



# NZ GI Solvency

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19 May 2021

New Zealand Society of Actuaries Conference 2021

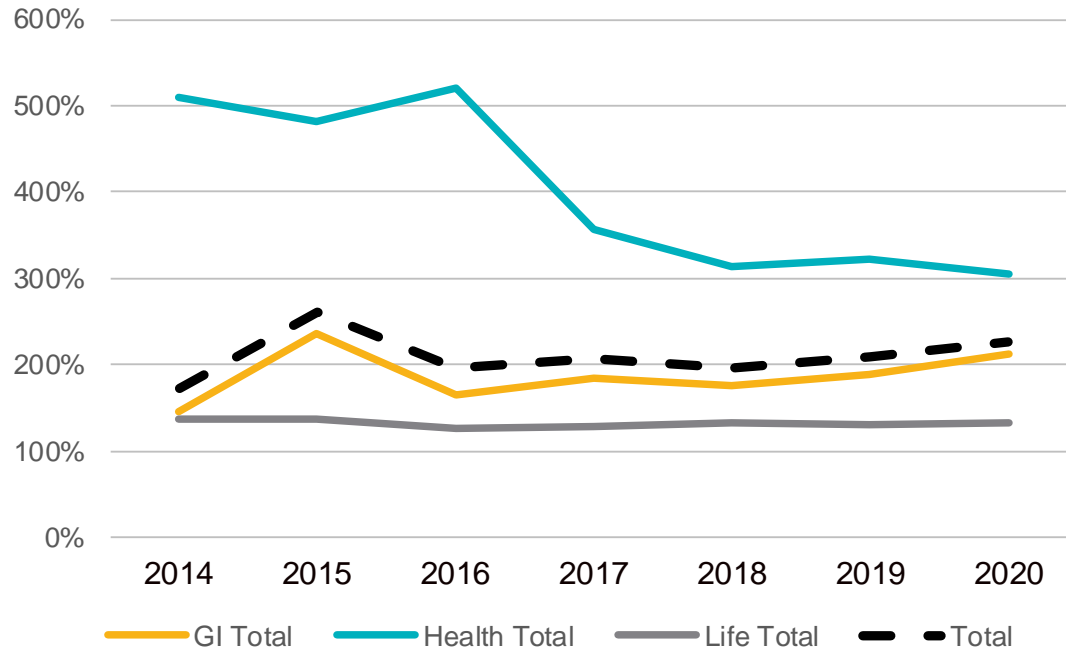


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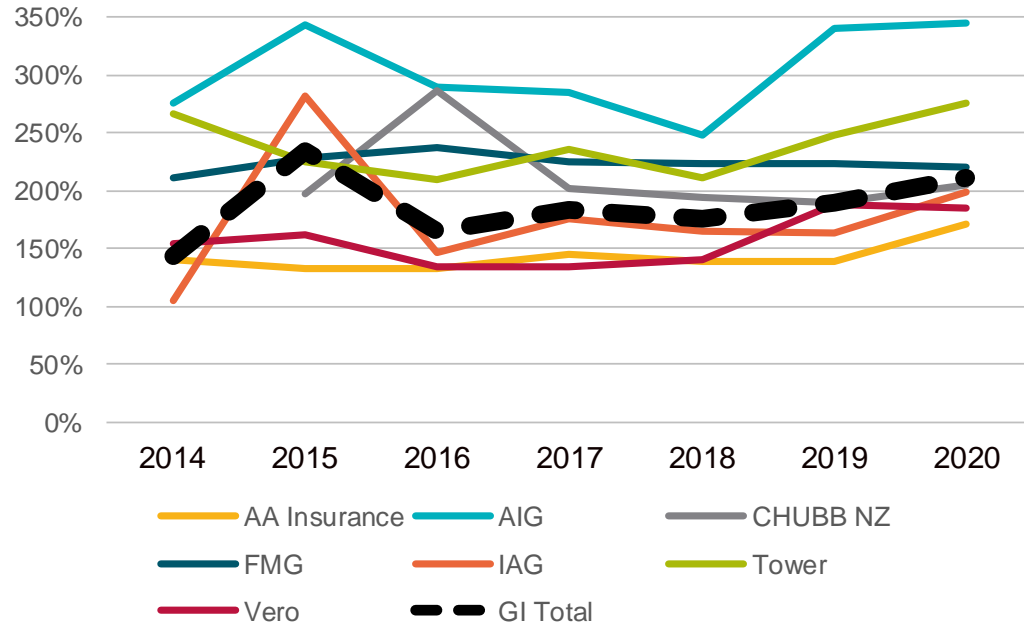
# Agenda

- Trends in solvency position
- Current RBNZ Non-life Solvency standard
- Insurance Risk Charge
- Asset Risk Charge
- Where to next?

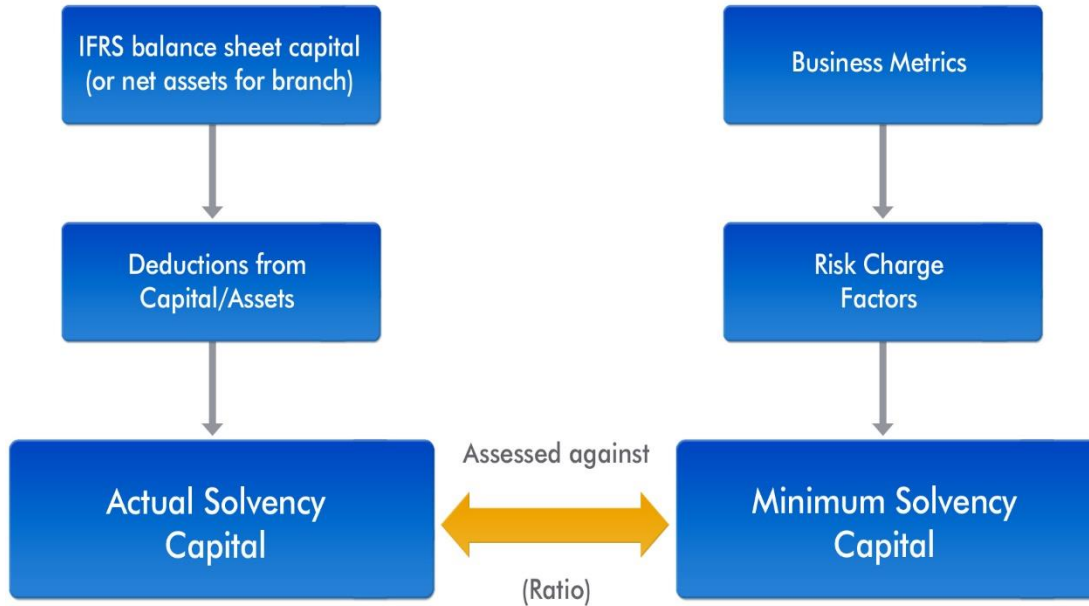
# Movement in solvency position



# Movement in GI solvency position

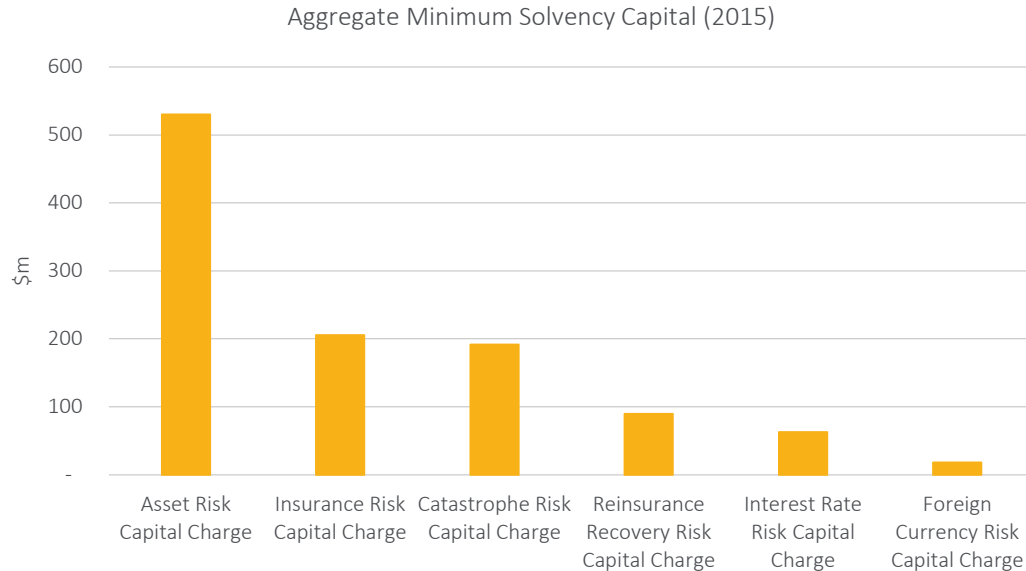


# RBNZ Non life solvency standard



- Non-Life solvency standard first introduced in 2011
- Insurers required to maintain a solvency margin or solvency ratio in excess of a minimum figure specified by licence condition (generally \$0)
- Actual Solvency Capital (ASC): Net Assets less Deductions
- Minimum Solvency Capital (MSC): 6 risk components

# RBNZ Non life solvency standard



*Data from Cole R and Allott A (2016), "Insights from New Zealand solvency returns for the 2015 financial year"*

# Comparison with Australia

Exposure Class	RBNZ Resilience Risk Charge	Old APRA Asset Risk Charge
Cash & Sovereign Debt	0.5%	0.5%
AA fixed interest < 1 year & Cash Mgmt Trusts	1.0%	1.0%
AA fixed interest > 1 year	2.0%	2.0%
A fixed interest & Cash Mgmt Trusts	4.0%	4.0%
BBB fixed interest & Cash Mgmt Trusts	6.0%	6.0%
Unrated local authority debt, 3rd Party recoveries	8.0%	6.0%
Any other debt obligation & Cash Mgmt Trusts	15.0%	8.0%
Listed equity, Listed Trusts, Listed Property Trusts	25.0%	16.0%
Unlisted equity, unlisted trusts	35.0%	20.0%

# Comparison with Australia

Class of Business	Underwriting Risk Charge		Run off Risk Charge	
	RBNZ	APRA	RBNZ	APRA
Domestic property	14.0%	13.5%	9.0%	9.0%
Commercial motor				
Private motor				
Travel				
Commercial property	16.0%	16.5%	11.0%	11.0%
Marine				
Health and personal acc't				
Other				
Liability classes	22.0%	22.5%	15.0%	15.0%



# Insurance Risk Capital Charge

The Insurance Risk Capital Charge (IRCC) is split into two components, to attempt to reflect two different types of risk to the insurer

Underwriting Risk  
(Premium Liabilities)

Run-off Risk  
(Outstanding Claims Liabilities)

- Underwriting risk reflects the risk to the insurer of writing unprofitable business
- Run-off risk attempts to capture the risk of inadequate reserving for outstanding claims

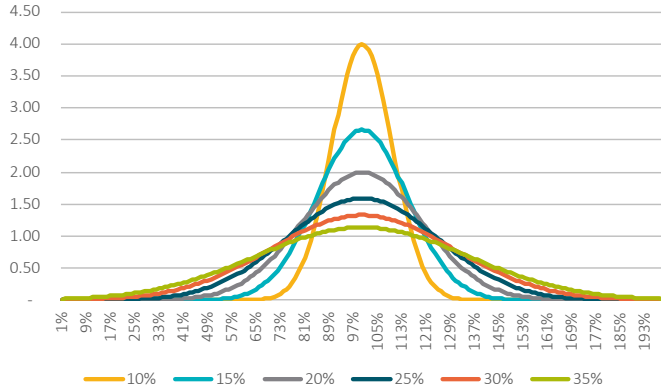
# Insurance Risk Capital Charge

We've undertaken an exercise to try reconstruct these charges from first principles, and compare them to the existing risk charges.

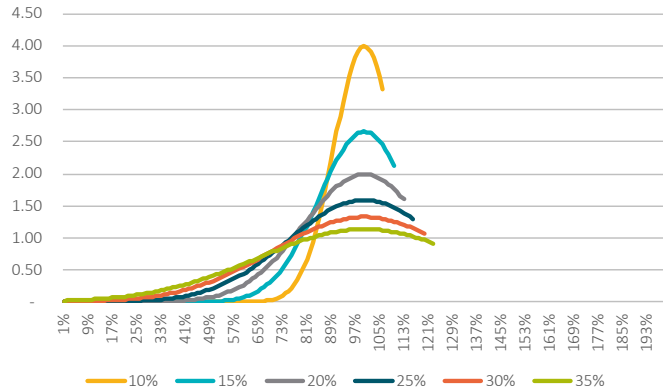
This table shows the median risk margins by class of business at the 75<sup>th</sup> PoS.

	Premium Liabilities	Outstanding Claims
Domestic Property	13%	10%
Private Motor	10%	8%
Commercial Property	21%	16%
Commercial Motor	18%	15%
Liability Classes	22%	17%
Marine	19%	16%
Health & Personal Accident	18%	14%
Travel	16%	12%
Other	19%	14%

# Insurance Risk Capital Charge

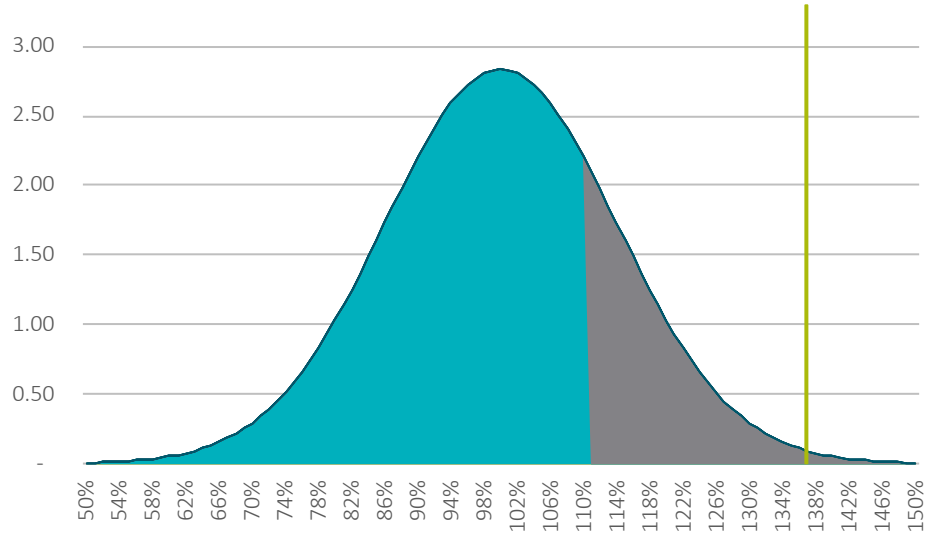


- Normal distribution with CoV's varying from 10% to 35%



- The same distributions, showing where the 75<sup>th</sup> percentile is

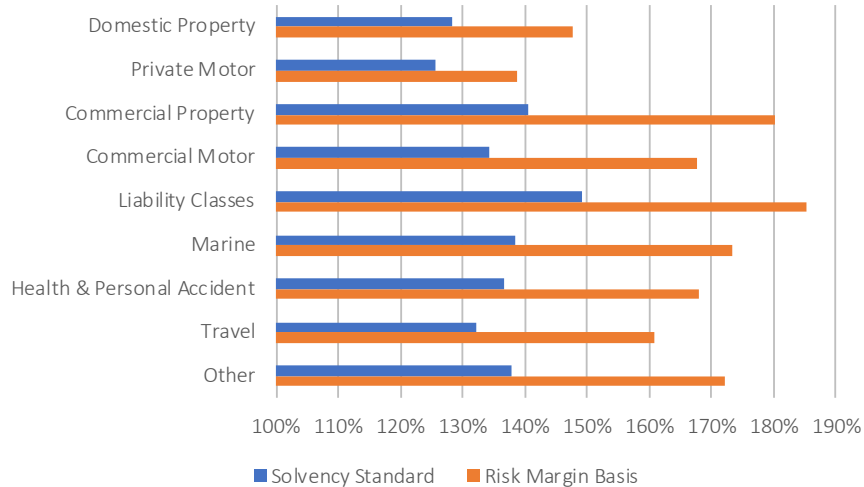
# Insurance Risk Capital Charge



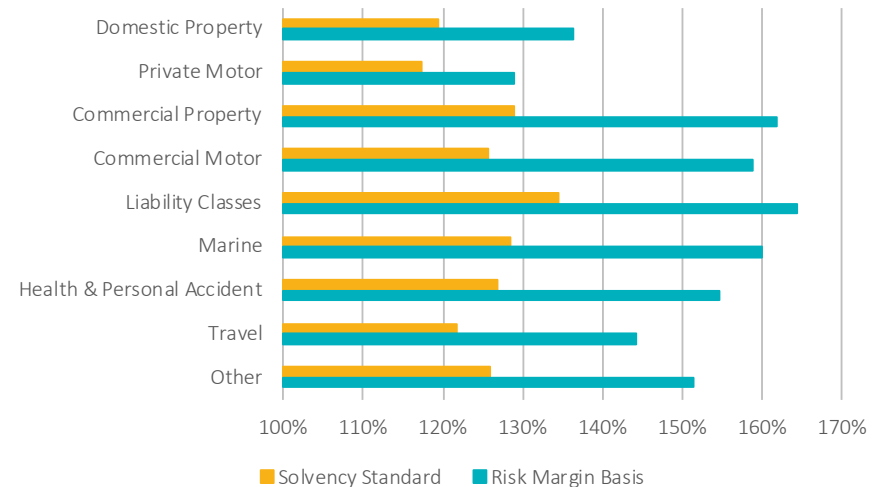
This shows our distribution for Domestic Property, with an assumed CoV of 14%

# Insurance Risk Capital Charge

## Outstanding Claims

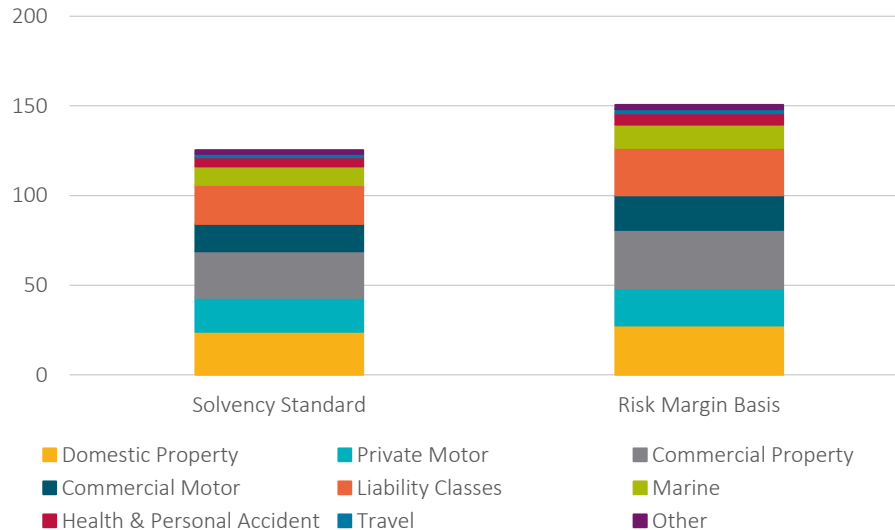


## Premium Liabilities



# Insurance Risk Capital Charge

Given \$100m of Outstanding Claims liabilities for a well diversified multi-line insurer, the IRCC is calculated using the two methods



# Asset Risk Capital Charge

- The Asset Risk Capital Charge (ARCC) is the sum of three components

Risk weighted exposures  
charge

Derivatives risk  
charge

Asset concentration  
risk charge

- The Risk weighted exposures reflects the insurer's exposure to losses on investment assets and financial risks arising from other exposures. Resilience capital factors are applied exposure classes, calibrated to a loss period of 1 in 200 years.
- The Derivatives risk charge attempts to capture the risk arising from derivatives.
- The Asset concentration risk charge allows for the risks from having large exposures to a single counterparty.

# Asset Risk Capital Charge

Similar to the Insurance Risk Capital Charge, we tried to compare the existing risk charges (“Solvency Standard basis”) with a the results of from a simple model of investment returns at a 1 in 200 year loss (“Asset model basis”).

We constructed a ‘typical’ investment portfolio using information contained in company financial statements.

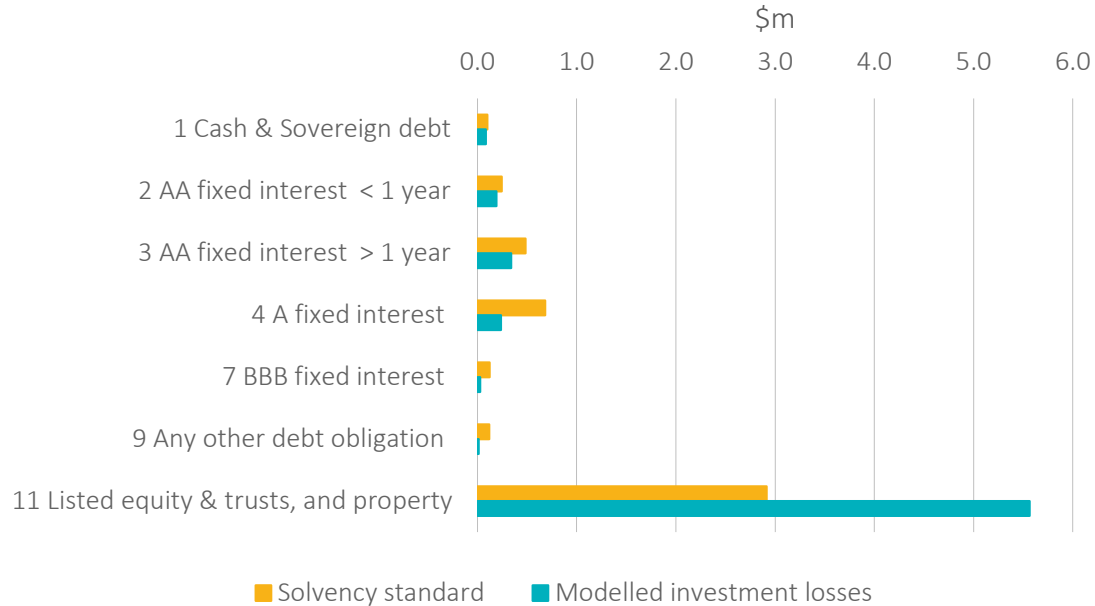
Exposure class	Assumed asset allocation
1 Cash (0.5%)	9%
1 Sovereign debt (0.5%)	11%
2 AA fixed interest < 1 year (1.0%)	24%
3 AA fixed interest > 1 year (2.0%)	24%
4 A fixed interest (4.0%)	17%
7 BBB fixed interest (6.0%)	2%
9 Any other debt obligation (15.0%)	1%
11 Listed equity & property (25.0%)	12%



# Asset Risk Capital Charge

- For the “Solvency Standard” basis, we used the investment portfolio allocation with the Resilience Risk Capital Factors applied to calculate the corresponding ARCC
- For the “Asset model basis”, we used the simulated investment returns from an asset model.
- The main focus of the model is on assessing the volatility of key economic variables rather than projecting future values.
- The asset model simulates a set of investment returns for the ‘typical’ investment portfolio.
- We then took the 1 in 200 year investment losses from the simulated investment returns.

# Asset Risk Capital Charge



# Insurance and Asset Risk Capital Charges

- Why are there differences?
- What does this mean?
- Should we be worried?
- What are other limitations of this analysis?

# Where to next?

Last year, the RBNZ announced the relaunch of its review of the Insurance (Prudential Supervision) Act (IPSA) combined with a review of the associated Insurer Solvency Standards.

	IPSA	Solvency Standards
H2 2020	Scope and overseas insurers	Principles Structure and IFRS-17
H1 2021	Statutory Funds, Solvency Buffers	Structural changes
H2 2021	Governance/Appointed Actuary, Disclosure	Interim standard and calibration
H1 2022	Supervisory Processes, Technical Amendments	Asset charges
H2 2022	Regulatory Tools, Distress Management	Liability charges
H1 2023		Other charges
H2 2023		Final standard and calibration

# Where to next?

- Ladder of intervention
- IFRS17
- Asset Risk charges approach
- Operational risk charge

# Contact details



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