




The Actuarial Profession
making financial sense of the future

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Risk Margins in Reserves— What's Going On Who is Doing What

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The Players

Regulatory IAIS CEIOPS FOPI APRA	Accounting IASB (International) FASB (US) ASB (UK) and doubtless others !
Industry CEA CRO CFO Forum GNAIE	Actuaries Group consultatif IAA "Giro" CAS & IofA



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history: it started outside insurance (1)

- Accounting manipulation and diversity
- International attempts at convergence
- Insurance: very difficult and left towards the end
- The idea: apply capital market “solutions” to insurance
 - Marking to market (no manipulation) theory
 - Insurance is a financial instrument (isn't it?)
 - DSOP – “draft statement of principles”

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history: (2)

- Association of International regulators
 - Let's develop a coherent framework for insurance regulation
 - Let's go back to first principles – risk based, principles based approach
 - Series of papers, very carefully thought out, developing principles
 - UK FSA early adopters of principles based and risk based approach – gives UK a (temporary?) advantage
 - Risk based approach now being adopted by Europe
 - Regulators want consistent reserving, which can be relied on by them. Make input towards IASB proposals, but intention is to use accounting output as an input to the regulatory framework.
 - Some “theological” differences with IASB, but not in relation to risk margins.

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history: (3)

- Everything now happening at once, big challenge is not wasting effort
 - IAIS have asked IAA advice on implementing risk margins
 - EU has selected cost of capital in as method of choice for establishing risk margins in Solvency
 - IASB has left it open for the time being
 - A cost of capital-based risk margin needs clarity on:
 - Future capital requirements to use
 - Rate of return to require in excess of risk free
 - We really don't know how to come to a landing!
 - - which is where we are today

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The Players Agree (Mostly)

- Actuaries know how to do expected value estimates! Or do they?
- Cost of capital is an acceptable approach
- Discounting is appropriate
- Calibrating a cost of capital model is described as simple, but no one has done a 'real' calibration (apologies to FOPI).

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The First Set of Who -- The Three I's

- IAA – International Actuarial Association
- IAIS – International Association of Insurance Supervisors
- IASB – International Accounting Standards Board

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IASB

- May 2007: Preliminary Views on Insurance Contracts
- Comments to be submitted by 16 November 2007

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IASB view of Insurance Liabilities

- Non-hedgeable component of insurance liabilities is to be modelled based on 'current exit value' considering:
 - Expected value of obligations
 - Discount for interest
 - Risk Margin

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IASB – Suggested Risk Margin Methods

- Confidence levels
- Tail VaR
- Explicit in Specified Range
- Cost of Capital
- CAPM or related method
- Adjusted cash flows
- Multiples of parameters
- Risk-adjusted discounting

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IAIS-Recent Work

- Comments to IASB on measurement of liabilities "second liabilities paper" (Jy 2007)
- Also
 - Common Structure for Assessment of Insurer Solvency (Feb 07)
 - Draft Guidance Paper on Capital Requirements (Jy 07)
 - Draft Guidance Paper on Use of Internal Models by Insurers (Jy 2007)
 - Draft Guidance Paper on Enterprise Risk Management for Capital and Solvency Purposes (Jy 07)

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IAA-Recent Work

- Measurement of Liabilities for Insurance Contracts: Current Estimates and Risk Margins (Risk Margins)- Exposure Draft – February 2007
 - Comments also available.
 - New exposure draft before the end of the year
- Other Work– Responses to IAIS and others:
 - Internal Models -- Aug 2007--response to IAIS
 - Capital Requirements--July 2007 -- response to IAIS
 - ERM and Solvency -- Aug 2007 --Response to IAIS
 - Fair Value -- May 2007 --Response to IAASB
 - Insurer Solvency --Jan 2007 -- response to IAIS
 - Financial Reporting 'Conceptual Framework'-- Nov 2006 --response to IASB

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IAIS – Risk Margins

- Principles –
 - Similar risks to have similar liabilities
 - No preferred method
 - Risk margin should depend on risk characteristics by product

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IAA

As usual it is up to the actuaries to make sense of what the accountants and regulators propose

- Analyse cost of capital method
- Compare to %-ile and other methods

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IAA – current activities

- Revising Risk Margin Report
- Responding to IASB

Risk Margin Issues

	IAA	IAIS	IASB
Risk Margin Needed?	Yes	Yes	Yes
Risk 'Context'			
Reporting company	?	?	?
Scale up	?	?	?
Diversification	Yes	?	?
Risk Margin Method	?	?	?

Risk Margins by Method - Illustration

Risk margin approach	Notional Coverage			
	Simple Life products	Motor 3 rd party liability	'Risky' liability	Catastrophe coverage
1. 65% confidence	0.6%	4.5%	7.7%	-113.5%
2. 75% confidence	1.1%	8.8%	18.1%	-7.9%
3. 90% confidence	2.1%	18.4%	42.5%	323.5%
4. 40% CTE	1.0%	8.8%	19.0%	64.5%
5. CoC -6% cost of capital*	2.1%	4.8%	45.2%	177.1%
6. 0% discount	44.6%	7.7%	23.4%	7.7%
7. 2.5% discount (Risk free - 2%)	19.0%	3.7%	10.7%	3.7%
Product info:				
*Initial Required Capital %	4.2%	41.3%	106.5%	1526.5%
Gamma	.05	0.42	0.95	8.0
CV	1.6%	13.9%	30.7%	151.3%