Operational Risk Management in Life Insurance

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Geoffrey Au

Chief Risk Officer

AEGON Religare Life Insurance Company

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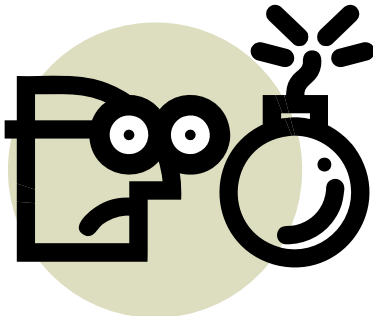
Operational Risk?

Operational Risk

- Risk of losses resulting from inadequate or failed internal processes and controls, people and systems or from external events
- Types of losses
  - Financial
  - Reputational
  - Opportunity
  - Inefficiencies



Types of Operational Risk event categories

- Business
- Legal & Compliance
- Tax
- Fraud
- Processing & Administrative
- Systems
- People
- Facility

How can we quantify Operational Risk?

Operational Risk Economic Capital guiding principles

- The overall OR EC level has to satisfy internal needs for reasonableness and prudence and external needs for relative comparison.
- OR EC should be consistently applied across businesses and products where OR attributes are similar, supporting a 'level playing field' within the Group.
- OR EC should be attached to products to facilitate its inclusion in pricing and subsequent economic valuation.
- OR EC should be applied in such a manner that it is clear to the business what can be done to manage the OR EC down and what results will cause OR EC to increase.

Data challenges regarding OR EC calibration

- Need for Operational Risk data to generate operational losses
  - Definition of Economic Capital
- Internal data is insufficient
  - Operational Risk is most relevant for high impact which are (hopefully) low likelihood events
- External data may not be applicable
- The need to consider future probable events that have never happened before
  - Use of scenarios, both generic (applied group-wide) and specific (to local units)

Different approaches

- Factor approach
  - CRO Forum indicates that OR EC in most companies is around 10% of total EC
  - European regulators are considering a standard formula where OR EC is determined as the lower of a percentage of SCR or as a percentage of earned premiums and technical provisions
  - Consultancies have provided reasonable OR EC percentages when compared to total EC, ranging from 5% to 15%
  - Note that percentages should be different in greenfield operations
- Advanced approach (for those who have data)
  - Sufficient and credible data on both severity and frequency along specific structured dimensions is required
  - Double counting should be avoided
    - For example, capital held for mortality/policyholder behavior risk have already taken into account shocks that may be caused by operational failures

Challenges regarding OR scenario generation

- Relevance to company
- Potential overlap with other scenarios/risks
- Assessment of its frequency and severity
- Correlation between scenarios
- Lack of subject matter experts
- Cognitive biases
  - Anchoring
  - Framing
  - Confirmation bias
  - Herding

Allocation of OR EC to lower levels

- In order to allocate OR EC in pricing and valuation, we need to allocate OR EC down to the product level
  - Nature of OR means that its impact is almost always higher than at product level. E.g. natural disasters, system failures
- Allocation can be based on the following factors as part of a Risk Score:
  - History of control issues
  - History of loss events
  - Product complexity
  - Process complexity
  - Operational changes
  - Distribution factors

Allocation of OR EC to product level

- A volume scalar is needed along with the Risk Score to assign appropriate weight. The volume scalar should be:
  - Easy to use
  - Proportional to the amount of OR for that product type
- Examples
  - Term insurance: PV of benefits and expenses
  - ULIP: Account Value

Example

- Assume a business unit sells two ULIPs, (a) ULIP A and (b) ULIP B
- The ORC allocated to this business unit is: INR 500 million. The average risk scores are 3 for (a) and 4 for (b).
- The volume scalar is the account value (market value of the funds), being for (a) INR 10 billion and for (b) INR 20 billion.
- ORC allocated to (a) – INR 500 million * (3 * 10) = INR 15,000 million / INR 110 billion = INR 136.5 million
- ORC allocated to (b) – INR 500 million * (4 * 20) = INR 40,000 million / INR 110 billion = INR 363.5 million
- The percentage for the ORC variable for (a) would be: INR 136.5 million / INR 10 billion = 1.37%

Questions?

Thank You