	Reserve Bank of New Zealand Financial System Policy and Analysis – Financial Policy PO Box 2498 WELLINGTON 6140

Publication of submissions:

All information in submissions will be made public unless you indicate you would like all or part of your submission to remain confidential. Respondents who would like part of their submission to remain confidential should provide both a confidential and public version of their submission. Apart from redactions of the information to be withheld (i.e. blacking out of text) the two versions should be identical. Respondents should ensure that redacted information is not able to be recovered electronically from the document (the redacted version will be published as received).

Respondents who request that all or part of their submission be treated as confidential should provide reasons why this information should be withheld if a request is made for it under the Official Information Act 1982 (OIA). These reasons should refer to section 105 of the Reserve Bank of New Zealand Act 1989, section 54 of the Non-Bank Deposit Takers Act, section 135 of the Insurance (Prudential) Supervision Act 2010 (as applicable); or the grounds for withholding information under the OIA. If an OIA request for redacted information is made the Reserve Bank will make its own assessment of what must be released taking into account the respondent's views.

The Reserve Bank may also publish an anonymised summary of the responses received in respect of this Consultation Paper.

Published by the Reserve Bank of New Zealand
30 November 2020

Glossary

AASB	Australian Accounting Standards Board
BEL	Best Estimate Liability
CTV	Current Termination Value
D-SIB	Domestically Systemically Important Banks
DAC	Deferred Acquisition Cost
DTA	Deferred Tax Asset
DTL	Deferred Tax Liability
ESR	Escalating Supervisory Response
FMA	Financial Markets Authority
FSAP	IMF Financial Sector Assessment Programme
GAAP	Generally Accepted Accounting Principles
IAA	International Actuarial Association
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
ICAAP	Internal Capital Adequacy Assessment Process
ICP	Insurance Core Principles
IFRS 4	International Financial Reporting Standard 4 – Insurance Contracts
IFRS 17	International Financial Reporting Standard 17 – Insurance Contracts
IMF	International Monetary Fund
IPSA	Insurance (Prudential Supervision) Act 2010
IPSA Review	Review of the Insurance (Prudential Supervision) Act 2010
LAGIC	Life and General Insurance Capital Standards
ORSA	Own Risk and Solvency Assessment
RBNZ	Reserve Bank of New Zealand
Regulations	Insurance (Prudential Supervision) Regulations 2010
RPG	Related Product Group
Solvency II	The European Union's prudential framework for insurers

Contents

Executive summary

Background

Under the Insurance (Prudential Supervision) Act 2010 ("IPSA"), the Reserve Bank is responsible for the prudential supervision of the insurance industry. We[1] regulate and monitor insurers to ensure that the sector operates in a sound and efficient manner.

A key part of this supervision involves imposing minimum amounts of capital that insurers must hold. These regulatory capital requirements set a minimum likelihood that insurers will be able to pay claims and meet other obligations to policyholders.

We codify our capital requirements for insurers in a set of solvency standards prescribing how regulatory minimum capital is to be calculated. The current standards were published in 2014, with different standards for each sector and variations for specific circumstances.

In October 2020, we announced the start of the Solvency Standards Review ("the Review") alongside the IPSA Review. We feel it is timely to review the standards to ensure that they are robust and fit for purpose. It is also a chance to address the findings from recent reviews of supervision and prepare the standard for the implementation of IFRS 17.

The review will be divided into two stages:

1. The first stage (now underway) will address structural changes and other issues that require immediate attention (including IFRS 17).
2. The second stage will address the determination of individual components of the solvency requirements (asset risks, liability risks, other components).

We will introduce interim standard(s) at the end of the first stage and final standard(s) at the end of the second stage.

In conducting the Review, we will take into account efficiency considerations from both the industry as well as our perspective.

Consultation topics

This consultation document relates to the first stage of the review. It is concerned with the issues that shape the standard's fundamental structure and nature. These are discussed below and need to be addressed before work begins on more detailed considerations.

Purpose & principles

While IPSA provides general purposes and principles to govern regulation and supervisory activity, and empowers the solvency standards, it provides no specific purpose for holding regulatory capital. We propose that the purpose of holding regulatory capital is to ensure that, in adversity, an insurer's obligations to policyholders will continue to be met in full as they fall due. This consultation also canvasses your views on two matters of principle:

1. Whether we should adopt a total balance sheet approach to capture second-order effects and balance sheet interactions;

[1] In this document, the pronouns "we", "us" and "our" refer to the Reserve Bank of New Zealand, unless otherwise specified.

2. Whether there are certain "sectorally important" insurers that are critical to the functioning of New Zealand's financial system and who should be treated differently for capital purposes compared to "non-sectorally important" insurers.

Applying the standards

IPSA empowers the application of standards to insurers and, for life insurers, to their statutory funds. We have chosen to issue separate standards for life and non-life business, as well as standards for insurers in specific circumstances (non-life insurers in run-off, non-life captives and variable annuity providers). Standards are applied by condition of licence to insurers as a whole and, if applicable, their statutory funds.

In this document we ask if our approaches to applying the solvency standards to industry sectors and sub-entities are as efficient as they could be. In particular, we explore the possibility of having a single framework apply to both life and non-life business.

IFRS 17

The new accounting standard IFRS 17 *Insurance Contracts* ("IFRS 17") is expected to have a material impact on an insurer's balance sheet. In particular, from a New Zealand perspective there is likely to be a number of areas requiring judgement to be exercised, leading to inconsistent results across the industry.

As the solvency requirements are based on the accounting balance sheet, it follows that they may be similarly affected. To minimise any unintended consequences, we must carefully consider how different elements of the balance sheet will be affected, in particular technical insurance elements. One possible way of achieving greater consistency and comparability after the adoption of IFRS 17 is to prescribe methods and assumptions for particular balance sheet elements for solvency purposes (a "standardised balance sheet").

Ladder of Intervention

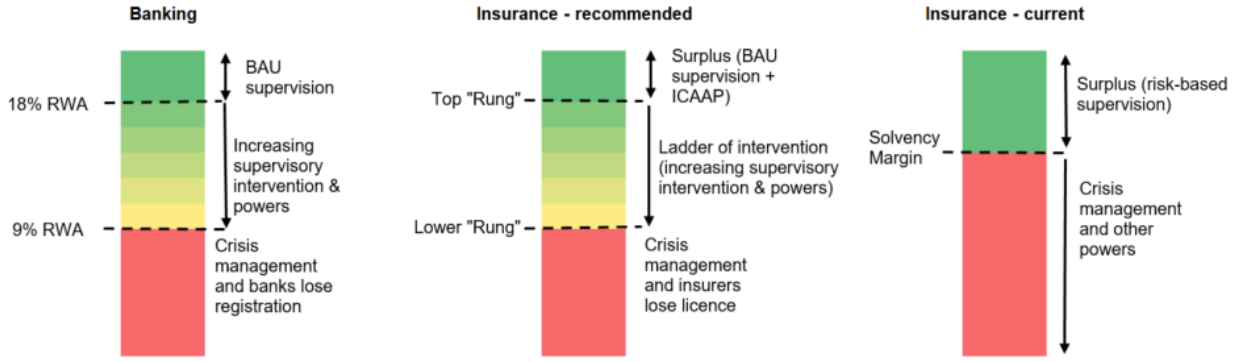
A "ladder of intervention" framework is a graduated approach to supervision. The "rungs" of the ladder open up regulatory powers and/or represent triggers for specific supervisory intervention. Above the top rung of the ladder, normal supervision[2] applies. Below the bottom rung, the supervisor would invoke the strongest actions (including potentially winding up the entity or withdrawing its licence). In between these two points, a graduated approach to supervision applies, with supervisory powers and intervention increasing in intensity as the solvency measure approaches the bottom rung.

A ladder of intervention framework may help in early intervention and could maximise the chances of recovery for an insurer in distress. It also provides greater clarity for both the supervisor and the entity, and ensures more proportionate supervisory interventions. The IAIS has endorsed this framework as best practice.

Both Trowbridge and Scholtens, in their report into the supervision of CBL, as well as the IMF's FSAP, described New Zealand's current solvency framework as "binary" in that the framework has only one rung. An insurer with a solvency ratio of 100% or greater is considered solvent, while as soon as the solvency ratio falls below 100%, the same insurer is considered insolvent. This triggers a number of powers under IPSA, including the option to liquidate the insurer. In reality, however, a solvency ratio below 100% may not necessarily mean the insurer's operations are nonviable and should be liquidated. On the other hand, IPSA only releases certain powers when the solvency ratio falls below 100% (allowing for licence conditions), making early intervention and recovery difficult.

[2] With intensity of monitoring related to the risks presenting in the insurer's business

We would like to consult on whether a ladder of intervention framework would be appropriate in a New Zealand environment. The diagram below compares the current framework (the bar on the right) to the proposed banking framework (the bar on the left), along with a potential insurance framework (middle bar). The lines representing the rungs in the middle bar are for illustration only, and do not necessarily indicate a top rung that is less or more conservative than the current solvency margin.



At this stage, we are not expressing any specific views relative to the current regime. Nor are we yet considering *where* specifically the rungs of the ladder should be placed, but rather exploring the theoretical underpinnings of what such a framework could look like: that is, on what basis should the solvency control levels be set? However, we would also be interested in submitters' views on where the rungs should be set.

Solvency calculation

The solvency standards allow for the fact that certain assets on the balance sheets may not be (fully) recognisable in the event of a wind-up through the use of a deduction from capital. Assets whose value might be questionable if an insurer needs to be wound up are completely deducted from eligible capital. However, a capital charge approach[3] may be more appropriate in some scenarios. This consultation considers which assets should be treated using a capital charge approach and which should be treated using a deduction approach.

Solvency standards also do not perfectly allow for the risk profiles of individual insurers. Where solvency standards do not provide the required level of security, we may occasionally impose an additional requirement through a condition of licence. These extra requirements do not, however, form part of solvency ratios and margins that are publicly disclosed. This document explores the idea of giving us the power to impose supervisory adjustments within the solvency calculation.

In theory, insurers with diverse, partially-related risks should be subject to lower capital requirements than insurers whose risks are concentrated in a particular area. This is because it is less likely that multiple uncorrelated (or imperfectly correlated) risks would crystallise during a period of time than a single risk. This document explores the possibility of including an allowance for diversification in the solvency standards, and of establishing a clear hierarchy of risks to facilitate this.

Another area which could be clarified is the nature of the life insurance risk capital charge. Currently this takes the form of a stressed liability rather than a capital measure. This document proposes amending the calculation in the life standard such that the life insurance risk capital charge becomes a capital measure.

Grouping of policies and the cross-subsidies available between them in the solvency calculation are another area of focus. This document considers a range of options for grouping, together with underlying philosophies and practical outcomes.

[3] A capital charge approach involves an addition to regulatory capital requirements, rather than disallowing the asset (or a portion of it) for solvency purposes.

Background to the consultation

Introduction

1. New Zealand's insurance sector is regulated under the Insurance (Prudential Supervision) Act 2010 ("IPSA"). Prudential supervision of insurance entities focuses on the regulation and monitoring of insurers to ensure the financial system continues to operate in a sound and efficient manner.

2. Part of ensuring the continued soundness and efficiency of the insurance sector involves imposing minimum amounts of capital that insurers must hold. These regulatory capital requirements serve the purpose of increasing the likelihood that insurers will be able to pay claims and meet other obligations to policyholders.

3. The Reserve Bank's capital requirements for insurers are specified in a set of solvency standards, which prescribe the manner in which regulatory capital is to be calculated. The main standards are the solvency standard for life insurance business 2014 and the solvency standard for non-life insurance business 2014. These are supported by standards dealing with specific situations, e.g. run-off insurers, captive insurers and variable annuities. These standards are empowered by Section 55 of IPSA.

Drivers of change

4. There have been a number of developments since the standards were introduced that require a response from us. These include:

   - The 2016 IMF review of New Zealand's financial system (FSAP);
   - Our thematic review of the appointed actuary regime;
   - The introduction of new capital regimes in comparator markets; and
   - A new accounting standard for insurance contracts.

5. Supervisory experience over recent years has also provided valuable insight into the operation of the framework. It has identified some areas where the standards could be improved. The events associated with the liquidation of CBL Insurance Ltd. have been particularly illuminating.

The Review

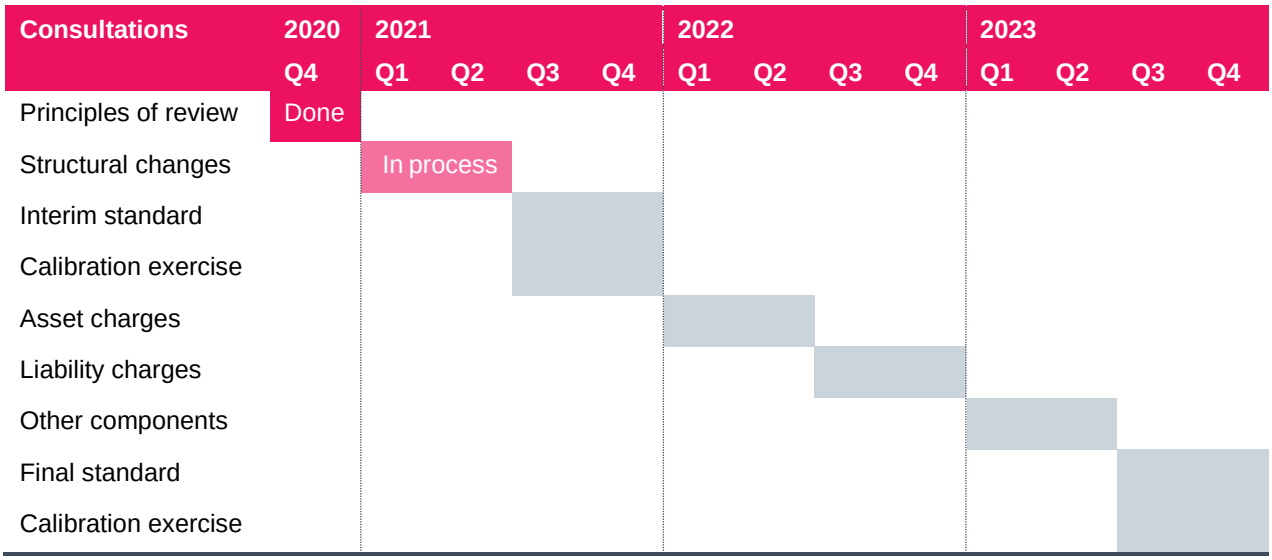
6. Best practice regulatory stewardship[4] includes monitoring and reviewing existing regulations at appropriate intervals to ensure they are robust and fit-for-purpose.

7. In October 2020, we announced the commencement of a review of the insurance solvency standards ("the Review") alongside a re-commencement of the review of the Insurance (Prudential Supervision) Act 2010.[5]

8. As part of this announcement, we asked for public submissions on the proposed timelines and on the review's principles. Following the closure of the consultation on 12 November 2020, we are taking into consideration the feedback received and will publish a formal response at a later date.

9. This consultation document addresses issues relating to the structure of solvency requirements and calculations. Submissions received will inform the development of interim solvency standards later in 2021. The full timeline is shown below. We consider the issues discussed in this paper to be fundamental in nature and needing be resolved before we address issues of detail in a subsequent stage of the review.

[4] https://treasury.govt.nz/information-and-services/regulation/regulatory-stewardship
[5] https://www.rbnz.govt.nz/news/2020/10/reserve-bank-relaunches-insurance-act-review



1. Principles and purposes

1.1 Purpose statement

10. There is no specific purpose for holding capital expressed in either IPSA or the solvency standards themselves. IPSA does however contain purposes and principles that have some bearing on the issue, for example soundness of and public confidence in the sector, sound governance and effective risk management.

11. It may be helpful for this review to have a clear picture of what the standards are trying to achieve by asking insurers to hold regulatory capital. For example, an explicit purpose statement would reduce ambiguity and provide a clear direction as to the Reserve Bank's regulatory objectives. It could also encourage better compliance with the standards by increasing understanding.

12. The ICPs provide the following statement:

    "The purpose of capital is to ensure that, in adversity, an insurer's obligations to policy-holders will continue to be met as they fall due."

13. "Adversity" is often defined in probabilistic terms, for example as the X^{th} percentile of a distribution of an insurer's change in net assets over a period. "Met" implies payment in full.

Questions for consultation:

A. Would a purpose statement be a useful addition to the solvency standards? Why or why not?

B. Please comment on the usefulness of the purpose statement above and suggest improvements, if any.

C. How likely should the fulfilment of obligations by an insurer be (recognising that certainty is an impossibility, and that there is a trade-off with efficiency and competition)?

D. Should the solvency risks be assumed to crystallise immediately, in the short-term (say one year) or over the long-term?

1.2 Principles

1.2.1 Total balance sheet

14. The International Association of Insurance Supervisors ("IAIS") recommends that certain principles should underpin the determination of solvency capital. One of these is the "total balance sheet approach". ICP 17 defines a total balance sheet approach as recognising the interrelationships between assets, liabilities and capital requirements. Essentially this means that stresses used to determine solvency capital should be applied to all items on the balance sheet, not just those that they primarily influence. It also means taking into account linkages between different parts of the balance sheet. Note that the total balance sheet approach refers to an overall concept, rather than a particular methodology.

15. For example, the interest rate risk charge assumes a step change in the level of market interest rates. The primary effect of this stress is to change the value of items (e.g. bonds, policy liabilities and lease commitments) that make use of interest rates to discount future cash-flows. The stress may also, however, create other effects on the balance sheet, for example through changes in policyholder behaviour (changes in surrender rates for investment-linked and participating products) or in inflation expectations. Under a total balance sheet approach both primary and secondary effects should be taken into account, if material.

16. The current solvency framework is not considered a total balance sheet approach.

1.2.2 Systemic and sectoral importance

17. Following the Global Financial Crisis of 2008-09, there was a push internationally to recognise "systemically important insurers" and require them to hold higher levels of capital due to their importance in the financial system. The IAIS' assessment of (global) systemic importance centred around five broad indicators – size, global activity, interconnectedness, asset liquidation and substitutability.[6]

18. As well as recognising the importance of identifying globally systemically important institutions, some national regulators have also identified institutions that are systemically important in a domestic context. For example, in our review of bank capital requirements, we have required domestically systemically important banks ("D-SIBs") to hold extra capital relative to non-systemically important banks.[7]

19. With respect to insurers, we are guided by the purposes and principles of both the Reserve Bank Act and IPSA. The former relates to financial stability, while the latter relates to the soundness and efficiency of the insurance sector, and public confidence in the sector.

20. We recognise that New Zealand insurers may not be as interconnected as New Zealand banks and therefore the failure of a large insurer may not have the same impact on financial stability as the failure of a large bank. However, a healthy financial system needs the support of a resilient insurance sector, and so it may be useful to identify sectorally, rather than systemically, important insurers.

21. Resilience generally relates to insurers' continued ability to operate even after a major adverse event, especially for insurers who play a dominant role in the market. One way to achieve this is potentially by way of higher solvency requirements for those "sectorally important insurers" relative to non-sectorally important insurers.

22. At the same time, we recognise that the benefits of greater resilience of major insurers must be balanced with considerations around efficiency and competition.

[6] IAIS, 2016: "Global Systemically Important Insurers: Updated Assessment Methodology"
[7] See "Capital Review – Decisions 2019"

Questions for consultation:

E. Should a "total balance sheet approach" be adopted for solvency calculations?

F. Do you think there are insurers that are "sectorally-important"? If so, what would be the advantages and disadvantages of imposing higher capital requirements on them, relative to those that are considered not sectorally-important? Please provide your reasons.

2. Application of the Solvency Standards

2.1 Background and Legal Basis

23. Insurers writing life business are subject to the "Solvency Standard for Life Insurance Business 2014" ("the life standard"), while insurers writing health or general insurance business are subject to the Solvency Standard for Non-Life Insurance Business 2014" ("the non-life standard"). Composite insurers may be subject to both standards simultaneously.

24. There are a number of other complications in the application of the standards:

- The life standard applies not only to the insurer, but separately to its statutory funds and life funds.
- Standards that apply to particular types of insurers (for example captives or insurers in run-off, with modified prescribed solvency assumptions).
- Standards that rely on another standard (for example the Solvency Standard for Variable Annuities 2015 ("the VA Standard"), which relies on many provisions of the Life Standard).
- For mono-sectoral insurers, capital and free assets are treated by the solvency standard for the sector in which they operate. For composite insurers, selecting a standard to deal with this business is less clear.

25. IPSA governs the application of solvency standards:

- Section 21(2) allows conditions of licence to require an insurer and/or its statutory funds to maintain solvency margins or minimum capital.
- Section 55(2) states that a solvency standard can apply to all insurers, to one or more classes[8] of insurer or to specified insurers.

2.2 Industry Sectors

2.2.1 Status

26. At the sectoral level, New Zealand's approach since solvency standards were introduced in 2011 has been to maintain separate standards for life and non-life insurance business. Health insurance, due to its generally short-term nature, has been accommodated in the non-life standard. Long-term classes of non-life insurance are catered for in the non-life standard by a requirement to have regard to the life standard principles.

27. Other approaches have, from time to time, been followed in other jurisdictions. For example, before the introduction of Solvency II, the UK's Prudential Regulatory Authority mandated separate approaches for long-term business (whether life, health or non-life) and short-term business. Similarly, Solvency II is an integrated approach covering all types of insurers.

28. Conceivably, it is possible for a New Zealand insurer to be subject to three solvency standards simultaneously – the life standard, the variable annuity standard and the non-life standard. A number of insurers have both life and non-life business on their books, and so are subject to two standards.

[8] "Class" is not a defined term.

2.2.2 Issues

29. We have observed a number of issues (or potential issues) with the way the solvency standards address various industry sectors:

- The standards have much in common and would be easier to upgrade if they were a single document with variations only at the component level as required.
- In addition to the contingency (life, disability, non-life), there are other factors that may also be important in directing solvency treatment. One such factor may be for how long the insurer is obligated to the policyholder. It is possible that the current solvency standards do not address the term of the contract appropriately. For example, the non-life standard allows considerable discretion regarding the treatment of contracts with long term risk characteristics.[9]
- The life and non-life standards are inconsistent with respect to some of the capital charges. For example, AA-rated debt with a remaining term of less than one year has a resilience capital factor of 1% in the non-life standard and 2% in the life standard. It may also not be clear which standard governs assets not backing insurance liabilities.
- Health business isn't specifically addressed in an explicit solvency standard. It is simply allocated to life or non-life as the case may be. This means that health insurance policies sold by life insurers and those sold by non-life insurers may be treated differently. In particular, life insurers may treat health insurance as a long-term product, while non-life insurers may treat it as a short-term product.
- Definitions and use of aggregate solvency measures need clarifying.
- The integration between the VA Standard's capital charge and the life standard's Insurance Risk Capital Charge is imperfect. This is because it is unclear whether the former takes the form of a capital stress or a stressed liability.

Questions for consultation

G. Please comment on how effectively existing solvency standards address particular sectors and subsectors of the industry.

H. Should health insurance have its own specific solvency approach? Please provide your reasoning.

I. Please discuss your preferences with respect to how the standards should apply to industry sectors, with reference to the following options:

Option	Description	Advantages	Disadvantages
1	Sector-differentiated status quo – separate Life and Non-Life Standards	Least cost for industry as would not require the industry to change its calculation methodologies.	Potential inconsistencies and more complex upgrade path.
2	Single solvency framework covering all sectors and subsectors	Streamlined approach and less potential for inconsistency.	Higher cost to industry as industry would be required to make significant changes to their calculation methodologies.

[9] Paragraphs 41-44 of the non-life standard

			Risk that sector-specific risks may not be accurately captured.
3	Rationalisation – folding the variable annuity standard into the life standard, and the three non-life standards into a single document	Would address some of the issues listed above relating to inconsistency, while still explicitly allowing for sector-specific differences.	Potentially minor costs to affected insurers.

2.3 Statutory and other funds

2.3.1 Status

30. Sections 82-119 of IPSA establish a requirement for insurers to maintain statutory funds for their life insurance business.[10] These funds are designed to specify a pool of assets that support obligations under life insurance policies and prevent them from being misused. They also allow investment performance to be tracked so that linked benefits can be determined correctly.

31. The provisions have rules requiring certain income to be credited to a fund and restricting the expenses that can be paid out of it. This sets up a de-facto minimum asset requirement on an accumulation basis.[11] Assets held in statutory funds are generally higher than this requirement, however. This is because the Life Solvency Standard is applied to the fund as well as the insurer, and this standard requires the fund to hold assets against stresses as well as policy liabilities.

32. The life standard refers to statutory funds (as defined in IPSA), which are a type of of 'life fund'. Business outside of statutory funds also constitutes a life fund. The non-life standard does not address fund structure within the insurer.

33. Both major standards define aggregate solvency measures. For example, the aggregate minimum solvency capital is defined as "the sum of the minimum solvency capital determined for each individual solvency margin required to be maintained by the licensed insurer".

2.3.2 Issues

34. There are a number of potential issues relating to how the solvency standards are applied to statutory funds and other funds:

- Health insurance can be treated differently depending on applicable accounting standards and licence conditions.
- Solvency requirements applicable to life funds other than statutory funds are not necessarily secured by a defined pool of assets.
- The minimum net asset requirement in Sections 82-119[12] may potentially be different to the solvency standard requirement.
- Definitions of aggregate measures could be taken to include the insurer's overall solvency requirements as well as the fund-level requirements.

[10] There are currently no requirements for non-life insurance business to be housed in statutory funds.
[11] Refer to Section 83 of IPSA
[12] This is a requirement to accumulate premiums and investment income within the fund, together with restrictions on expenses allowed to be paid by the fund.

Questions for consultation

J. Please comment on how effectively existing solvency standards address statutory and other funds.

K. Should solvency standards applied to statutory funds apply a floor to assets based on the provisions of Sections 82-119?

L. Please discuss your preferences with respect to how the standards should apply to statutory and other funds, with reference to the following options:

Option	Description	Advantages	Disadvantages
1	Status quo – life insurers have solvency requirements for statutory funds and the insurer as a whole; non-life insurers have requirements only at the insurer level.	No disruption to insurers.	Minimum assets determined at the current level may not be sufficient to resolve all blocks of business for an insurer in distress.
2	All business allocated to 'insurance funds'.[13] Solvency requirements are only applied at the insurer level, although these requirements will be a function of fund solvency.	Facilitates resolution of all blocks of business.	May result in increased costs (administrative and capital) for insurers.

2.4 Consolidation

35. The solvency standards apply to licensed insurers and any of their subsidiaries that are also licensed insurers. The requirements apply to each entity individually as well as to the group as a whole. Non-insurance subsidiaries are not captured explicitly under the group solvency requirements, but are treated as either a related party investment, subordinated loan, or other obligations.

36. This treatment may not reflect the economic reality of the non-insurance subsidiary's contribution to the parent's balance sheet. As a result, this may distort the solvency position of the insurance group. It may be appropriate to look through to the assets, liabilities and risks of the non-insurance subsidiary.

Questions for consultation

M. In your view, is the current treatment of insurance and non-insurance subsidiaries in the solvency standards appropriate? Please provide your reasons.

N. If your answer to the previous question was "No", what do you feel would be a better treatment of insurance and non-insurance subsidiaries?

[13] Insurance funds would include statutory funds and other pools of assets deemed to be providing security for specific types of policy liability.

3. Dealing with the impacts of IFRS 17

3.1 Background

37. In May 2017, the IASB released a final version of a new international accounting standard for insurance contracts, IFRS 17 *Insurance Contracts* ("IFRS 17"). IFRS 17 replaces the current standard IFRS 4, and is intended to increase transparency and reporting consistency internationally.

38. IFRS 17 will have a significant impact on how insurance liabilities and related assets on the balance sheet are determined. It will also impact on solvency calculations as New Zealand's solvency standards are based on the accounting balance sheet.

39. From a New Zealand perspective there are likely to be several areas that require judgement. This could in turn lead to financial and solvency results that are inconsistent and not comparable across the industry.

40. Not all parts of the balance sheet will be equally affected – technical provisions are likely to be the most affected, while non-technical insurance and non-insurance specific items may be less affected. We are exploring the possibility of using a "standardised balance sheet" structure as part of our response to IFRS 17.

41. For this discussion, a "standardised balance sheet" is defined as one where adjustments have been applied to ensure as much consistency as possible across the industry. These adjustments may, for instance, take the form of specific requirements for discount rates and other assumptions, or prescribe the method for valuing insurance liabilities.

42. A standardised balance sheet for solvency purposes may or may not be based on the accounting balance sheet. One possible way of achieving greater consistency and comparability after IFRS 17 has been adopted is to prescribe specific methods and assumptions for particular elements of the balance sheet for solvency purposes. However, at the same time, we must balance this with efficiency considerations from both the industry's and our perspective.

43. The discussion will be separated into two sub-sections: the first encompassing the "technical" portions of the balance sheet (that is, insurance liabilities and other related items including deferred acquisition costs and deferred reinsurance expenses), and the next dealing with other components of the balance sheet.

3.2 Insurance liabilities and other technical provisions

3.2.1 Introduction

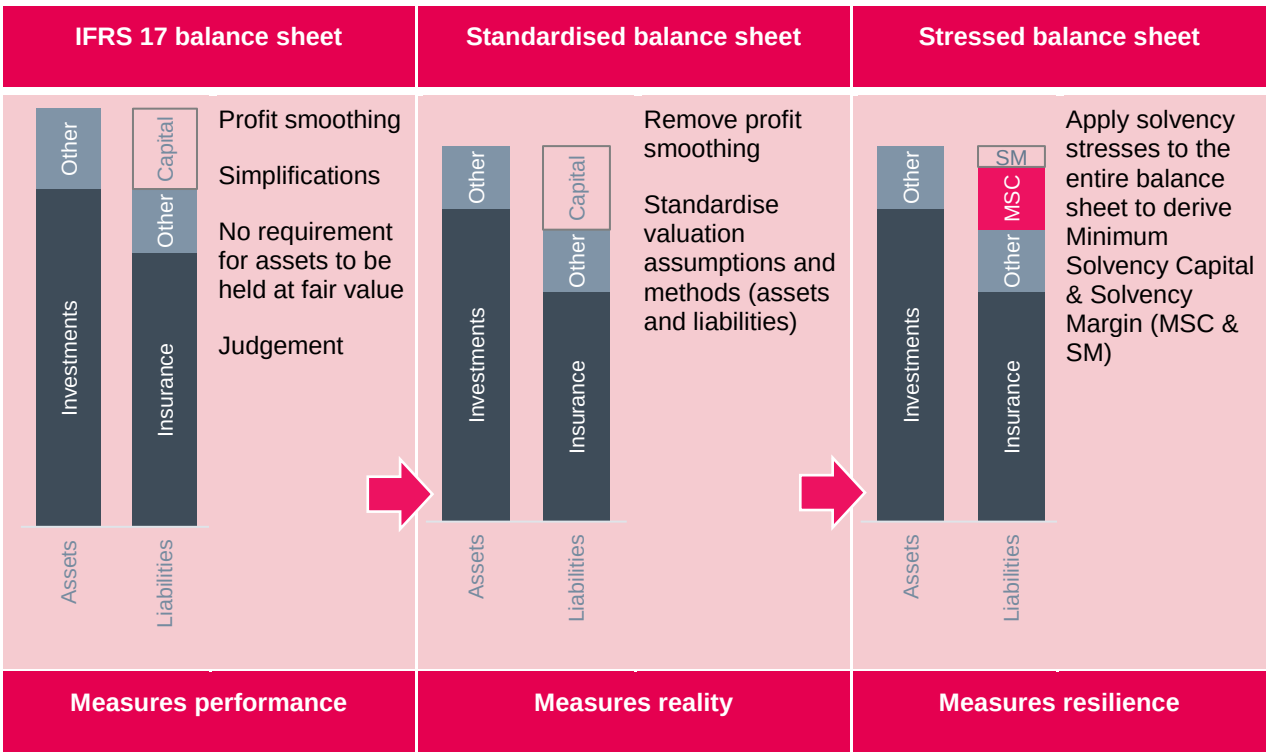
44. This section will discuss a number of different forms that a standardised balance sheet could take.

45. The scope of this sub-section is the calculation of technical insurance provisions and related assets. This includes:

- life insurance policy liabilities
- outstanding claims liabilities
- premium liabilities including unexpired risk provision
- deferred acquisition costs
- reinsurance of the above

46. For the purposes of this section, the following distinction will be used:

Accounting balance sheet	Balance sheet used for financial reporting purposes. Assets and liabilities on the balance sheet are valued on a Generally Accepted Accounting Principles ("GAAP") basis.
Solvency balance sheet	Balance sheet used as the starting point for solvency calculations. This is *before* the application of any stresses. This balance sheet will be used as the base case for solvency stresses.
Stressed balance sheet	Balance sheet after the application of solvency stresses (solvency stresses applied on the solvency balance sheet components, including any adjustments to asset values). This is the basis that will be used to assess the sufficiency of the company's assets.



47. This discussion will focus on the solvency balance sheet. Throughout this document, any reference to a "standardised balance sheet" will be in relation to the solvency balance sheet. The accounting balance sheet, while important to understand from a regulatory point of view, is not within the regulator's jurisdiction to specify. The stressed balance sheet will be discussed during a later stage of the solvency standard review.

3.2.2 Solvency balance sheets

48. While solvency capital requirements are a common feature of insurance regulation in most developed jurisdictions, the accounting basis on which the solvency requirements are calculated may vary between jurisdictions.

49. At one end of the spectrum is the regulatory balance sheet. This is where the regulator specifies the valuation method and assumptions for each item on the balance sheet to be used as a starting position for solvency purposes. Under this approach, the solvency balance sheet is completely independent of the accounting (GAAP) balance sheet.

50. In contrast, some regulators use the GAAP balance sheet for solvency purposes. The GAAP approach values assets and liabilities for solvency purposes according to the jurisdictional accounting requirements on an unadjusted (or minimally adjusted) basis. This approach assumes implicitly that the accounting requirements provide a reasonable estimate of the assets and liabilities for solvency purposes.

51. Other regulators opt for a more in-between approach, where the GAAP balance sheet is used as a basis for solvency, but with adjustments for material assets and liabilities. Under this approach, which will be referred to as the "GAAP-adjusted approach", the regulator may specify both the valuation method for these material components as well as the assumptions to be used in the valuation.

52. A comparison of the approaches used under a number of international frameworks has been included in Appendix 1.[14]

53. New Zealand's solvency standards are currently mostly based on the NZ GAAP balance sheet.[15] The applicable GAAP standard for insurance liabilities in New Zealand is currently NZ IFRS 4. This has a specific requirement that assets backing insurance liabilities be valued under a fair value (or similar) basis. Assets not backing insurance liabilities are valued using the applicable NZ IFRS. However, as most insurers designate all assets as supporting insurance liabilities, all assets on the balance sheet are typically valued using fair value.

54. As mentioned earlier, the introduction of IFRS 17 is expected to have a significant impact on the insurance liabilities and hence on solvency calculations. To minimise any unintended consequences, we must fully consider and understand the extent to which IFRS 17 will impact the solvency position, and the potential avenues available to respond to IFRS 17.

55. The following discussion will describe the main areas of the solvency calculations that are expected to be impacted by IFRS 17. We will then touch upon the international benchmark for solvency valuation as specified by the ICPs, as well as the FSAP's assessment of New Zealand's alignment with the benchmark. With these in mind, we will present a number of possible approaches to address the solvency impacts of IFRS 17.

3.2.3 IFRS 17 impacts on solvency

56. The main areas of difference between NZ IFRS 4 and IFRS 17 that may have an impact on solvency calculations have been included in Appendix 2. These issues highlight the importance of a response from us. Without action from us, the solvency standards could cease to provide an accurate reflection of financial strength, as the insurer's true financial strength would be somewhat disguised by the choice of valuation method and other judgements applied. In addition, the risk charges may need to be recalibrated in order to achieve the target risk criterion.

3.2.4 International benchmark

57. Alignment with international standards is an important consideration when developing solvency standards. At the same time, what is appropriate for the New Zealand environment must be considered. International best practice, as benchmarked by the ICPs, shows that valuation of assets and liabilities for solvency purposes should reflect an economic valuation.

[14] The choice of international frameworks used in the comparison has been influenced by the frameworks listed in Principle 1 of the review, as outlined in this consultation paper.

[15] With the exception of non-life premium liabilities – the accounting standards require premium liabilities to be calculated on a retrospective basis, whereas the solvency standards require premium liabilities to be valued using a prospective (projection) approach.

58. ICP 14 defines an economic valuation as "a valuation such that the resulting assessment of an insurer's financial position is not obscured by hidden or inherent conservatism or optimism in the valuation". To achieve an economic value, the valuation of assets and liabilities on the solvency balance sheet should reflect a current, prospective valuation of the future cash flows, allowing for both the riskiness of those cash flows as well as the time value of money.

59. For assets in a deep and liquid market, the current quoted market value is generally seen as an economic value, as the price is considered to already incorporate any risk premiums. However, for insurance liabilities where there is no active market, an economic value can be achieved by including a margin to allow for uncertainty on top of the best estimate liability. Note that there is no specific guidance in ICP 14 regarding the size or form of the margin for uncertainty.

60. The assessment of New Zealand's compliance with ICP 14 is covered in the FSAP, but is summarised again here. The FSAP considers that the valuation of assets and liabilities for solvency purposes is largely observant to the ICPs – that is, New Zealand uses a proxy for economic valuation. This conclusion was based on:

    - Non-life insurance liabilities are calculated as the sum of the central estimate (the mean) and a risk margin, which the solvency standards have specified to be at a 75% probability of sufficiency. The central estimate represents the present value of future claims cash flows, for both claims that have been incurred (outstanding claims liabilities), and claims that have not yet been incurred (Premium Liabilities).
    - Life insurance policy liabilities (including health insurance by life insurers) are valued as the sum of a best estimate liability and the present value of profit margins. The FSAP considered the latter a prudent margin over best estimate (though unlike the risk margin for non-life liabilities this is not calibrated to any sufficiency level).
    - Assets backing insurance liabilities are required under NZ IFRS 4 to be valued using a fair value (or similar) basis. As insurers typically allocate most of their assets as backing insurance liabilities, it follows that for most insurers, all assets are valued on a fair value basis. In the solvency calculations, adjustments (in the form of deductions or risk charges) are then applied for assets with reduced or nil value under a stressed scenario.

3.2.5 Options

61. The actions available to us in addressing the areas of IFRS 17 that impact technical insurance liabilities (and related assets) can be grouped into four broad categories:

    - **Option 1 (status quo)** – continue to require NZ IFRS 4 for solvency purposes
    - **Option 2 (GAAP)** – continue to use the GAAP balance sheet after transition to IFRS 17, and make no changes to the solvency standard.
    - **Option 3 (GAAP with adjustments)** – use GAAP where it makes sense, but make adjustments for certain areas/parameters. There are varying degrees of prescription involved with this method.
    - **Option 4 (full regulatory balance sheet)** – Ignore GAAP entirely and specify a separate set of regulatory reporting requirements.

62. We consider Options 1 and 2 above (status quo and GAAP) unlikely to be realistic in practice, but have included them as we recognise the importance of acknowledging all the available options. This will allow us to gain a more complete understanding of the impacts of each alternative relative to the status quo.

Option	Description	Advantages	Disadvantages
Option 1: Status Quo	Continue to require IFRS 4 for solvency purposes, even after transition to IFRS 17, with no changes to the solvency standard.	• Low implementation cost for us • No (upwards or downwards) spike in solvency ratios after transition, and hence easier for the public to understand	• Burden on industry to maintain both reporting requirements, especially for life insurers. • Not robust and difficult to maintain through future generations of accounting changes.
Option 2: GAAP	Continue to use the GAAP balance sheet after transition to IFRS 17, and make no further changes to the solvency standard.	• Lower implementation cost for us and insurers • Flexibility for insurers to choose what works for them (through judgements under IFRS 17) • Easy to reconcile to accounts • As IFRS 17 is an international standard, basing our solvency standards on IFRS 17 makes it more easily understandable and easily accessible for an overseas entity	• Obscures true financial strength as IFRS 17 is open to judgement, so insurers with otherwise identical risks could end up with very different solvency positions. Insurers' true financial strength will be disguised by the choice of method and assumptions. • Doesn't provide a consistent basis to implement a ladder of intervention approach as the solvency ratio may mean different things for different insurers. • Even if there was consistency in valuation method across the whole industry, various IFRS 17 allowable approaches may not be appropriate for solvency purposes.
Option 3: GAAP with adjustments			
Option 3a: Specify insurance liability valuation parameters	Allow insurers flexibility of choice regarding insurance liability valuation method under IFRS 17, but specify parameters to use	• Least implementation cost for insurers as they can leverage off their IFRS 17 implementation • As IFRS 17 is an international standard, our solvency standards will be more easily understandable to overseas regulators and insurers (less barrier to entry)	• Insurers may select the valuation method that works best for them (in terms of management and systems), and not necessarily have solvency in mind when selecting the valuation method. This may mean the valuation method selected by the insurer does not reflect the economic value of the product. • Difficult to ensure consistency[16] and comparability across industry as different insurers may treat the same product differently

[16] Especially when dealing with onerous contracts, risk adjustments and the contractual service margin

Option	Description	Advantages	Disadvantages
Option 3b: Specify IFRS 17 insurance liability valuation method	Use an IFRS 17 valuation method for insurance liabilities, but specify which valuation method (and parameters) to use.	• Might be easier from an implementation point of view • Comparability across industry • Easy to understand from an international perspective.	• Depending on the insurer, this might actually increase cost of implementation to the insurer if the method specified is different to what they are using. This is more likely for insurers with a small and relatively homogeneous range of products. • There is still such a large range of products in the market that it might be difficult to find a one-size-fits-all approach.
Option 3c: Use a non-IFRS 17 insurance liability valuation method	Use IFRS for other parts of the balance sheet where it makes sense, but specify a non-IFRS 17 valuation method for insurance liabilities. An example of this approach would be to require Yearly Renewable Term business to be valued as long-term business rather than one-year contracts.	• Might be a better solution to reflect the economic reality of the products • Consistency and comparability across industry, as well as internationally (if we are careful about how we specify the valuation method) • Provides a good base for implementing ladder of intervention • Robust and future-proofed, in case of future accounting standard changes	• Higher implementation costs for insurers as they have to maintain multiple valuation systems and methods (IFRS valuation methods as well as regulatory valuation methods) • Potentially confusing as fragmented requirements • May not be comparable to financial statements
Option 4: Regulatory balance sheet	Ignore GAAP entirely, and specify a new set of regulatory reporting requirements. Note that by definition a regulatory balance sheet encompasses the entire balance sheet, not just the technical provisions.	• Structured and tidy as all the requirements are in one place, with no need to reference separate standards (GAAP and solvency) for different assets and liabilities • Better harmonisation and consistency across industry can be achieved, while at the same time specifying a set of requirements that are appropriate for NZ, as GAAP may still allow for judgement in some areas • Robust and future-proofed, in case of future accounting standard changes • Good base for implementing ladders of intervention as it is standardised and consistent.	• May lack international comparability if we choose something too NZ-specific • Potentially burdensome for a small market like NZ to maintain multiple sets of accounts, from both the industry as well as the our standpoints • Even harder to reconcile to financial statements. While this could be mitigated by requiring insurers to provide a reconciliation, this requirement might be viewed by industry as overly burdensome.

63. Note that Options 3b, 3c and 4 are each examples of the standardised balance sheet approach.

64. Our initial preferred options are Options 3b and 3c. In our view, these options achieve harmonisation of solvency requirements across the industry and a valuation that reflects the economic reality of the products with the most efficiency. Option 3c, while more complex than Option 3b, gives us flexibility in specifying a liability valuation approach that is deemed most appropriate for the New Zealand market.

65. Option 4, in our view, may be overly burdensome for New Zealand's small and relatively homogeneous market. However, we will wait for feedback from submitters around the feasibility of each of these options.

Question for consultation

O. In the context of solvency requirements, which of the above options do you consider to be the most appropriate for New Zealand? Please give your reasons.

3.3 Other (non-technical) items

66. While the previous sub-section discussed technical insurance items, this sub-section will focus on non-technical insurance and non-insurance items on the balance sheet. However, as will be discussed shortly, the treatment of some non-technical elements cannot be separated from the treatment of the technical provisions.

67. Currently, gaps exist in our knowledge of the non-technical components of the balance sheet. One way to fill in these gaps is through this public consultation process. Once we have the necessary information, we can form more concrete proposals for change.

68. As before, it is important to keep in mind international best practice, which for insurance is benchmarked by the Insurance Core Principles (ICPs), published by the IAIS.

69. This sub-section will be structured as follows: First, there will be a brief discussion on the "total balance sheet" approach, as detailed in ICP 17. Next, we will discuss the non-technical components of the balance sheet, and the interaction with the options presented in the previous section on insurance liabilities.

70. Under the IAA framework for capital requirements and risk oversight, "the capital requirements and risk oversight processes in two jurisdictions with similar business, legal, economic and demographic environments and supervisory philosophy should be comparable". A cornerstone of the IAA framework is the total balance sheet approach. This was touched upon briefly earlier in this document.

71. One implication of a total balance sheet approach is that an insurer's financial position should be based on a consistent and meaningful measurement of assets and liabilities. This does not necessarily require full matching of assets and liabilities. However, for example, a change in interest rates should be consistently reflected in both the value of assets and liabilities, with the capital requirement changing appropriately in response.

72. The use of inconsistent methods and assumptions in measuring the assets and liabilities could generate hidden surpluses or deficits, and create the appearance of differing capital positions for otherwise similar insurers.

73. A typical insurer's assets and liabilities under IFRS 4 are shown in the table below. The shades show the degree to which the items are likely to be affected by IFRS 17 – darker shades indicate more obvious and direct impacts, while lighter shades indicate a smaller and/or less direct impact. Note that for some insurers NZ IFRS 9 (Financial Instruments) also becomes effective at the same time as NZ IFRS 17[17], so any changes resulting from IFRS 9 may also need to be taken into account.

[17] While we have referred to IFRS 17 throughout this document, the form of the standard approved by the External Reporting Board for application in New Zealand is known as NZ IFRS 17. Differences with the international standard are minimal.

Assets	Liabilities
Cash & cash equivalents	Trade and other payables
Investments	Reinsurance premium payables
Premium receivables	Claims payable
Trade and other receivables	Unearned premium liability
Reinsurance receivables	Outstanding claims liability
Loans	Life insurance contract liability
Insurance contract assets	Life investment contract liability
Current tax assets	Lease liabilities
Deferred reinsurance expense	Current tax liabilities
Deferred acquisition costs	Deferred tax liabilities
Reinsurance and other recoveries	Other liabilities
Reinsurance in respect of the insurance contract liability	
Deferred tax assets	
Right of use assets	
Property, plant and equipment	
Intangible assets	
Investment in subsidiaries	
Goodwill	
Other assets	

74. The items highlighted in dark grey are technical insurance liabilities and were discussed in the previous sub-section. Here we will discuss the non-technical insurance and non-insurance components, highlighted in the lighter shades.

3.3.1 Non-insurance items

75. In the illustrative balance sheet above, non-insurance items encompass all the items that have not been highlighted (cash, investments, property, etc.).

76. NZ IFRS 4 requires assets backing insurance liabilities to be valued using a fair value or similar basis. The FSAP notes that "many insurers designate all assets as supporting the insurance business and hence use a fair value measurement for all of the assets". IFRS 17, on the other hand, does not specify any requirements for valuing assets backing insurance liabilities. This raises the question of how the non-technical components of the balance sheet will be affected after transition to IFRS 17.

77. We would like to find out whether insurers, after transition to IFRS 17, will revert to the applicable accounting standard in order to value the assets and liabilities on the balance sheet, which may or may not need the use of a fair value approach. While arguably the solvency treatment of non-insurance assets and liabilities could leverage off the accounting standards, this potentially leads to further areas of uncertainty:

- If accounting standards yield methods that are materially different to the current (fair value) basis, this may result in a change to solvency results that are not reflective of an actual change in an insurer's financial strength.
- If the accounting standards allow significant areas of judgement, the solvency position may not be comparable across the industry.
- Whether the accounting treatment of assets (and liabilities) is appropriate for solvency purposes.

- Even if there was consistency across the industry and the accounting standard treatment was appropriate for solvency purposes, the solvency position is not immunised against future accounting standard changes.
- How does this fit in with the total balance sheet approach and the requirement for assets and liabilities to be valued on a consistent basis?

78. Following from the discussion above, it appears that a natural alternative would be to require insurers to continue using fair value for solvency purposes. This would have the advantage of achieving similar treatment of the balance sheet pre- and post- IFRS 17, with the least impact from a solvency perspective as a result. Additionally, fair value is consistent with the requirement specified in ICP 14 and ICP 17. At a high level, a fair value requirement also does not appear unreasonable, given that insurers are likely to already have the systems and expertise in place to conduct a fair valuation.

79. However, we then need to consider whether a fair value requirement will impose an unnecessary burden on insurers, and if the rest of the balance sheet (excluding non-technical items) should also be valued using a fair value approach.

80. An important consideration in addressing these questions relates to principle 2 of the Solvency Standard Review Principles which states that the Reserve Bank will adopt a "substance over form" approach, and consider what is most appropriate for the New Zealand market. In particular, we are not restricted to following the treatment of accounting standards where we believe that treatment to be inappropriate.

81. Note that APRA specifies the asset valuation requirements for regulatory reporting purposes under reporting standards LRS and GRS 300, but adjusts all the assets to fair value for solvency purposes, as per reporting standards LRS and GRS 112.[18] Solvency II requires assets and non-insurance liabilities to be valued on a fair value basis.

Questions for consultation:

P. How do insurers currently treat non-technical insurance assets and liabilities on the balance sheet? Are all assets currently designated as backing insurance liabilities, and hence valued using the fair value approach? Are there any items (other than technical provisions) on the balance sheet that insurers are not currently measured using fair value?

Q. How, if at all, is the treatment in (P) likely to change after transition to IFRS 17 (and IFRS 9)?

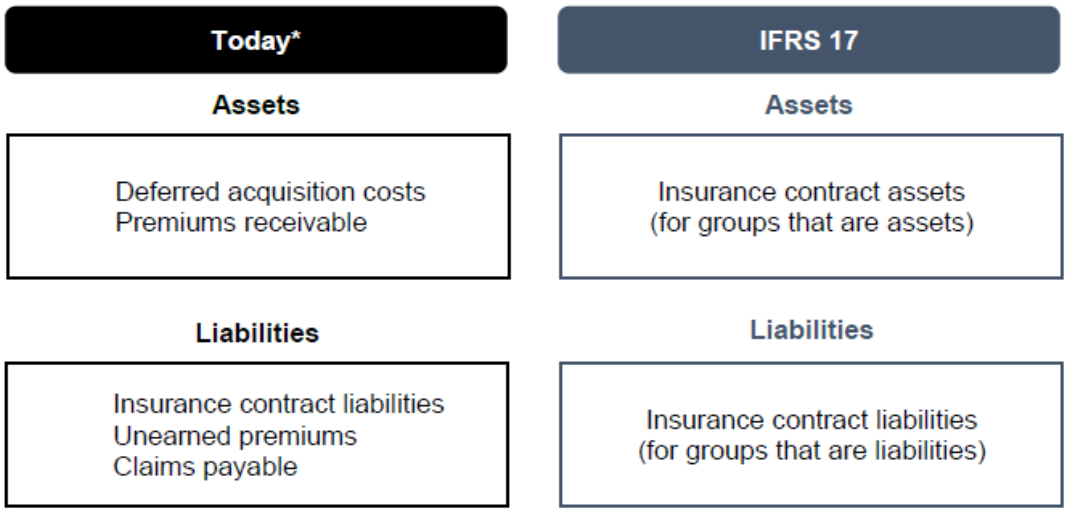
R. Is fair value a reasonable approach to value non-technical assets and liabilities? Would an adjustment to bring all assets and liabilities on the balance sheet to fair value for solvency purposes be appropriate?

3.3.2 Non-technical insurance items

82. In the illustrative balance sheet above, non-technical insurance items refer to the insurance (premiums, claims, reinsurance) receivables and payables. These reflect rights and obligations arising under insurance and reinsurance contracts as defined under NZ IFRS 4. They have been explicitly excluded from NZ IFRS 9 (and NZ IAS 39, the old version of NZ IFRS 9). The financial statements for some insurers show that insurance receivables are sometimes measured using amortised cost with impairment provisions, but at this stage it is not clear if this approach is used consistently by all insurers.

[18] LRS and GRS are reporting standards that apply to Life and General Insurers respectively.

83. Currently, most insurers account for insurance and reinsurance receivables as assets, and insurance payables as liabilities on the balance sheet, separate to the insurance and reinsurance contract assets and liabilities. Under IFRS 17, it is likely that insurance-related receivables and payables will no longer appear as an explicit item on the balance sheet, but implicitly as part of the insurance contract assets and liabilities. This treatment is shown in the diagram below.[19] Premium receivables and claims payables will be consolidated as part of insurance contract assets/liabilities, and reinsurance recoveries as part of reinsurance contract assets/liabilities.



(*) Common presentation in the statement of financial position applying IFRS 4 *Insurance Contracts*

84. During the development of IFRS 17, a number of stakeholders expressed concern about combining insurance receivable and payables as a single line item on the balance sheet. They argued that presenting these separately would better reflect the nature of these items, particularly in relation to credit risk. Additionally, they argued that meeting the IFRS 17 requirements presented implementation challenges, in that the systems currently used to record receivables and payables may be separate from the insurance liability valuation system.

85. However, the IASB decided to continue with the existing requirements for the following reasons:

- The principle of IFRS 17 recognises that a group of contracts create a single bundle of rights and obligations. Therefore, measuring insurance receivables and payables separately from insurance contracts would result in internal inconsistencies in IFRS 17 and potentially mislead users of the financial statements into thinking these are separate rights and obligations.
- Reduced comparability as insurers may use different definitions of receivables and payables. While introducing a consistent definition under IFRS 17 was discussed, the IASB decided this would disrupt implementation already underway and lead to unnecessary delays in the effective date of IFRS 17.

86. Solvency standards currently apply a capital charge for unpaid premiums and third party recoveries (by means of the asset risk charge) and reinsurance receivables (by means of the Reinsurance Recovery Risk Charge) to reflect the credit risk associated with these items. As IFRS 17 already requires balance sheet items to reflect credit risk, an adjustment to these capital charges may be required.

87. Although the requirement to use probability-weighted cash flows under the IFRS 17 general measurement model essentially means that any credit risk or impairment will be allowed for implicitly, a number of considerations remain:

[19] Sourced from the IASB Board Paper Agenda Paper 2A (Dec 18)

- Without specific guidance on how to allow for credit risk or impairment, insurers may reach a different view on the probability of the cash flows, leading to results that are not comparable across the industry.
- The allowance for impairment and credit risk under the simplified model may be even less transparent than under the general model. This is because the simplified model is based on a cash received basis, and not expected future cash flows.
- Do we consider credit risk associated with unpaid premiums and reinsurance recoveries to be significant? The insurer can lapse a policy after a certain number of missed payments. In addition, overdue premiums generally comprise a relatively small portion of an insurer's assets. In contrast, reinsurance receivables generally make up a more material portion of an insurer's balance sheet. Reinsurance also does not relieve the direct insurer's obligation to the policyholder – the insurer is still contractually bound to pay claims to the policyholder regardless of whether or not the reinsurer fulfils its end of the treaty. The credit risk related to reinsurance receivables is higher for classes of business where the claims take longer to settle.
- There is a possibility that insurers may not implement full system changes in order to combine the receivables/payables system with insurance liability valuation system. Instead, they may use a high-level adjustment to add the payables/receivables into the insurance contract assets/liability. If this is the case, it might be possible to leverage off this treatment and ask insurers to retain information about insurance receivables and payables for solvency purposes.

88. The treatment of insurance payables and receivables is not independent of the treatment of technical provisions, as shown below:

Options for valuing technical provisions	Treatment of insurance payables and receivables
3a: Allow insurers choice of valuation method under IFRS 17, but prescribe valuation parameters	No further adjustment needed to make sure that insurance receivables and payables are covered. Under this method it may be possible to standardise the allowances for impairment and credit risk through the prescribed valuation parameters. However, the question still remains as to whether or not the impairment can be easily unwound/unloaded to apply a 1-in-200 year stress.
3b: Specify which IFRS 17 valuation method and parameters	
3c: Specify non-IFRS 17 valuation method	May require an explicit adjustment to the balance sheet to ensure insurance receivables and payables are accounted for. This approach would require us to come up with a consistent definition for these items. However, this runs the risk of being unduly complex and burdensome for both industry as well as the Bank. An alternative to adding an explicit entry on the balance sheet would be to ensure these items are allowed for in the valuation of technical provisions. However, we run into a similar problem as before, in that unwinding to apply a 1-in-200 year stress may be problematic.
4: Regulatory balance sheet	

89. As noted earlier, overdue premiums generally comprise only a small part of the balance sheet, and the insurer can also lapse the policy after a certain number of unpaid premiums. On the other hand, reinsurance receivables comprise a larger portion of the balance sheet and do not relieve the insurer from its obligations to policyholders, and therefore arguably expose the insurer to more significant credit risk than overdue policyholder premiums. The difference in materiality also suggests that a different treatment between premium receivables and reinsurance receivables may be warranted. This may, however, come at the cost of inconsistency and additional complexity.

- Is it necessary to have visibility of insurance receivables, and hence the associated credit risk, from a solvency perspective? If not, how do we ensure any material credit risk is properly reflected in the solvency standards?
- How do we balance transparency, complexity and appropriate allowance for risk (materiality)?

Questions for consultation

S. Is it necessary to have visibility of insurance receivables, and hence the associated credit risk, from a solvency perspective? If not, how do we ensure that any material credit risk is properly reflected in the solvency standards?

T. How do insurers currently measure insurance receivables and payables (premium and reinsurance recovery receivables, claims payable)?

U. How are insurers looking at implementing the changes relating to insurance receivables and payables resulting from IFRS 17 from a systems perspective? Are major system changes to collate the receivables/payables system with the valuation system being considered, or will separate systems be maintained, with a high level adjustment being applied to incorporate the receivables/payables into the measurement of insurance contracts?

V. If the measurement of insurance receivables under IFRS 4 currently includes an allowance for impairment, how will insurers change the basis to determine the impairment related to insurance receivables after transition to IFRS 17?

3.3.3 Tax

90. Tax may be affected to the extent that it affects the recognition of profit. It is likely there will be some change in the profit recognition pattern between IFRS 4 and IFRS 17, which in turn may flow through to the deferred tax asset and liability components of the balance sheet. However, the extent to which these items will be affected is not yet clear to us.

91. Both the life and non-life solvency standards currently deduct the deferred tax asset ("DTA") from the calculation of actual solvency capital. This means the impact of any changes to the DTA may be mitigated. Nevertheless, understanding the tax effects are important in assessing whether the current treatment remains appropriate or if further adjustments are needed (to tax, as well as to other items). A more complete understanding of tax effects also helps achieve consistency under the total balance sheet approach. For instance, a deferred tax asset or liability that is disproportionate to the insurance liability (before any deductions) will not yield comparable results.

Questions for consultation:

W. How are the tax items on the balance sheet likely to be impacted by IFRS 17 (and IFRS 9)?

X. Will there be any flow on impacts of tax impacts on other insurance and non-insurance items on the balance sheet?

4. Ladder of intervention framework

4.1 Solvency control levels

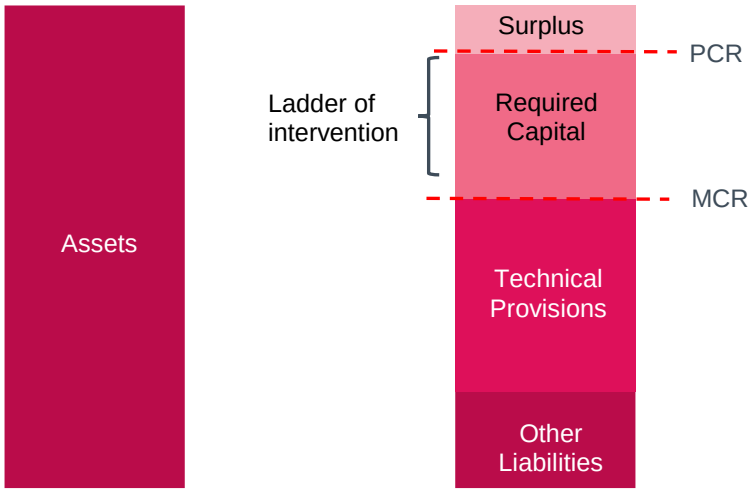
92. ICP 17 (Capital adequacy) requires the regulatory capital framework to include at least two solvency control levels. This may trigger different degrees of intervention by the supervisor as the insurer's capital resources fall below these control levels. The intensity of the supervisor's actions should be proportional to the insurer's capital position. Higher levels of solvency are associated with lower supervisory intervention, with the level of supervisory intervention increasing as the insurer's solvency position deteriorates.

93. This "ladder of intervention" framework acts as an early warning sign and lets the supervisor take action early enough if an insurer falls into difficulty, making recovery more likely.

94. Under the ICP 17 structure, the following solvency control levels are set up:

- *Prescribed capital requirement ("PCR")* – this is the highest solvency control level. Above this level, the supervisor does not intervene on capital adequacy grounds. The PCR means that assets will exceed technical provisions and other liabilities with a specified level of sufficiency over a defined time horizon.
- *Minimum capital requirement ("MCR")* – this is the lowest solvency control level. It acts as an ultimate safety net for policyholders. If the insurer breaches the MCR, the supervisor would invoke its most stringent powers, if the insurer has not taken timely corrective action to strengthen their capital resources. The MCR sets a minimum level below which no insurer is seen as able to operate effectively. The supervisor's actions increase in intensity as the insurer's capital position approaches the MCR.

95. These two quantities are illustrated in the diagram below.



96. ICP 17.4.7 allows extra control levels in between the PCR and the MCR, which could correspond to supervisory intervention or actions the supervisor requires the insurer to take. The guidance is flexible about whether or not these extra control levels need to be formally established with explicit intervention actions linked to particular control levels, or less formally with a range of potential intervention actions available to the supervisor.

97. In either case, ICP 17 requires possible triggers and interventions at each control level to be disclosed appropriately. The guidance also suggests the criteria for setting up the solvency control levels should be simple and readily explainable when seeking court enforcement of supervisory action.

4.1.1 Current regulatory environment

98. Insurance solvency standards are issued under Section 55 of IPSA. The current solvency standards specify the calculations for the:

    - *Minimum solvency capital ("MSC")* - the minimum amount of capital to be held for solvency purposes. It is intended to ensure that the company can meet its obligations to policyholders in a range of adverse scenarios. MSC is calculated based on stressed assumptions intended to achieve a 99.5% probability of sufficiency (1-in-200) over a period of one year; and
    - *Actual solvency capital ("ASC")* - the amount of capital that can be considered as supporting the MSC. The ASC is calculated as the company's net assets less deductions.

99. The following measures are often used as an indicator of the size of the buffer held by the insurer over and above the capital required by the solvency standards:

    - Solvency margin = ASC – MSC;
    - Solvency ratio = ASC/MSC

100. When the ASC and MSC are equal, the solvency margin is zero and the solvency ratio is 100%.

101. Many New Zealand insurers currently implement a capital management plan, which may include a plan for addressing a fall in the solvency ratio. These plans, however, are not consistent and comparable across all insurers, and may not be tied to the risk management framework.

4.1.2 IPSA

102. Section 21(2)(b) and (c) enable us to set licence conditions that require insurers to maintain a solvency margin (including solvency margins in respect of statutory funds) in accordance with an applicable solvency standard. Standard conditions of licence set the solvency margin at 100%.

103. We may impose a non-standard licence condition that requires an insurer (or an insurer's statutory fund) to maintain a solvency ratio higher than 100%. An increase in solvency may also be imposed by a direction given under Section 143, provided that the grounds for imposing a direction are set out.

104. Section 24 of IPSA requires the insurer to let us know if a breach of the solvency margin (that is, a solvency ratio below that set by licence conditions) is likely to occur in the next 3 years.

105. Reasonable cause to suspect failure (or likely failure) to maintain the solvency margin is one of the criteria for using distress management powers under IPSA; for example, investigations under Section 130, the requirement for a recovery plan under Section 138, and directions including to cease to carry on business in accordance with the direction under Sections 143 and 145. In addition, failing to maintain a solvency margin is a ground for us to apply to liquidate the insurer under Section 151. If an insurer is not failing (or is unlikely to fail) to maintain its required solvency margin, then these escalations can only be exercised if other grounds exist, e.g. failure to conduct business in a prudent manner or failing to comply with another condition of licence. IPSA currently does not mandate any particular supervisory action to be taken for insurers failing to maintain solvency – it is fully discretionary.

106. Issues relating to capital adequacy can only be addressed through the exercise of the most intrusive IPSA powers once the insurer's solvency ratio has fallen (or is at risk of falling) below that set by licence condition (usually set as a solvency margin of 100%). In some circumstances, formal regulatory action may be taken too late, reducing the chances of recovery.

107. As discussed in an earlier section, we have started thinking about how the solvency standards should change in response to IFRS 17, which will likely result in new definitions for MSC and ASC. However, throughout this section we use the current definitions of MSC and ASC in order to minimise confusion.

4.1.3 What's the problem?

108. As part of the 2016 FSAP, which assessed New Zealand's compliance with the ICPs, the IMF stated that:

> *The solvency standards specify only one solvency control level: the Solvency Margin. The Solvency Margin is a minimum capital requirement as envisaged in ICP 17.4, in the sense that RBNZ's belief on reasonable grounds that "the insurer has failed, is failing, or is likely to fail to maintain a solvency margin" is a ground for requesting a recovery plan [IPSA section 138(1)], or ground for issuing directions [IPSA section 143(1)(a)]. "The insurer is failing to maintain a solvency margin" is a ground for application to the High Court for liquidation [IPSA section 151(2)].*
>
> *On the other hand, the Solvency Margin has the characteristics of a prescribed capital requirement as envisaged in ICP 17.4, in the sense that RBNZ may allow an insurer not to maintain the Solvency Margin (albeit for a short period of time), as RBNZ recognises that the Solvency Margin is determined on a conservative basis and that the insurer might still be viable when it fails to maintain the solvency margin.*
>
> *The RBNZ has not yet developed a formal process to determine the appropriate response, if any, relative to the level of Solvency Margin.*

109. To increase alignment with the ICPs, the FSAP recommended the following improvements to the solvency framework:

- Having two solvency control levels as specified in ICP 17.3 and 17.4 would enable less intrusive early intervention before the insurer's condition deteriorates to a critical level.
- Developing internal guidance for what supervisory actions would be taken at each solvency level, with the strongest actions reserved for when the insurer fails to maintain solvency at the lower control level.

110. Trowbridge and Scholtens, in their review of the CBL liquidation process, echoed these recommendations. In particular, the binary approach to solvency (with over 100% - or analternative figure set by licence conditions - solvency ratio being satisfactory, and unsatisfactory otherwise) was considered too rigid and unhelpful for capital management. Trowbridge and Scholtens argued that "a graduated and more flexible approach" should be adopted, citing the following examples:

- The Internal Capital Adequacy Assessment Process ("ICAAP") framework that applies to APRA-regulated entities. This is an internal company document prepared by the insurer that places responsibility for capital management on the insurer's board (subject to approval by APRA). The ICAAP comprises, amongst other things, a triggered capital action plan to reduce the likelihood of breaching the minimum capital requirement. (The APRA framework is discussed in further detail in Appendix 1. The European Central Bank also implements an ICAAP similar to Australia's framework.)
- The Escalating Supervisory Response ("ESR") framework for licensed banks in New Zealand (still under development). Trowbridge and Scholtens noted that this is an opportunity to increase alignment between industries regulated by the Reserve Bank. Unlike the ICAAP, which is an internal insurer framework designed to ensure that the minimum capital requirement is not breached, the ESR is a framework maintained by the Reserve Bank to deal with instances where capital falls below the regulatory minimum.

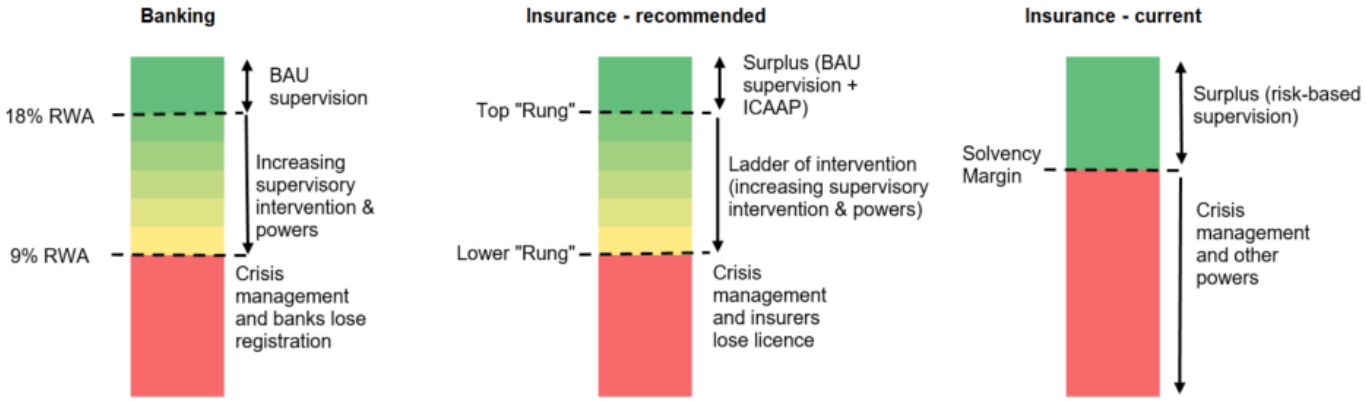
4.1.4 Purpose of framework

111. What purpose should a ladder of intervention framework serve? Does it serve to encourage insurers to maintain adequate buffers above the PCR to minimise the likelihood of a breach, or to provide clarity to supervisors when dealing with a breach of the PCR?

112. Adopting an ICAAP-type framework places the onus on the insurer to maintain capital buffers above the MSC. On the other hand, a pure ladders of intervention framework provides a base under which we may operate once capital falls below the MSC.

113. The insurer's board should have ultimate responsibility for managing the business and its capital. However, regulatory capital requirements support good capital management practices by insurers and help align incentives for firms and policyholders. A possible way to balance competing objectives would be to formalise the capital management framework under something like an ICAAP framework (dealing with buffers above the top solvency control level). This could complement a ladder of intervention that deals with supervisory action for when capital falls below the top solvency control level.

114. The following diagram shows this framework, alongside the banking ESR and current insurance framework for comparison. Note that the diagram is not to scale. Although we have placed the solvency margin under the current framework in between the top and bottom rungs under the new framework, this is for illustrative purposes only. We have not yet decided where the rungs should be placed.



115. As shown above, the current solvency framework is binary and anchored on the solvency margin. Above the solvency margin specified in the licence condition, normal risk-based supervision applies. As soon as the solvency margin falls below the specified minimum, IPSA releases crisis management powers.

116. The recommended ladder of intervention framework has two (or more) solvency control levels. The top solvency control level acts as a boundary between normal risk-based supervision (possibly alongside an ICAAP-type framework) and increasing supervisory intervention. As solvency levels fall below the top rung and approach the lower rung, supervisory intervention and powers increase. The bottom rung acts as a boundary between increasing supervisory oversight and crisis management.

117. In this document, we would like to explore possible bases on which the risk posed by an insurer could be measured to set appropriate control levels. In particular, on what basis might we decide that an insurer's operations are no longer viable, triggering a need for crisis management or liquidation? Can this be represented by balance sheet insolvency (i.e. where net assets fall below zero), or should it be set at a point above balance sheet insolvency?

118. And, for the top rung of the ladder, what level and form of increased risk or vulnerability should imply the need to begin subjecting an insurer to enhanced supervisory oversight? What metrics might be used to specify these points and what measures would be best to capture the deterioration of solvency levels between the control levels?

119. The New Zealand banking framework uses the capital ratio (capital as a percentage of risk-weighted assets) as a measure of the bank's viability. Does it make sense to use the solvency ratio in the same way, or might other measures be better for conceptualising insurers' risk or of explaining risk levels to the public?

120. To be clear, at this stage we are not looking to determine the points at which the control levels should be placed, as this would require the most appropriate way to measure resilience to be established. However, we invite comments from submitters on what the appropriate points might be.

4.2 Options for operating the ladder

121. While the ICPs provide a broad framework for implementing a ladder of intervention, they recognise jurisdictional differences with regard to the overall level of capitalisation, supervisory risk appetite, nature of the market and the regulatory landscape. The ICPs therefore do not provide any detailed guidance on how the framework is to be established.

122. As mentioned earlier, the focus at this stage is on the quantitative capital-based aspect of a ladder framework (i.e. determining each solvency control level and how to assess the insurer's performance against these solvency control levels). It is not on where to place those solvency control levels or which specific supervisory interventions will apply at each solvency control level. Specific supervisory intervention proposals will be developed at a later stage.

123. We include a high-level international comparison in Appendix 1. While international frameworks provide a good reference point, it is important that the framework is suitable for the New Zealand environment.

124. The framework's quantitative aspect can be separated into two components: firstly, how the solvency control levels should be calculated, and secondly, how the insurer's capital position will be assessed against the solvency control levels.

4.2.1 Solvency control levels

125. Measures that could be used to determine the solvency control levels (i.e. the rungs of the ladder) include:

Value-at-Risk (VaR)	
For a given confidence level p and time horizon t, there is a probability of (1-p) that losses will exceed the VaR. For instance, the top solvency control level could be set at a 99.5% (say) confidence level, and the bottom one at an 85% confidence level. Alternatively, the bottom solvency control level could be set as a simple percentage (say 90%) of the top solvency control level. The VaR method yields a dollar amount.	
Pros	▪ Least implementation cost as it is the method used in the current solvency standards. ▪ Widely used internationally (LAGIC, Solvency II).
Cons	▪ Ignores size of loss in the tails (for probabilities smaller than 1-*p*). These losses can be significant where the loss distribution is heavily skewed. ▪ Added cost and complexity for both industry and/or the Reserve Bank as accurate calculation (or calibration of parameters) will likely require the use of stochastic or other advanced modelling.

Scenario-based	
Under this approach, the solvency control levels would be determined using a number of prescribed scenarios representing, for example, severe, moderate and mild stresses to insurers. The scenarios could be based on real-life historical events, such as the Christchurch earthquakes, COVID-19 pandemic and the GFC. This approach would also yield a dollar amount, representing the amount of capital required to be sufficient to withstand the stresses resulting from each scenario.	
Pros	▪ May be more easily understood from a policyholder's perspective.

Cons	▪ Severity of scenarios may be subjective and may not allow for full range of extreme scenarios, especially if based on historical events. ▪ May not be internationally recognised. ▪ Does not give an indication of probability of failing to meet claims.
NB: If it were decided that this method was not suitable as a basis for solvency control levels, it might still have merit as a supplementary approach, for example in stress testing of insurers' resilience and for establishing tail correlation factors.	

126. To fully implement a ladder of intervention framework with multiple solvency control levels would require a change to IPSA. The results of this consultation will feed into the IPSA review; once a suitable framework has been developed, any changes required to IPSA will be identified and consulted on. The solvency buffers module of the IPSA Review is scheduled for the first half of 2021.[20]

Questions for consultation:

Y. Should we implement a ladder of intervention approach to solvency? Please give your reasons.

Z. At what point should the insurer's operations be considered to be no longer be viable?

AA. Conversely, what point in an insurer's solvency level triggers the need to start increasing the intensity of supervisory intervention from normal risk-based supervision?

BB. Should we adopt an ICAAP/ORSA-type approach alongside the solvency requirements? If so, are either of these frameworks a good starting point for New Zealand? Please provide reasons supporting your statements.

4.2.2 Measures of solvency position

127. Measures that could be used to assess the insurer's performance against the solvency control levels include (i.e. where the insurer sits on the ladder):

Solvency ratio Use the solvency ratio as currently defined, i.e. the actual capital over required capital. Note that "capital" refers to the excess of assets over liabilities.	
Pros	▪ Least cost and complexity as no change from current method. ▪ Broadly comparable to other jurisdictions as most report some form of solvency ratio.
Cons	▪ Solvency ratio may not be the best measure by which to assess solvency. For example, the presence of a large negative policy liability on life insurers' balance sheets distorts the comparison between life and general insurers. ▪ Have to consider impacts of how the solvency ratio may change from current after transition to IFRS 17. ▪ Only an indirect indication of how likely the company is to not be able to meet its obligations to policyholders.

[20] https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Policy-development/Insurers/ISS-review/IPSA-Review-Relaunch-October-2020.pdf?la=en&revision=795010e2-8f8a-4d97-a3de-5eb000632aa4

Assets over stressed liabilities This measure shows the amount of assets the company has to cover the stressed liabilities. The stressed liabilities may include asset-side stresses for completeness (as assets and liabilities need to be considered together).	
Pros	▪ A more direct calculation approach, and therefore might be more easily understood from a communications or policyholder's perspective. ▪ May provide a better comparison of solvency positions across industry, as it is less susceptible to distortions due to peculiarities in insurance accounting (e.g. negative policy liabilities).
Cons	▪ May not be comparable to other jurisdictions. ▪ Have to consider communications impacts transition to IFRS 17 (need to isolate what change is due to IFRS 17 and which change is due to a measurement approach change). ▪ Only an indirect indication of how likely the company is to not be able to meet its obligations.

Probability of failure The probability that an insurer will not be able to fully meet its obligations to policyholders over a certain time period.	
Pros	▪ Policyholders may be more interested in knowing how likely the insurer is to not be able to meet its obligations to policyholders. ▪ May be a more natural way of describing loss.
Cons	▪ May involve complex modelling (and potentially subjective assumptions) on the part of the insurers to translate the amount of capital held by the insurer to a probability measure. ▪ As this is a technical concept, there is a danger that it may be misinterpreted by policyholders.

128. Some calculation methods lend themselves more naturally to particular assessment measures, as shown in the following matrix.

Measure	VaR	Scenarios
Solvency ratio	✓	✓
Assets over stressed liabilities	✓	✓
Probability of failure	✓	✗

129. We currently use the VaR method to specify the MSC and the solvency ratio to assess the insurer's position relative to the MSC.

Questions for consultation:

CC. Are any of the above measures more or less appropriate to calculate and assess an insurer's solvency position, from the point of view of implementing an effective ladder of intervention framework? Please give your reasons. If not, what measures do you consider would be more appropriate for this purpose?

4.3 Other considerations

130. The main focus of the current consultation is on the conceptual lens we should be using for thinking about where the solvency control levels should be placed, and the most sensible way to measure and communicate levels of solvency. However, once we have reached a decision on these fundamental issues, two further concerns will need to feed into setting appropriate control levels and corresponding supervisory responses.

131. The framework should be practical, easily understood, and not impose undue burden on the industry or on the Reserve Bank, but there is likely to be a trade-off between flexibility and transparency. While on one hand a more formal framework might provide clarity to both the industry and ouselves (as well as being a sound basis for any decision-making if legal action is required), supervisors may need some degree of discretion to allow for a more flexible and robust framework. For example, an insurer breaching the top rung of the ladder could give supervisors the right, but not the obligation, to use certain tools, while breaches of lower rungs could *require* certain supervisory actions to be taken.

132. Where we ultimately place the solvency control levels (including how far 'above' or 'below' the current MSC the levels are placed) and the supervisory actions that correspond to them, should reflect a well-articulated understanding of the Reserve Bank's risk appetite in relation to the insurance sector.

133. Section 4 of IPSA states that the Act is not intended to lead to a zero-failure regime. This recognises that there may be trade-offs between soundness on the one hand and efficiency or competition on the other.[21] Our risk appetite is risk-based and thus fully aligned with IPSA. This means that the more important for the sector an insurer is, the less appetite there is for risk. The intensity of supervisory engagement may therefore differ depending on entities' sectoral importance. At the same time, we need consistency and a simple regulatory framework, so major differences in rules are unlikely.

134. We also need to balance soundness and efficiency at a macro level. New Zealand is a comparatively small market and is exposed to natural events such as earthquakes. This means that fostering competition and the availability and coverage of insurance are important considerations. At the same time, it also means that there is a higher potential for concentration of risk and that the sector may find it more difficult to absorb the failure of big players. Our mandate to promote confidence in the insurance sector is also relevant in this context. Large scale insurer failures after an event would undermine confidence and could lead to longer-term underinsurance and shrinkage of the sector. Weighing up these different considerations leads us to the initial conclusion that our regulatory settings should be more conservative than in peer jurisdictions, without undermining the efficiency aspects of our mandate. We acknowledge that there are significant difficulties when it comes to making international comparisons.

Questions for consultation:

DD. What approach would strike the right balance between clarity and discretion when setting out supervisory responses at different levels of the ladder of intervention?

EE. What should our risk appetite be in relation to insurer failure?

[21] Note that soundness and efficiency can also be reinforcing and short term trade-offs can become long term synergies if the time frame is extended.

5. Solvency calculations

5.1 Deductions vs Charges

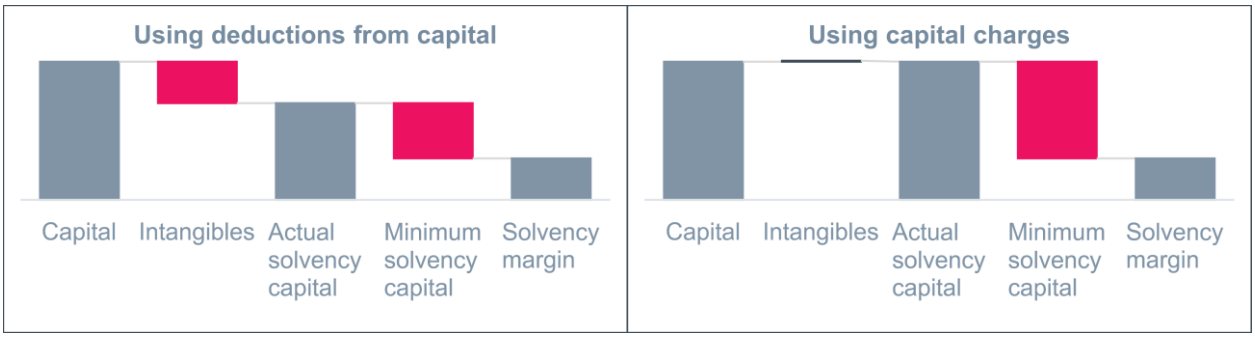
135. Our current standards require the full deduction of certain assets in determining Actual Solvency Capital. These include items such as intangible assets and deferred tax assets that may not be realisable, and potentially also accounting entries that mask the economic reality of the insurer's situation.

136. This approach is in line with a "wind-up" valuation of the insurer, and may, therefore, be appropriate for determining an insurer's minimum solvency requirement (i.e. the bottom rung of a ladder of intervention). A wind-up valuation may not, however, be appropriate for determining higher rungs of the ladder, where it could be assumed that the insurer is still a going concern.

137. To the extent that these items change in value under the operation of solvency stresses, they could also be addressed through the Resilience Risk Capital Charge. This would permit a more nuanced approach, allowing some value to be retained where appropriate.

138. As shown in the diagrams below, the solvency margin is unaffected by replacing deductions with capital charges (contributing to the MSC) of the same amount. The solvency ratio – actual solvency capital divided by minimum solvency capital – decreases, however, as the denominator and numerator increase by the same amount.

139. The Solvency Margin may change, however, if the capital charge is not equal to the deduction.



Questions for consultation:

FF. Would you be comfortable with handling some deductions from capital through the Resilience Risk Capital Charge? Why or why not?

GG. Do you believe that some value should be allowed for these deductible items at higher levels on the ladder of intervention? Is it appropriate to assume a 'going-concern' valuation at these levels?

5.2 Supervisory adjustments

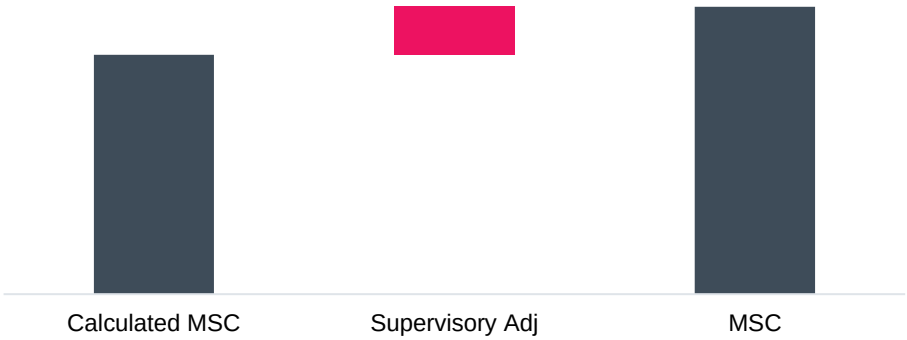
140. There are a number of situations where it may be appropriate for us to have the power to adjust insurers' solvency calculations. These include where:

- A material item on an insurer's balance sheet is held at a value that does not reflect its true economic value.
- An insurer or their appointed actuary has used judgement regarding solvency stresses and discretions. This has the effect that the Minimum Solvency Capital (MSC) no longer aligns with the target solvency criterion (i.e the 99.5% VaR objective under current standards).
- The insurer is subject to material risks not (fully) assumed by the solvency standards, once again with the result that the MSC is misaligned with the solvency criterion.

141. Since the passage of IPSA, the main tool used to address such matters has been the power to impose a minimum solvency margin/ratio through conditions of licence. This approach has some weaknesses, however, as follows:

- Solvency ratios and margins published by insurers do not incorporate these additional licence condition requirements, distorting the picture presented to policyholders and the public.
- While IPSA Section 21(4) allows licence conditions to be fixed in either dollar or percentage terms, or in *any other way*, in practice it has been difficult to make conditions responsive to changes in business volumes or insurer risk profiles.

142. We propose introducing "supervisory adjustments" similar to the LAGIC framework as an integral part of the process of determining solvency capital requirements.[22] This supervisory adjustment would then form part of the insurer's minimum solvency capital, and be captured in any reporting and disclosure requirements.



143. Depending on circumstances, such supervisory adjustments could take the form of, for example:

- fixed dollar amounts
- ratios to balance sheet aggregates (e.g. a percentage of premiums or claims)
- instructions to use certain methods or assumptions in the valuation of balance sheet items

144. The power to impose insurer-specific minimum solvency margins and ratios would remain (but would likely be used more sparingly).

Questions for consultation:

HH. Is it appropriate for us to adjust insurer solvency calculations?

II. Does the list in paragraph 140 above cover all circumstances where solvency calculations should be adjusted?

JJ. Do you support introducing supervisory adjustments as an integral part of the determination of capital requirements?

KK. Are there other forms (other than fixed amounts, ratios and valuation instructions) that the supervisory adjustments could take?

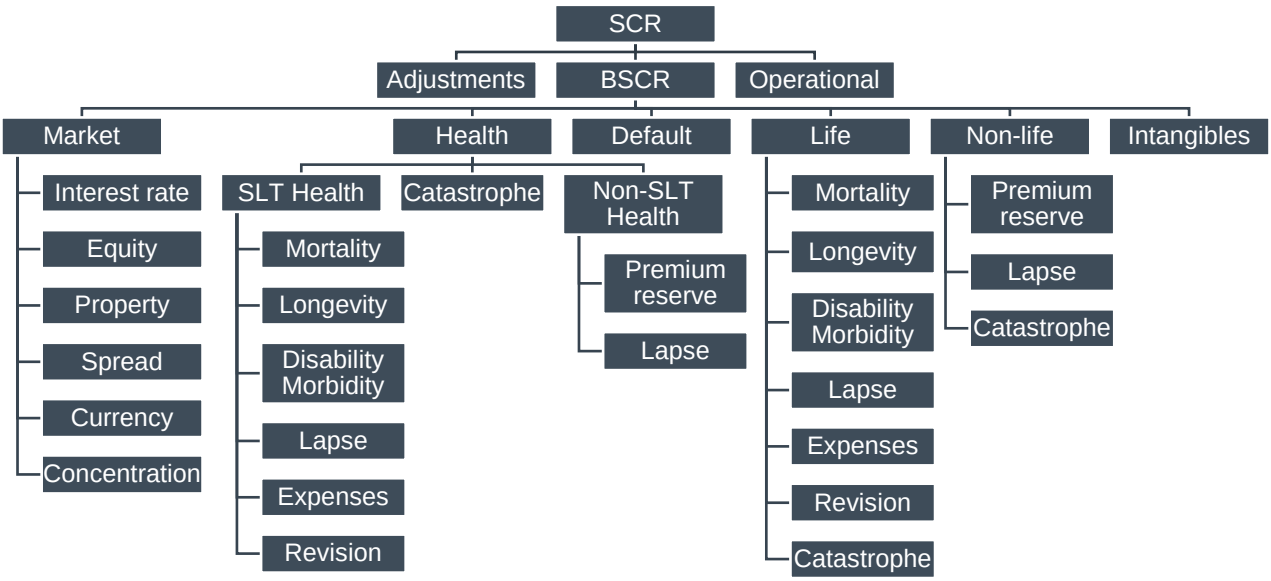
[22] As this is a significant supervisory power, this may require changes to IPSA.

5.3 Hierarchy of risks and diversification

145. Solvency II takes a highly systematic approach to analysing and measuring risk. First, a near-exhaustive list of individual risks was developed.[23] Next, these individual risks were allocated to major risk categories - market, default, operations and insurance – which are similar to the Basel categories. Category charges at the category level are determined by assuming certain correlations among the individual risks and combining by formula of the form

$$Compound\ Capital\ Charge = \sqrt{\sum_{ij} Correlation_{ij} \times Capital\ Charge_i \times Capital\ Charge_j}$$

146. The Basic Solvency Capital Requirement ("BSCR") is determined similarly from the capital charges for the risk categories. The final solvency capital requirement adds an operational risk charge and supervisory adjustments.



Source: *Solvency II technical specifications*

147. This approach has the obvious advantage of allowing a broad range of material risks to be identified and analysed in a logical framework that recognises relationships between risks.[24] It also allows for somewhat more granular risk information to be collected from Insurers.

148. A further advantage of this approach is that it provides a framework in which an insurer's degree of risk diversification can be assessed and then rewarded or penalised as appropriate. In simple terms, an insurer subject to a wide variety of uncorrelated risks should have a lower capital requirement than an insurer subject to a single risk of similar intensity. This is because it is highly unlikely that multiple risks would crystallise at the same time.

149. New Zealand solvency standards do not allow for diversification, and accordingly parameters have been modified from the pre-diversification values used in overseas regimes. Well-diversified insurers are subject to the same treatment as poorly diversified providers.

[23] Many of these risks are also hypothesised in New Zealand's existing solvency standards, however some (spread, revision, health lapse, expenses) are not. Note also that some of these risks are themselves compound in nature – for example life lapse risk countenances both an immediate mass lapse event and an ongoing permanent change in lapse rates.

[24] For example, the Solvency II correlation factor between mortality risk and longevity risk is -0.25, recognising that if mortality rises, longevity tends to fall (and vice-versa).

150. We acknowledge the major criticisms of the use of correlation matrices, namely that they are blunt instruments and that they model 'peace-time' relationships rather than conditions that prevail in times of stress. We believe that these issues can be mitigated to some extent by carefully examining the relationships during historic periods of stress. We are not proposing, at this time, the use of more complex approaches to modelling risk relationships.

Questions for consultation:

LL. Should New Zealand adopt a more structured risk hierarchy? Why or why not?

MM. Is it necessary to introduce risk charges for risks currently not hypothesised in solvency standards, for example operational risk? Why or why not?

NN. Should solvency standards allow for a diversification benefit of some form? Is the Solvency II approach to relating risks appropriate for New Zealand conditions?

5.4 Life insurance risk capital charge restructure

151. The life insurance risk capital charge ("Life IRCC") is different to all the other risk charges in the current solvency standards. It represents a stressed form of the underlying best estimate liability[25] rather than a stress *on* the best estimate liability. This Life IRCC is then combined with other capital charges to derive the solvency requirement (which is also a stressed liability in form). The minimum solvency capital ("MSC") must be a capital measure, however, as it is compared with actual solvency capital ("ASC") to determine the solvency margin ("SM"). To derive the MSC from the solvency requirement, we need to, as a final step, deduct the policy liability.[26]

152. This treatment can cause confusion, as internationally the term "capital charge" is used to denote an amount of capital that needs to be set aside to support a particular risk (*not* any form of liability). We propose that New Zealand solvency standards reflect this international usage and redefine the Life IRCC as a true capital charge. This would be effected by deducting the policy liability from the stressed liability *within the capital charge module*, rather than outside it as is currently the case.[27]

153. Note that we are only addressing the structural issue with the Life IRCC in the current document. Inherent issues will be addressed in the "liability charges" consultation cycle, scheduled for the second half of 2022.

Questions for consultation:

OO. Should the deduction for policy and other liabilities be moved inside the Life IRCC?

5.5 Grouping of policies

5.5.1 Background

154. Pooling of risks is a core tenet of insurance, and insurers routinely categorise individual risks (policies) into groups for various purposes, including pricing and analysing experience (claims, persistency, etc). The choice of size and categorisation of groups may vary according to the group's purpose, as well as the amount of reliable data available in each group.

[25] The present value of future policy cash-flows on best-estimate assumptions.
[26] Note that other (accounting) liabilities are carried through the calculation, being added into the Life IRCC and then deducted out again as a final step. For simplicity these have been ignored in the text.
[27] Note that the Variable Annuity Capital Charge and the Solvency Liability Resilience Impact are both linked to the Life IRCC, so may need to be adjusted accordingly.

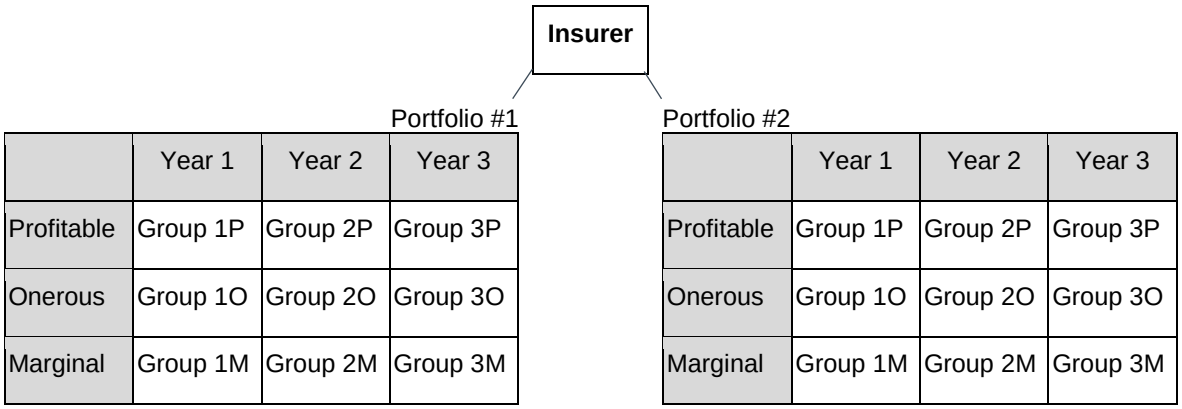
155. Smaller, more granular groups allow greater visibility of the performance and profitability of particular business classes. Larger groups, on the other hand, allow for more offsetting and cross-subsidisation between products. This may obscure the characteristics of certain classes of business within the larger group.

5.5.2 NZ IFRS 4 vs IFRS 17

156. Under NZ IFRS 4, life insurance policies are organised into related product groups ("RPGs"). These are policies that "have substantially the same contractual terms and are priced on the basis of substantially the same assumptions."

157. The current life insurance solvency standards rely on NZ IFRS 4 RPGs. For example, in the Life Insurance Risk Charge, solvency liabilities for an RPG are subject to a floor of the total CTV for the RPG. Note, however that the solvency liability for an individual policy within the group can be less than its CTV, provided that the shortfall can be offset by other policies.

158. Under IFRS 17, however, the existing definition of RPGs will no longer exist. Instead, they will be grouped into a hierarchy as follows. At the top level will be "portfolios", which are "contracts subject to similar risks and managed together". Portfolios need to be split into "cohorts" comprising business written in calendar time periods not exceeding one year. Finally, each cohort is split into three "groups" depending on expected profitability – solidly profitable, onerous and marginal.



	Year 1	Year 2	Year 3
Profitable	Group 1P	Group 2P	Group 3P
Onerous	Group 1O	Group 2O	Group 3O
Marginal	Group 1M	Group 2M	Group 3M

	Year 1	Year 2	Year 3
Profitable	Group 1P	Group 2P	Group 3P
Onerous	Group 1O	Group 2O	Group 3O
Marginal	Group 1M	Group 2M	Group 3M

159. The non-life standard does not rely on this same definition of RPGs. Instead, it applies insurance risk charge stresses to "classes of business" (domestic property, domestic motor, etc.), and is therefore likely to be less affected than the life standard. However, there may be room for more clarity and standardisation in the definition of "classes of business". Additionally, this could be seen as an opportunity to reconsider whether this level of aggregation for non-life business remains suitable, and whether consistency with the level of aggregation for life business is needed.

5.5.3 Options

160. The question therefore arises: how should policies be grouped for calculating solvency after transition to IFRS 17? IFRS 17 portfolios may be larger than IFRS 4 RPGs given the definitions referenced above, while cohorts and groups are likely to be more granular.

161. We have set out the range of possible options to address the grouping issue in the table below. In choosing an appropriate option, keep in mind that the focus of IFRS 17 is on accurately determinating and reporting profit over time. This focus may not be suitable for regulatory purposes.[28]

[28] IFRS 17 BC.15, BC.119

Grouping option	Possible theoretical basis	Impact on capital requirement	Advantages	Disadvantages
Insurer	Policyholder security is provided by the insurer.	Lowest	• Ease of administration	• Lack of visibility regarding performance of individual products/classes • Potentially unequitable if participating products subsidise non-participating products
Statutory fund	Policyholder security is provided by the fund.	Lower	• Reflects that a purpose of statutory funds is for policyholder protection • Consistent with LAGIC	• Leads to potential inconsistencies between life and non-life as the latter does not have statutory funds
IFRS 17 portfolio	"Similar risks and managed together"	Slightly lower?	• Can leverage off IFRS 17 implementation leading to lower costs for industry • Easily reconciled to accounts • Easily understood internationally	• Portfolios may not be standardised across insurers
Regulatory groupings	Groupings that are appropriate for regulatory purposes, defined by the Reserve Bank – minimum saleable block of business? Product classes (e.g. Lump Sums, Income Protection, Domestic Motor, etc.)?	Slightly higher?	• Flexibility to define a grouping that is more appropriate for regulatory purposes	• Potentially higher implementation costs if insurers have to maintain multiple definitions of groupings (for accounting and regulatory purposes) • Difficult to reconcile to accounts
IFRS 17 group	Alignment with profitability inspection level in accounting standards	Higher?	• Can leverage off IFRS 17 implementation leading to lower implementation costs for industry	• Definitions that are too granular may not recognise pooling of risks • Increased operational complexity in maintaining too many groups
Individual policy	No policy should be an asset.	Highest	• Highest level of protection for policyholders	• Does not recognise pooling of risks

162. Our initial preferred option is to adopt regulatory groupings, as we consider that this is likely to result in greater consistency and comparability across the industry relative to the other methods. It would also allow some degree of cross-subsidy between policies.

Questions for consultation:

PP. Are any of the above grouping options appropriate for solvency purposes? Please provide your reasons.

QQ. Are there any other grouping approaches that you consider would be appropriate for solvency purposes? Please provide your reasons.

RR. What are your views on our preferred option of specifying regulatory groupings for solvency purposes? What basis do you think should be used to form the regulatory groupings? Please provide your reasons.

Have your say

1. Stakeholders are welcome throughout the Review to provide comment and information to us. At this time we are particularly seeking commentary on the questions set out above, however we would welcome any general comments as well.
2. Use this email - insurancesolvency@rbnz.govt.nz - to provide comments. Please clearly indicate which question or section your comments relate to.
3. Comments or submissions should be received by 18 February 2021. Submissions received after this date will not be considered.
4. As noted earlier in this paper, it is our practice to publish submissions received unless specifically requested not to. We may also publish an anonymised summary of submission received.

List of consultation questions

A. Would a purpose statement be a useful addition to the solvency standards? Why or why not?

B. Please comment on the utility of the purpose statement ("The purpose of capital is to ensure that, in adversity, an insurer's obligations to policy-holders will continue to be met as they fall due.") and suggest improvements, if any.

C. How likely should the fulfilment of obligations by an insurer be (recognising that certainty is an impossibility, and that there is a trade-off with efficiency and competition)?

D. Should the solvency risks be assumed to crystallise immediately, in the short-term (say one year) or over the long-term?

E. Should a "total balance sheet approach" be adopted for solvency calculations?

F. Do you think there are insurers that are "sectorally-important"? If so, what would be the advantages and disadvantages of imposing higher capital requirements on them, relative to those that are considered not sectorally-important? Please provide your reasons.

G. Please comment on how effectively existing solvency standards address particular sectors and subsectors of the industry.

H. Should health insurance have its own specific solvency standard? Please provide your reasoning.

I. Please discuss your preferences with respect to how the standards should apply to industry sectors, with reference to the following options:

Option	Description	Advantages	Disadvantages
1	Sector-differentiated status quo – separate Life and Non-Life Standards	Least cost for industry as would not require the industry to change its calculation methodologies.	Potential inconsistencies and more complex upgrade path.
2	Single solvency framework covering all sectors and subsectors	Streamlined approach and less potential for inconsistency.	Higher cost to industry as industry would be required to make significant changes to their calculation methodologies. Risk that sector-specific risks may not be accurately captured.
3	Rationalisation – folding the variable annuity standard into the life standard, and the three non-life standards into a single document	Would address some of the issues listed above relating to inconsistency, while still explicitly allowing for sector-specific differences.	Potentially minor costs to affected insurers.

J. Please comment on how effectively existing solvency standards address statutory and other funds.

K. Should solvency standards applied to statutory funds apply a floor to assets based on the provisions of Sections 82-119?

L. Please discuss your preferences with respect to how the standards should apply to statutory and other funds, with reference to the following options:

Option	Description	Advantages	Disadvantages
1	Status quo – life insurers have solvency requirements for statutory funds and the insurer as a whole; non-life insurers have requirements only at the insurer level.	No disruption to insurers.	Minimum assets determined at the current level may not be sufficient to resolve all blocks of business for an insurer in distress.
2	All business allocated to 'insurance funds'.[29] Solvency requirements are only applied at the insurer level, although these requirements will be a function of fund solvency.	Facilitates resolution of all blocks of business.	May result in increased costs (administrative and capital) for insurers.

M. In your view, is the current treatment of insurance and non-insurance subsidiaries in the solvency standards appropriate? Please provide your reasons.

N. If your answer to the previous question was "No", what do you feel would be a better treatment of insurance and non-insurance subsidiaries?

O. In the context of solvency requirements, which of the following options do you consider to be the most appropriate for New Zealand? Please give your reasons.

Option	Name	Description
1	Status Quo	Continue to require NZ IFRS 4 for solvency purposes
2	GAAP	Continue to use the GAAP balance sheet after transition to IFRS 17, and make no changes to the solvency standard.
3	GAAP with adjustments	Use GAAP where it makes sense, but make adjustments for certain areas/parameters. There are varying degrees of prescription involved with this method. Sub-options: (a) specify insurance liability valuation parameters, (b) specify insurance liability valuation method, and (c) use a non-IFRS 17 insurance valuation method.
4	Full regulatory balance sheet	Ignore GAAP entirely and specify a separate set of regulatory reporting requirements.

P. How do insurers currently treat non-technical insurance assets and liabilities on the balance sheet? Are all assets currently designated as backing insurance liabilities, and hence valued using the fair value approach? Are there any items (other than technical provisions) on the balance sheet that insurers are not currently measured using fair value?

Q. How, if at all, is the treatment in (P) likely to change after transition to IFRS 17 (and IFRS 9)?

[29] Insurance funds would include statutory funds and other pools of assets deemed to be providing security for specific types of policy liability.

R. Is fair value a reasonable approach to value non-technical assets and liabilities? Would an adjustment to bring all assets and liabilities on the balance sheet to fair value for solvency purposes be appropriate?

S. Is it necessary to have visibility of insurance receivables, and hence the associated credit risk, from a solvency perspective? If not, how do we ensure that any material credit risk is properly reflected in the solvency standards?

T. How do insurers currently measure insurance receivables and payables (premium and reinsurance recovery receivables, claims payable)?

U. How are insurers looking at implementing the changes relating to insurance receivables and payables resulting from IFRS 17 from a systems perspective? Are major system changes to collate the receivables/payables system with the valuation system being considered, or will separate systems be maintained, with a high level adjustment being applied to incorporate the receivables/payables into the measurement of insurance contracts?

V. If the measurement of insurance receivables under IFRS 4 currently includes an allowance for impairment, how will insurers change the basis to determine the impairment related to insurance receivables after transition to IFRS 17?

W. How are the tax items on the balance sheet likely to be impacted by IFRS 17 (and IFRS 9)?

X. Will there be any flow on impacts of tax impacts on other insurance and non-insurance items on the balance sheet?

Y. Should we implement a ladder of intervention approach to solvency? Please give your reasons.

Z. At what point should the insurer's operations be considered to no longer be viable?

AA. Conversely, what point in an insurer's solvency level triggers the need to start increasing the intensity of supervisory intervention from BAU supervision?

BB. Should we adopt an ICAAP/ORSA-type approach alongside the solvency requirements? If so, are either of these frameworks a good starting point for New Zealand? Please provide reasons supporting your statements.

CC. Are any of the above measures (solvency ratio, assets/stressed liabilities, probability of failure) more or less appropriate to calculate and assess an insurer's solvency position, from the point of view of implementing an effective ladder of intervention framework? Please give your reasons. If not, what measures do you consider would be more appropriate for this purpose?

DD. What approach would strike the right balance between clarity and discretion when setting out supervisory responses at different levels of the ladder of intervention?

EE. What should our risk appetite be in relation to insurer failure?

FF. Would you be comfortable with handling some deductions from capital through the Resilience Risk Capital Charge? Why or why not?

GG. Do you believe that some value should be allowed for certain deductible items at higher levels on the ladder of intervention? Is it appropriate to assume a 'going-concern' valuation at these levels?

HH. Is it appropriate for us to adjust insurer solvency calculations?

II. Does the list in paragraph 140 cover all circumstances where solvency calculations should be adjusted?

JJ. Do you support introducing supervisory adjustments as an integral part of the determination of capital requirements?

KK. Are there other forms (other than fixed amounts, ratios and valuation instructions) that the supervisory adjustments could take?

LL. Should New Zealand adopt a more structured risk hierarchy? Why or why not?

MM. Is it necessary to introduce risk charges for risks currently not hypothesised in solvency standards, for example operational risk? Why or why not?

NN. Should solvency standards allow for a diversification benefit of some form? Is the Solvency II approach to relating risks appropriate for New Zealand conditions?

OO. Should the deduction for policy and other liabilities be moved inside the Life IRCC?

PP. Are any of the following grouping options (Insurer, statutory fund, IFRS 17 portfolio, regulatory groupings, IFRS 17 groups, individual policy) appropriate for solvency purposes? Please provide your reasons.

QQ. Are there any other grouping approaches that you consider would be appropriate for solvency purposes? Please provide your reasons.

RR. What are your views on our preferred option of specifying regulatory groupings for solvency purposes? What basis do you think should be used to form the regulatory groupings? Please provide your reasons.

Appendix 1 – International comparisons

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Sectors				
Differentiation by sector?	• Yes. There are separate standards for life and non-life business, even though IPSA allows composite insurers. • Whilst the standards are broadly consistent, they differ primarily with respect to treatment of insurance risk. • Some identical non-insurance risks faced by each sector are treated a little differently.	• Yes. There are separate, but consistent, standards for life and general insurers. Australian law does not permit composite insurers. • Life, General and Health business is regulated under separate acts, and composite insurers are not allowed.	• No. Solvency II is a single framework applicable to all insurers. • Insurance risk is classified as life or non-life and treated differentially. • Non-insurance risks are treated uniformly for all insurers. • NB: Composite insurers are not allowed, although accident and health business can be written by both life and non-life insurers.	• Entities are split into their insurance and non-insurance components, with the ICS being applied separately to each. • The ICS is a single framework applicable to all systemically important international insurers. • Insurance risk is classified as life or non-life and treated differentially. • There is no prohibition of composite insurers.
Sub-sectors treated separately	• Captive non-life insurers (dovetails with the non-life standard) • Non-life insurers in run-off (dovetails with the non-life standard) • Variable annuity providers (dovetails with the life standard)	• New capital standards for health insurance are in the process of development. These will be broadly aligned with the general insurance approach. • Category C (foreign general) insurers are required to maintain assets in Australia that exceed liabilities by the amount of the PCR. • Run-off insurers are required to maintain a run-off plan.	• While there is no special treatment for captives, the directive asks that methods used be 'proportional to the nature, scale and complexity of the risks', and specifically mentions captives in this context. • UK run-off insurers must submit a scheme of operations to the BoE. • Small insurers are exempted from Solvency II (and instead subject to national law).	• The solvency shocks in the ICS are instantaneous, so there is no allowance for dynamic hedging. • As the ICS deals with Internationally Active Insurance Groups ("IAIGs"), there are no specific provisions for captives or run-off insurers.

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Grey areas	• Line between life and non-life business. • GI business with long-term characteristics should 'have regard' to the life standard. • Health business generally treated under non-life standard (given NZ product design). • Non-insurance business. • Aggregate solvency measures, defined in the standards as top-level insurer metrics, but largely ignored in licence conditions.	• Private Health Insurance Act 2007, Life Insurance Act 1995 and Insurance Act 1973 appear to have mutually exclusive definitions of covered business. • As there is no explicit allowance for using life techniques, GI business with long-term characteristics appears to be treated as short-term.	• Health business treated as either 'similar to life' or 'similar to non-life', with insurance risk assessed accordingly. • Overseas branches; whilst they must register with national authorities, it is unclear if Solvency II applies.	• Follows Solvency II treatment of health business. • Focus on IAIGs means that standard may need adaptation for domestic insurers.
Funds				
Statutory funds	• Yes, for all life insurance business (and for composite policies with majority life components). • Small insurer exemption. • According to the life solvency standard, statutory funds are a type of 'life fund', although this term is not used in IPSA.	• Yes, for all life insurance business (note that there is no concept of composite policies) • No small insurer exemption. • Separate statutory funds for investment-linked life business, and for non-grandfathered overseas business. • Life insurance - Capital requirements apply to each statutory fund, the shareholder's fund and the insurer as a whole.	• Solvency II does not require the establishment of statutory funds.	• The ICS does not require the establishment of statutory funds.

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
	• IPSA does not specifically empower the application of solvency standards to statutory funds, although it is the RBNZ's practice to require (by licence condition) that statutory funds maintain a positive solvency margin.	• General insurance – there are no statutory funds and the capital requirement applies to the insurer as a whole.		
Other funds	• Under the life standard, the business of an insurer outside of a statutory fund is itself a life fund. • Health insurance business issued by a life insurer and accounted for as life business is included in a life fund and has the life standard applied. Other health business should have the non-life standard applied but should still be part of a life fund if issued by a life insurer.	• For life insurance, business outside the statutory fund is referable to the 'shareholder fund', which has its own capital requirement under the life standards.	• National law may allow for the maintenance of 'ring-fenced funds' for various purposes, and for the imposition of (non-Solvency II) capital requirements on such funds. • Any capital held in a ring-fenced fund and not available for other purposes is deducted from Own Funds (as it is not available to support business outside of the Funds).	• There are deductions from capital for defined benefit pension fund surpluses and for encumbered assets.
Non-life	• Insurers not subject to the life standard have no fund structures. • Insurers that are only subject to the non-life standard are only required to maintain a positive solvency margin at the level of the insurer as a whole.	• While there are no formal fund structures for general insurers, they are subject to an 'assets in Australia' test. This may achieve some of the same objectives as a statutory fund.	• There is no 'Assets in Europe' test; in fact, Member states are prohibited from requiring that assets be located within the EU.	• As the ICS is supra-national, there are no rules relating to asset domicile.

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Valuation				
Relationship to GAAP	• For life insurance policy liabilities, the solvency standard relies on the GAAP balance sheet (NZ IFRS 4). • For general insurance policy liabilities, the solvency standard relies on the GAAP balance sheet for outstanding claims liabilities, but adjusts the premium liabilities to use a prospective approach (similar to LAGIC below).	• For life insurance policy liabilities, the valuation method specified in APRA's prudential reporting requirements (LPS 340) utilises the method specified in the accounting standards. The value of policy liabilities in the calculation of the capital base is adjusted to only reflect the BEL. • For general insurance policy liabilities, APRA's specification of outstanding claims liabilities in GPS 340 aligns with the accounting standards. However, the premium liabilities (i.e. the liabilities for claims that have not yet been incurred) is specified differently to the accounting standards.	• Assets and non-insurance liabilities are valued on a fair value basis for solvency purposes, regardless of how they are valued under GAAP.	• The ICS capital requirement is based on GAAP accounts, with adjustments to significant components (insurance liabilities, financial investments and instruments, and deferred taxes).

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Valuation rules	• NZ IFRS 4 requires that assets backing insurance liabilities be valued using a fair value (or similar) approach. As insurers typically designate all their assets as supporting policy liabilities, all assets on the balance sheets are generally valued using a fair value approach.	• For regulatory reporting purposes, APRA specifies its asset valuation requirements in LRS 300, but adjusts all the assets to fair value for solvency purposes, as per LRS 112.[30]	• Insurance liabilities ("technical provisions") are valued as the sum of a best estimate liability and a risk margin, regardless of how they are valued under the accounting standards of the local jurisdiction. This is intended to represent a market-consistent value, i.e. the amount that would be required to transfer the liabilities to another insurer.	• Insurance liabilities are calculated as the sum of a current estimate and a margin over the current estimate. • Other adjustments to items of the balance sheet include fair value adjustments and impairment adjustments.[31]
Solvency Control Levels				
Upper level	• Systemically important NZ ***banks*** are required to hold total capital equal to 18% (16% for other banks) of RWA. This has been designed to be sufficient to cover a 1-in-200 systemic event.[32]	• APRA's Prescribed Capital Amount ("PCA") as specified under LAGIC (LPS 110 and GPS 110) is designed to achieve a 99.5% probability of sufficiency over one year.	• The Solvency Capital Requirement ("SCR") under Solvency II is designed to achieve a 99.5% probability sufficiency over one year.	• The ICS capital requirement is a 99.5% Value at Risk (VaR), over a one-year time horizon, of adverse changes in the insurance group's qualifying capital resources.

[30] Under IFRS some assets are valued using methods other than fair value (e.g. bonds held to maturity).
[31] Refer to section 5.1 of the Level 2 document for more detail.
[32] Note that this is different to the criterion applied to NZ insurers, which is that capital should cover a 1- in – 200 chance of insurer failure

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
	• Between 9-18% of RWA, ***banks*** are still compliant with their conditions of registration but will subject to more intense scrutiny from the RBNZ. The severity of the additional scrutiny and other consequences (e.g. dividend restrictions) will increase as the banks approach 9%.			
Lower level	• Below 9% of RWA, the ***bank*** breaches its condition of registration and its operations may be deemed non-viable.	• Alongside the PCA, APRA has also issued a solvency requirement under LPS 100, which is set to be 90% of the PCA. This level of capital triggers a few provisions of the Life Insurance Act 1995, including dividend restrictions and judicial management.	• The Minimum Capital Requirement ("MCR"), which is designed to achieve an 85% probability of sufficiency over one year. The MCR is capped at 25-45% of the SCR.	• The ICS has no lower level. Note, however, that insurance groups subject to the ICS are also subject to local capital requirements.
Other	• There is only a single solvency control level for insurers, the minimum solvency margin specified by condition of licence (typically $0). • The specific details of the escalating supervisory response framework for NZ ***banks*** are currently still under internal discussion.	• General insurance only has a single solvency control level, while life insurance has two.	• The SCR and MCR form the top and bottom rungs respectively of the ladder of intervention. Increasingly severe actions will be taken as a company's eligible capital falls below the SCR and approaches the MCR. Below the MCR, the company would lose its authorisation.	• ICP 17.3: The regulatory capital requirements include solvency control levels which trigger different degrees of intervention by the supervisor with an appropriate degree of urgency and requires coherence between the solvency control levels established and the associated corrective action that may be at the disposal of the insurer and/or the supervisor.

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
ICAAP / ORSA	• Licensed insurers are not required to complete an ICAAP. • Registered banks are required to have an ICAAP process, as per BS12.	• To support the solvency requirements, LAGIC requires that an insurer's board be responsible for specifying and overseeing an Internal Capital Adequacy Assessment Process ("ICAAP") that must be submitted to APRA. • The ICAAP includes plans for how target levels of capital are to be met and the means available for sourcing additional capital where required. • Further guidance, specified in CPG 110, specifies that an insurer is required to have a series of graduated trigger levels above the Prudential Capital Requirement ("PCR") to minimise the probability of breaching the PCR (with actions of varying degree of intensity as the buffers approach the PCR).	• In addition to the MCR and SCR, each insurer is also required to carry out an Own Risk and Solvency Assessment ("ORSA"). The ORSA requires an insurer to identify all the risks to which it is subject and the related risk management processes and controls, including some quantitative risks that may not have been captured in the MCR and SCR. • As part of the ORSA, the insurer must also quantify its ability to continue to meet the MCR and SCR over the defined business planning horizon, allowing for new business. • The ORSA is one of the elements used by the supervisor when determining whether a further capital add-on is required.	• ICP 17.3 - The supervisor requires the insurer to: - determine, as part of its ORSA, the overall financial resources it needs to manage its business given its risk appetite and business plans; - base its risk management actions on consideration of its economic capital, regulatory capital requirements, financial resources, and its ORSA; and - assess the quality and adequacy of its capital resources to meet regulatory capital requirements and any additional capital needs. • The ICS does not address ICAAP or ORSA processes.

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Solvency Calculation				
Purposes	• Neither the Solvency Standards nor IPSA state the purpose of holding capital.	• The Prescribed Capital of a fund is intended to provide sufficient assets to cover liabilities after losses at the 99.5% confidence level. Liabilities are at best estimate for life business and 75% PoS for non-life business.	• The Solvency Capital Requirement shall correspond to the Value-at-Risk ("VaR") of the basic own funds of an insurance or reinsurance undertaking subject to a confidence level of 99.5 % over a one-year period. Own funds are net of liabilities including risk margins.	• The ICS target criteria is a 99.5% Value at Risk (VaR), over a one-year time horizon, of adverse changes in the IAIG's qualifying capital resources. Capital resources are net of liabilities including "margins over current estimates". • ICPs: "The purpose of capital is to ensure that, in adversity, an insurer's obligations to policy-holders will continue to be met as they fall due."
Principles	• Capital charges apply to specific items on the balance sheet. • There is no special treatment for "systemically important insurers".	• Market risk charges include impacts of solvency stresses on all balance sheet items. • There is no special treatment for "systemically important insurers".	• Market risk charges include impacts of solvency stresses on all balance sheet items. • Arguably, systemically important insurers are given favourable treatment through the ability to develop and use internal models.	• Market risk charges include effects linked to changes in policyholder behaviour. • The IAIS has abandoned identification of "global systemically important insurers" in favour of a holistic framework for managing systemic risk.

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Deductions vs charges	• The following items are 100% deducted from capital: intangibles (including goodwill), deferred tax assets, shares in related parties, some equity in financial institutions, value arising from the insurer's own credit risk, unsupported fair value gains, defined-benefit scheme surplus, declared dividends, encumbered overseas assets.	• LAGIC takes a similar approach to NZ solvency standards, fully deducting a similar list of items from the capital base using 'regulatory adjustments'.	• The deductions under Solvency II are limited to goodwill, unquoted intangibles and deferred tax assets that can't be realised. A deduction is also made for the IAS37 value of material contingent liabilities. Solvency II accepts IFRS valuation of other items and applies capital charges accordingly.	• The ICS takes a similar approach to LAGIC and NZ solvency. • The ICPs contain a similar list of items, but allow for both the deduction and capital charge approaches.
Supervisory adjustments	• None within the solvency calculation. Supervisors may, however, impose minimum solvency margins through licence condition.[33]	• Contained within the determination of the Prudential Capital Requirement (= Prescribed Capital Amount + Supervisory Adjustments).	• Art 85 of the directive allows supervisory authorities to modify "non-compliant" technical provisions. • Art 110 of the directive allows supervisory authorities to direct insurers to use specific parameters.	• The ICS doesn't have a facility for supervisors to impose adjustments. • The ICPs allow for some use of regulatory adjustments, providing there is a high degree of transparency.

[33] These licence conditions do not impact on the solvency margins and ratios disclosed by insurers

	New Zealand	Australia – LAGIC	Europe – Solvency II	IAIS – ICS
Hierarchy of risks	• The structure of the risk hierarchy is not clearly communicated. Some disparate risks are combined in a single charge (e.g. credit, equity and property), while some related risks (e.g. insurance and catastrophe) are treated separately.	• Asset risks are separately stressed and combined using an aggregation formula. Catastrophe and insurance risks are treated separately.	• Solvency II categorises risk into major categories – Market, Default, Insurance, Operational etc. Within each category there are a number of risks – for example Market Risk is split into property, equity and interest rate risks.	• ICS uses a hierarchy similar to Solvency II. • ICPs: Risk assessment should address the interrelationships between risk categories as well as within a risk category
Diversification	• There is no allowance for diversification. Parameters within the solvency calculation have been decreased relative to international approaches to compensate.	• LAGIC has a diversification allowance which applies a correlation matrix between major risks.	• Capital charges are combined using correlation matrices between major risks, and, separately, sub-risks.	• The ICS employs a similar approach to Solvency II. • ICPs: The insurer should be able to explain the allowance for diversification effects and should consider how dependencies may increase under stressed circumstances.
IRCC structure	• The Insurance Risk Capital Charge (IRCC) takes the form of a stressed liability.	• The capital charge is measured as the difference between adjusted and stressed policy liabilities.	• All capital charges are measured as the change in net assets resulting from a specified stress. The insurance charge is a combination of lower-level stresses.	• Capital charges are based on the potential adverse changes in qualifying capital resources resulting from unexpected changes, events or other manifestations of the specified risks.

Appendix 2 – Impacts of IFRS 17

Component	Sectors Impacted	Description
Coverage period	Life, Health	The treatment of Yearly Renewable Term ("YRT") life insurance products[34] under NZ IFRS 4 (and health insurance provided by life insurers) reflects its long-term economic value. However, under IFRS 17 there is a possibility that YRT life insurance and all health insurance (whether provided by life or non-life insurers) products may be treated as short-term (one-year) products. Treating YRT products as short-term may not be appropriate for solvency purposes as it may not reflect the longer-term viability of the product. In addition, insurers who choose to treat YRT as long-term for practical reasons may be penalised relative to those who select a short-term treatment.
Grouping	Life, Non-life	Under NZ IFRS 4, life insurers currently divide business into Related Product Groups ("RPGs"), a classification that may no longer exist under IFRS 17. This affects the solvency standards in the following ways: • The solvency standard calculates the Insurance Risk Charge at RPG level. While the solvency standards include an explicit definition of RPGs, this definition may not map directly to any group insurers may have under IFRS 17, and therefore impose an unnecessary burden on insurers. • IFRS 17 groups are more granular than IFRS 4 groupings – is this lower level of granularity appropriate for solvency, or should the solvency standards allow for more pooling and cross-subsidisation? The factors specified in the Non-Life Insurance Risk Charge apply to "classes of business" (domestic property, domestic motor, etc.), which needs to be better defined. Additionally, this is an opportunity to reconsider whether or not the level at which business is aggregated for non-life business remains suitable.
Reinsurance	Life, Non-life	The solvency standards currently apply stresses to the net of reinsurance liability. This is not an issue under NZ IFRS 4 where the gross and reinsurance contracts are valued together. However, under IFRS 17 gross and reinsurance contracts are valued separately, which means that there is a possibility of a mismatch in the treatment of gross and reinsurance liabilities, in particular with relation to the length of the contract. At this stage we think this might be more problematic for life insurance (specifically YRT), but the impacts on the full range of insurance business should be considered when developing a solution.

[34] YRT products are guaranteed renewable policies with premiums that increase each year in line with the policyholder's age (to reflect the increased claims costs associated with older ages). This is currently the most prevalent structure of modern life insurance business in the market.

Component	Sectors Impacted	Description
Policy liability	Life, Non-life	Life insurance liabilities under NZ IFRS 4 Appendix C (including health insurance by life insurers) are calculated on a best estimate basis, i.e. not deliberately overstated or understated. The solvency stresses, designed to achieve a 99.5% probability of sufficiency, have been calibrated based on the assumption that the best estimate corresponds to the mean of the distribution. The general method under IFRS 17 introduces the concept of a "risk adjustment" which is added on top of the best estimate. This has the following implications for solvency: Should the stresses be applied on top of the risk adjustment (akin to the current non-life method), or just on the BEL?[35] If the risk adjustment is to be included in the stress, the insurance risk charge stresses may need to be recalibrated to achieve a 99.5% probability of sufficiency. What should be the treatment for insurers who choose to use the simplified approach? Under the simplified approach, there is no explicit risk adjustment. General insurance liabilities under NZ IFRS 4 Appendix D (including health insurance other than by life insurers) are calculated as the sum of the current estimate (defined in the standard as the mean of the distribution) and a risk margin to represent the inherent uncertainty in the current estimate and future cash flows.[36] The risk margins at the 75%[37] probability of sufficiency prescribed in the solvency standard plus the solvency risk charges, together are calibrated to achieve a probability of sufficiency of 99.5%. While this may not be so much of a problem under the IFRS 17 general method, it is likely that most classes of general insurance will be valued using the simplified valuation method. As the simplified method does not include an explicit risk adjustment, the current standard and risk charges may need to be recalibrated.

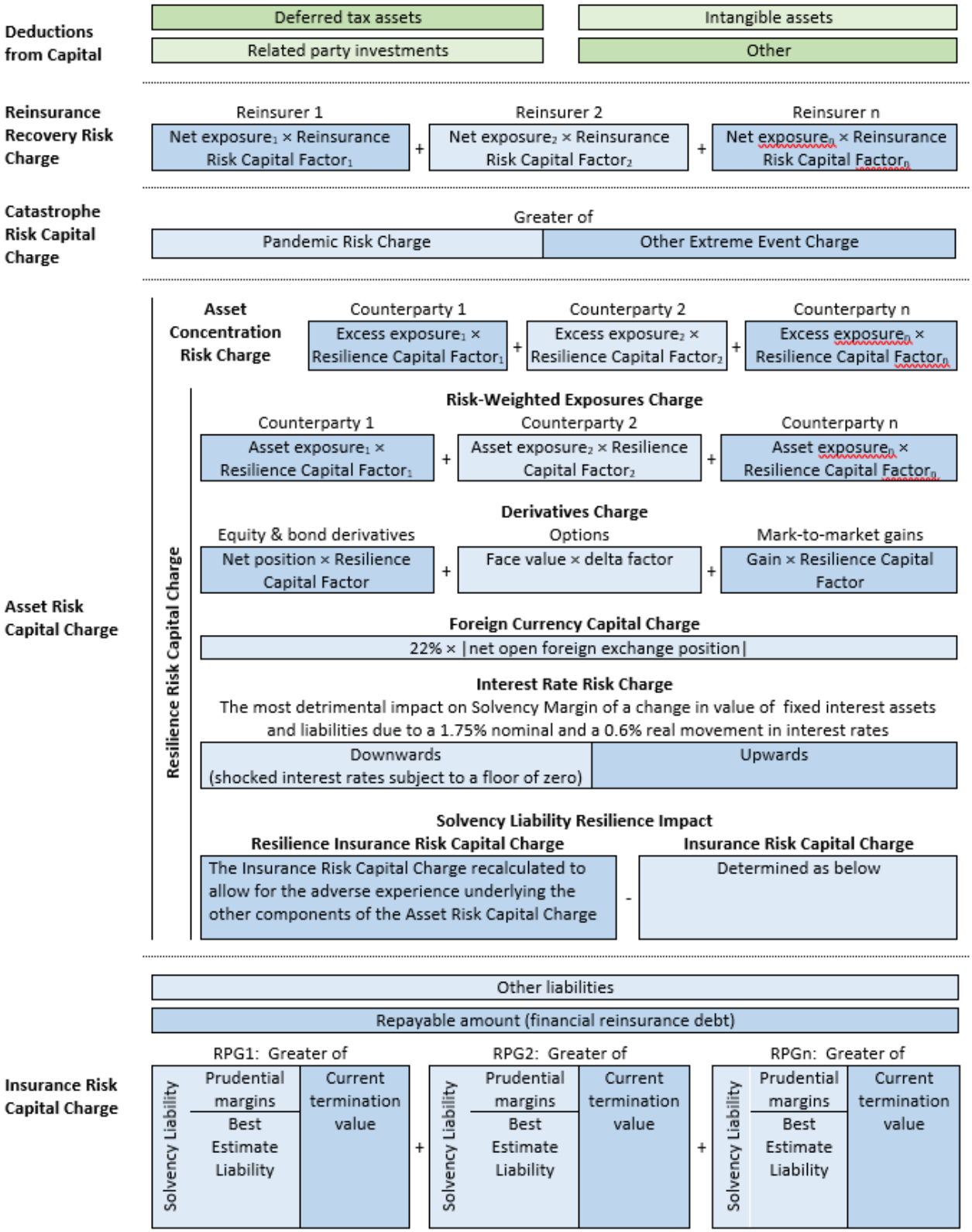
[35] The Best Estimate Liability ("BEL") is the net present value of future cash inflows and outflows under a policy. The life insurance policy liability is comprised of the BEL and the Present Value of Future Profit Margins, designed to smooth the recognition of profits over time.
[36] Note that the risk margin under NZ IFRS 4 is not necessarily the same as the risk adjustment under IFRS 17.
[37] 90% for the run-off solvency standard.

Component	Sectors Impacted	Description
Deferred Acquisition Costs	Life, Non-life	Under NZ IFRS 4, acquisition costs for life insurance business are amortised across the entire term of the policy, and the deferred acquisition cost asset ("DAC asset") is implicit within the negative policy liabilities[38]. Because of this, there is no explicit allowance for DAC in the life insurance solvency standard. Instead, the DAC is allowed for in the life standard through the application of a CTV minimum[39] in the Insurance Risk Charge. The simplified method under IFRS 17 allows the insurer a choice between expensing acquisition costs, or amortising them over the current contract coverage period and across expected future renewals (on a systematic and rational basis). The latter requires the insurer to set up an explicit asset relating to acquisition costs allocated to future renewals on the balance sheet. The life standard will therefore need to be adjusted to ensure that the DAC is accounted for appropriately. This may also be an issue if insurers choose to treat the underlying policy as single-year contracts, but amortise the DAC across future policy renewals. At this stage we think that the non-life standard is likely to be less affected by the change in treatment of the DAC than the life standard, as the DAC is an explicit item on the balance sheet. However, there may be flow on impacts that need to be considered.
Onerous contracts	Life, Non-life	NZ IFRS 4 has a liability adequacy test ("LAT"), assessed at valuation date, to increase policy or premium liabilities if premiums are inadequate for benefits, claims and certain expenses during the period of future cover. The non-life solvency standard modifies the accounting LAT by specifying a probability of sufficiency and a different period for the calculations. There is also an interaction between the DAC and the LAT in both the accounting and the non-life solvency standards, in that the DAC is to be written off if there is a deficiency.[40] IFRS 17 requires onerous contracts to be accounted for separately, but the identification of onerous contracts is typically at inception rather than at valuation date.

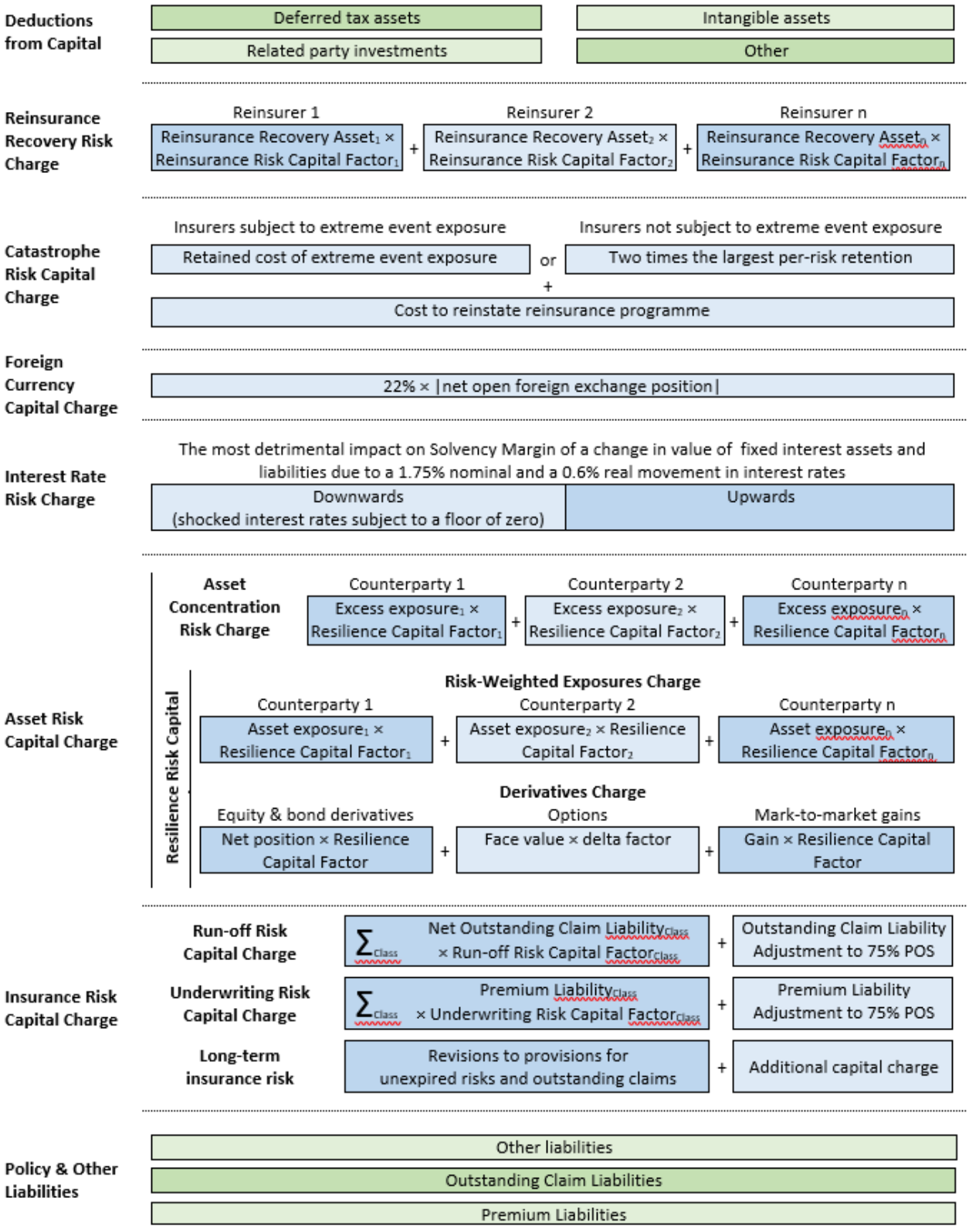
[38] Negative policy liabilities are common for modern life insurance products in New Zealand.
[39] The Insurance Risk Charge is calculated as the greater of the CTV and the stressed BEL. If the stressed BEL is negative as is common for many modern life insurance products, the CTV will automatically apply.
[40] The life accounting standard requires a write-off of "intangibles".

Appendix 3 – Determining the Solvency Requirement

Life insurance



Non-life insurance



Notes

Life insurance

- Pandemic risk charge – expected cost of extra claims over following year from a 1‰ increase in mortality rates
- Other extreme event charge – financial impact of an extreme event on the insurer
- RPG = related product group
- Solvency liabilities are subject to a floor of the NZ IFRS Liabilities (Best Estimate Liability + Value of Future Profit Margins). Implicitly, the prudential margins cannot be less than the value of future profit margins

Non-life insurance

- Extreme event exposure is defined as the greater of losses arising from two earthquake scenarios calibrated to a 1000 year return period and a non-earthquake scenario calibrated to a 250 year return period.
- The long-term insurance risk capital charge is to be determined having regard to principles in the life solvency standard.

Other notes

- Cells marked in green are not formally part of the solvency requirement, however, as (a) deductions from capital or (b) balance sheet obligations, have a similar effect.
- Reinsurance Risk Capital Factor is a function of the reinsurer's credit rating
- In the Risk-Weighted Exposures Charge, "asset exposure" should be taken to include the value of any contingent liabilities. The value of leases is non-negative and is taken to be the value of the right-of-use asset less the value of the lease liability.
- The delta factor is derived from the application of appropriate shocks to the underlying instruments.