

Shareholder Reporting in Life Insurance



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Areas of shareholder interests



- **Technical Provisions**
- **Embedded Value**
- **Goodwill**
- **Risk Appetite**



Technical Provisions

Why do we need it?



- These are set aside by the company to meet the expected future liabilities
- The calculation of it depends on assumptions for parameters like
 - Mortality/ Morbidity
 - Investment Return
 - Expenses Incurred
 - Withdrawal Rates

Areas of concern



- **Shareholders interest** : *“to maximize the return on its investment, keeping the risk appetite into consideration”*
- **Actuaries interest** : *“to maintain sufficient provisions for future liabilities so as to maintain a healthy solvency position of the company”*
- **Disagreement between shareholders and actuaries on the assumptions for setting technical provisions.**
 - Actuaries may use prudent basis to ensure the company remains solvent
 - For the shareholders the assumptions might be over prudent and imply locking in the money for lower returns



Embedded Value

History



- Developed as a concept in UK in the 1980s as a valuation tool
- Was considered to be a useful measure of profit and an aid to putting a value of a company
- Gained widespread acceptance amongst equity analysts in the 1990s
- Often produced as a supplementary measure to other profit measures

Traditional Embedded Value



- **Value of In-Force business**

- Present value of projected shareholder cash flows discounted at the risk discount rate intended to reflect the risk to shareholders of the expected cash flows not emerging

Plus

- Net Assets (on regulatory basis)

Less

- Cost of Capital (to reflect the lower return on “locked – in” solvency capital)

Traditional Embedded Value : Shortcomings



- **Allowance for risk**
 - It is subjective and unclear
- **Asset Risks**
 - Value driven by assets held
 - Balancing cost of associated risk not always held
- **Options and Guarantees**
 - Expensive guarantees can be ignored if not currently in the money

Market Consistent Embedded Value is...

Market Consistent Embedded Value

Shareholder Net Worth

+

Value In-Force

Free Surplus

+

Required
Capital

Present Value of
future profits

-

CoRNHR¹

-

FCoRC²

-

FOGs³

1 Cost of residual non hedgeable risks

2 Frictional Cost of required capital

3 Financial options and guarantees

Example 1 on MCEV



- Valuing a non-par annuity

Expected payments	(100)	(80)	(60)	(40)	(20)
Change in reserve	110	88	66	44	22
Investment Income (5% Corporate Bonds)	16.5	11.0	6.6	3.3	1.1
Net Profit	26.5	19.0	12.6	7.3	3.1
Reserves	330	220	132	66	22

- Valuing individual cash flows:

- PV of Expected payments (Discounted at RFR=3.5%)=(277.1)

- PV of Investment and other(Discounted at 5%) = 330

Net Value = 52.89

Example 1 on MCEV



- **Certainty Equivalent Approach**

Expected payments	(100)	(80)	(60)	(40)	(20)
Change in reserve	110	88	66	44	22
Interest (3.5% RFR)	11.5	7.7	4.6	2.3	0.8
CE Profits	21.5	15.7	10.6	6.3	2.8
Reserves	330	220	132	66	22

- PV of certainty equivalent future profits=52.89
- Value of In-force business= 52.89 (in this case)
- MCEV=52.89(in this case)

Example 2 on MCEV



- MCEV benchmarks credit and market risk to the market
 - If \$1 will buy
 - Zero coupon bonds yielding 3%
 - or
 - Corporate bonds yielding 7%
- ... then this is the market value of additional risk associated with corporate bonds

MCEV offers



- MCEV attempts to value shareholder cash flows on a risk adjusted basis
- It offers
 - Objectivity – calibrated to the market
 - Value of liability not affected by the assets backing it
 - Very good at picking up the time value of options and guarantees
 - Consistent with other possible market investments

MCEV Gaps



- MCEV is not so good with quantifying mismatch risk
- Not so good with risks where market does not exist eg persistency
 - In theory these risks can be diversified and so only frictional costs should be allowed
 - Value of liability not affected by the assets backing it
 - Very good at picking up the time value of options and guarantees
 - Consistent with other possible market investments



Goodwill

What is goodwill?



It is the value associated with new business the company is expected to write in future.

Quantification of goodwill



- It requires the company to put a fair assumption of the new business it is expecting to write in future i.e. the revenue assumptions.
- The factors on which the value of Goodwill depends, are
 - Reputation of the firm
 - Types of distribution outlet(e.g. broker, direct sales, mass marketing etc.)
 - Quality, size and maturity of distribution outlet
 - The expected growth rate in future sales

Quantification goodwill



- Since it requires the cash flows to be projected in the future, the company needs to evaluate the economic and the non – economic assumptions:
 - Mortality
 - Investment Returns
 - Expenses
 - Withdrawal rates etc.



Risk Appetite

What is it???



“Risk appetite is the degree of risk, on a broad-based level, that a business is willing to accept in pursuit of its objectives.”

Management considers the business’s risk appetite first in evaluating strategic alternatives, then in setting boundaries for downside risk”.

Why is it important??



- It helps in defining the company strategy
- Defines the risk management framework for the organization
- Sets the boundaries within which risk can be taken
- Helps in managing stakeholder expectations appropriately

How does it help in deciding the company strategy?



- It helps in framing the portfolio of products to be offered for sale
- It evaluates whether each risk has been appropriately priced for in the contract
- It helps in understanding the capital requirements from the shareholders
- How does reinsurance fit into the framework and suitability of the type of reinsurance agreement for the business in consideration
- Helps in assessing the suitability of the investment options to lie within the risk framework of the organization

Risk Matrix



The Life insurers can identify the major areas of risk for the firm and then develop a matrix based on probability of occurrence (y axis) and severity of occurrence (x axis).

Then each identified risk can be placed into low risk region or high risk region based on the probability of occurrence and the severity of occurrence. Basis this the company can design the opportunity matrix corresponding to the identified risks.

Risk Appetite : Articulation



- It consists of six theoretical aspects:
 - Vertical Coherence : There should be connection and consistency between corporate objectives
 - Horizontal Coherence : there should be connection and consistency across different sources of risk
 - Stakeholder Coherence : there should be consideration and reconciliation of all different risk perspectives
 - Analytical : appropriate use of quantitative and qualitative consideration
 - Decision Support : the statement should be effective in support all risk related decision making
 - Governance : statement should offer complete and appropriate support for processes to review and monitor the organizations risk appetite

Risk Appetite : Effectiveness



- It consists of four practical aspects:
 - Awareness: those expected to make use of the guidance provided in the risk appetite statement are fully aware of the statement.
 - Usability: it is usable by those expected to make use of it
 - Credibility: effectiveness of the statement should be evident from comparing the statement to the Past events occurred.
 - Influence: it should influence the key decision making within the organization

Risk framework : Approaches



- **Top Down Approach**
 - Risk appetite is determined by the board and cascaded down to the organization
- **Bottom Up Approach**
 - Expressions of risk appetite at ground level are aggregated to develop an overall appetite for risk

Advantages of different approaches



- **Top Down Approach**

- Board is engaged in risk issues helping to integrate risk management
- Board is balanced to manage conflicting interests of different stakeholders
- An enterprise view of risk is available

- **Bottom Up Approach**

- Ensures that all forms of risk are captured.
- Inputs from local risk experts are taken into account for specific areas of risk
- Promotes management buy in at all levels

Disadvantages of different approaches



- **Top Down Approach**
 - Could be set arbitrarily according to perceptions and prejudices of the board
 - Can constraint operational management decision making where local factors suggest a different risk appetite
- **Bottom Up Approach**
 - Local views may be inconsistent and impossible to aggregate
 - Views may be too narrow
 - Can be time consuming

Relevance of Risk Appetite



- It defines the risk shareholders are exposed to
- Risk adjusted return may be measured
- Incremental risk acceptance may need to be assessed based on incremental return
- Management decisions may need to document impact on the risk appetite
- Shareholders may expect to see risk appetite reports including any breaches.

Risk vs Opportunity



		Risk				Opportunity			
Probability	Very likely	Low	Medium	High	High	High	High	Medium	Low
	Likely	Low	Medium	High	High	High	High	Medium	Low
	Unlikely	Low	Medium	Medium	Medium	Medium	Medium	Medium	Low
	Very unlikely	Low	Low	Low	Low	Low	Low	Low	Low
		Negligible	Minor	Significant	Major	Major	Significant	Minor	Negligible
		Consequence				Benefit			

On 'risk' side, the danger zone, which must be addressed, is colored red (or amber in a more detailed risk matrix). On the 'opportunity' side, the action zone, which should be addressed, is colored blue, indicating a major opportunity to take action to add value to the enterprise.



THANK YOU