The Actuarial Profession
making financial sense of the future

Operational Risk in Life Insurers

Life Operational Risk Working Party

Focus for discussion

A practical approach to the assessment of operational risk in life insurance companies:

- **Collecting Operational Risk loss data (Nick Dexter)**
- Assessing Control Effectiveness
- Operational Risk Management and embedding it in the business

Internal Data Issues

- The usefulness of historic losses as a guide to the future.
- Rarity of some OR events
- Insufficient to model the tail of the distribution
- Difficulties with overcoming non-reporting
- Danger of inconsistent reporting and heterogonous data
- Quantifying some losses is tricky
- Difficult to obtain the split of payments between reserve releases, settlement costs and ex gratia payments

External Data Issues

- The recovery amount associated with the loss, whether the amount reported is the gross or net.
- The size of the loss relative to a company's size
- Scalability / comparability to different sized companies
- The date that the loss occurred.
- The delay in reporting.
- The relevance of the loss event.
- The completeness of the database.

Quantifying OR without historic loss data

- Consult with manager in relevant areas
- Request a small number of possible points, or scenarios, on the loss distribution
- Ask to specify probabilities of loss events directly, or assessed by modelling team.
- Estimate the points on the loss distribution allowing for variation in both the underlying inherent risk and in the effectiveness of the controls.
- Possibly build variation in effectiveness of controls into the loss scenarios definition

Risks not requiring ORCA

Risks not requiring capital

- Strategic opportunity risks
- New business risks
- Risks to other corporate objectives

Risks allowed for elsewhere

- mortality and morbidity capital
- expense risk capital
- lapse risk capital

Possible Discussion Topics

- What processes/controls have companies used to help internal loss reporting?
- Has anyone made extensive use of external loss data?
- Are companies contributing to the ABI loss database? If not, why not?
- What techniques have companies used to help estimate potential loss distributions?

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Building In Control Effectiveness

Gross Loss (100% control failure)	Key Control Name	Key Control Weight	Key Control Effectiveness	Weighted Average Control Effectiveness	Net Loss (100% control operation)	Actual Loss
£G	C1 C2 … Cn	CW1 CW2 … CWn	CE1 CE2 … CEn	WACE%	£N	£L

A The gross and net impact of a risk scenario are fully costed:

First identify net impact and controls, then work backwards to gross

B Key controls are clearly identified and their effectiveness is assessed using objective measures

C The 'Actual Loss' is used to parameterise the scale of the severity distribution for this particular risk

Use of Indicators

This approach can be used with two sets of indicators to:

- Assess whether the Gross and Net costings are still valid; and
- Update the model more frequently through control effectiveness changes

Use of Indicators

1. Gross and Net costing indicators
   - The key drivers of the costing can be identified (e.g headcount for BI risk)
   - Limits are set around these drivers (e.g. ± 20%), so that when these limits are breached the costings are re-visited in more detail
   - A change in the driver is an indication of a change in potential loss amount if the risk occurs
2. Control Effectiveness indicators
   - The control effectiveness measures should be objective rather than subjective (e.g. % of BCPs updated in line with policy for BI risk)
   - Again limits should be set around these measures that would lead to mitigating actions if the limits are breached

The limits defined above can be considered a realisation of an organisations risk appetite at a granular level

Pros and Cons of this approach

Implementation Assumptions:

- Business managers have signed off the key control information and loss information
- The key control information is aligned to operational risk policy for that particular risk type
- Business managers are incentivised to optimise their capital allocation /contribution

Pros

- Business managers can clearly see what actions will influence their operational risk capital
- This transparency can align management behaviour with implementation of op risk policies
- The indicators can be updated more readily than all data and hence can lead to more frequent model run updates
- Re-use of existing control information (e.g. generated from Sarbanes-Oxley, Internal Audit)

Pros and Cons of this approach

Cons

- The move from Gross to Net loss due to movements in control effectiveness is assumed to be linear and this is almost certainly not the case
- Control effectiveness measures may not capture the whole effectiveness of the control
- Only focuses on risk severity not frequency

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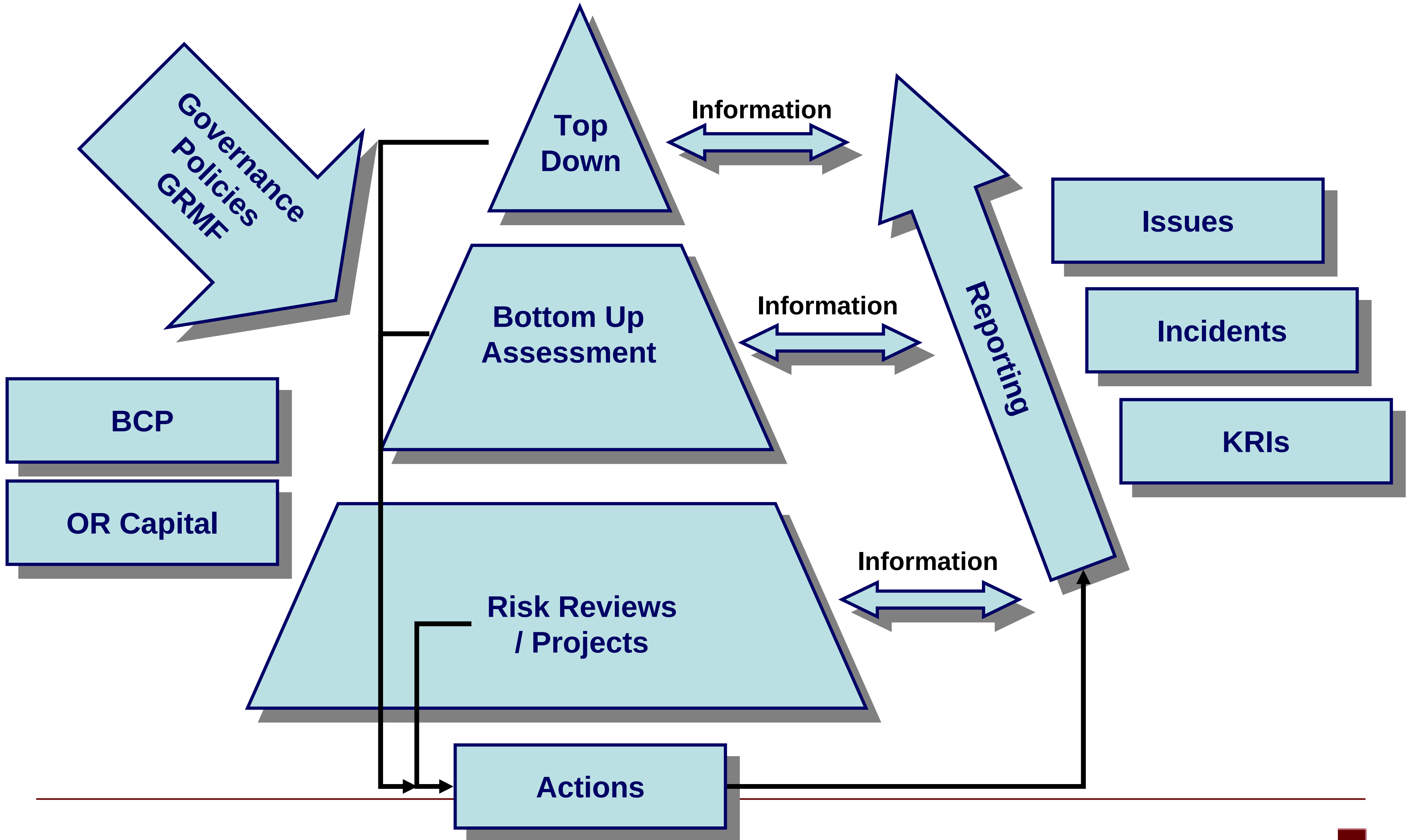
- **Operational Risk Management and embedding it in the business (Cameron Mills)**

Risk Management Framework



Embedding Operational Risk

- "*ORM is just a rebranding of how we manage our business; it's what we've always done.*"
- *"If the FSA wasn't asking for it we wouldn't bother trying to quantify operational risk."*
- *"Operational risks don't really change, the first time we go through an exercise people are enthused; the third time they're bored and tick boxes."*
- *"There is so much subjectivity in the underlying data that the final capital value is meaningless"*