



# **Insurance, Government and Disasters**

**DAVID MIDDLETON, ONZM**

[dm@kestrel.co.nz](mailto:dm@kestrel.co.nz)

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**The contribution by the many to  
the misfortunes of the few**



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**i.e.**

**Financial compensation for  
damage or loss**



# Conditions for Healthy Insurance

- Homogeneity – enough similar, separate risks
- Calculability of occurrence
- Fortuity – not certainty
- Clarity – about what happened
- Measurability – of financial loss
- Insurable interest – not a gamble
- Affordability – by the insurance company



# Healthy Insurance and disasters

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# Insurance Company Actions



- Increase premiums and deductibles
- No new policies
- Cancel policies on transfer of ownership
- Require structural surveys
- Compete aggressively in supposedly less risky areas



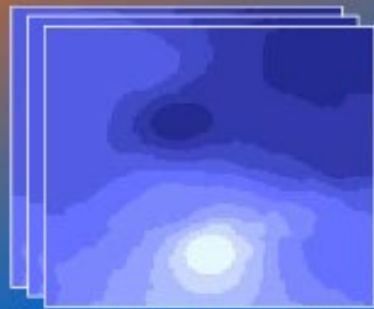
# Total Economic Cost of Earthquakes Contributed by Insurance



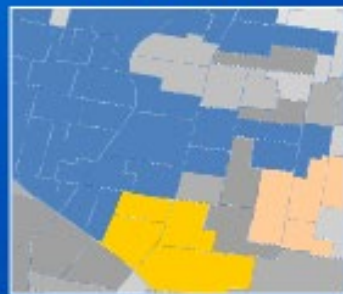
• Kobe (Japan) 1995	3%
• Taiwan 1999	5%
• Italy 2012	10%
• Fukushima (Japan) 2011	<20%
• Chile 2010	<30%
• Northridge (California) 1994	<40%
• Canterbury 2010-2012	70% (inc. EQC)



# General Loss model framework



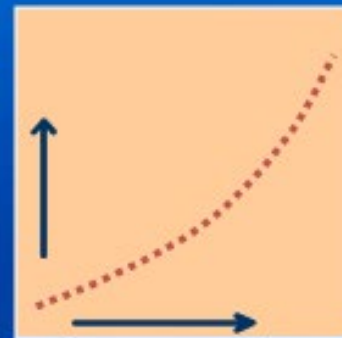
**Hazard**



**Exposure**

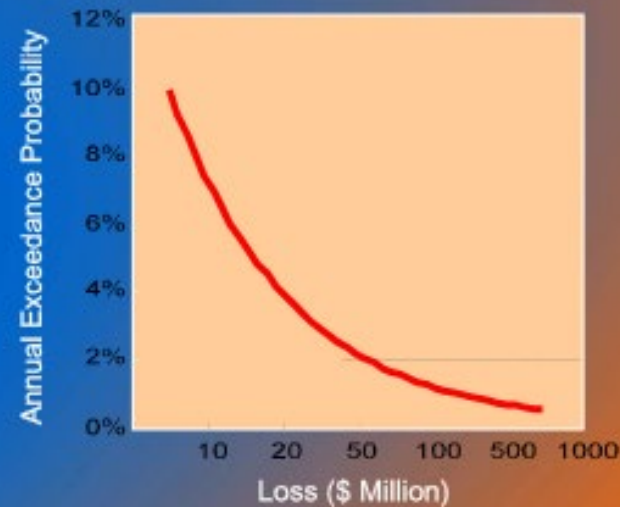
$$\text{Risk} = f(\text{Hazard}, \text{Exposure}, \text{Vulnerability})$$

Mean damage (%)



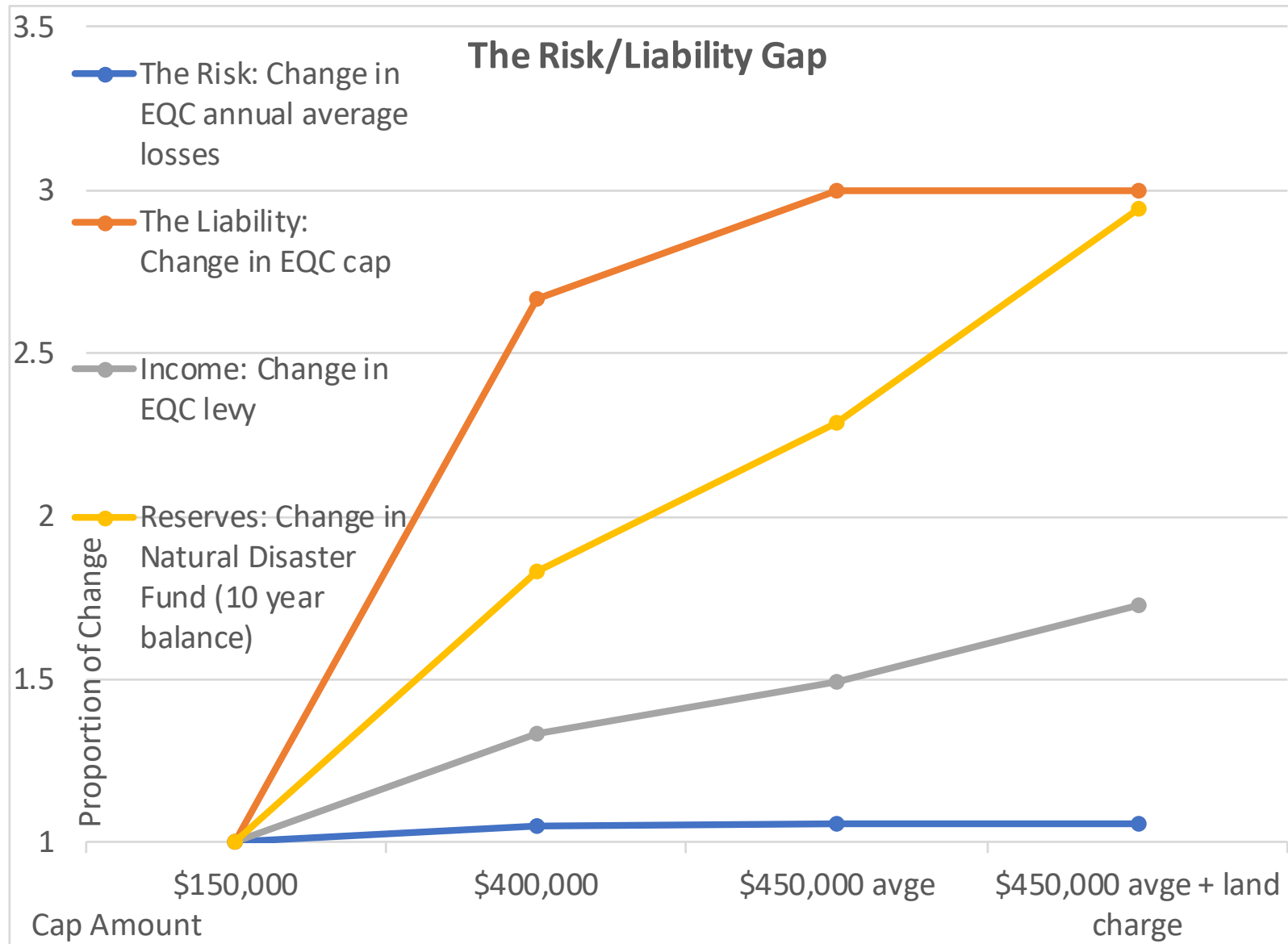
Hazard intensity

**Vulnerability**



**Financial  
Impact**







# The value of EQC



- Discharges Government responsibility for shelter and safety
- Private to social risk/Community solution vs. individual claims
- Lower premiums due to low overheads, no tax or dividend, maximum spread of risk
- One levy rate throughout the country – enforces solidarity
- Ability to make contingency plans and contracts, to practise, train, consult
- Invest in public services of research and education
- Puts New Zealand on the global reinsurance map