Life Insurance: A Business of Risk Management

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What do life insurers do for customers?

Not savings for goals; Wealth erosion - inflation, market volatility

Falling ill
Outliving one’s savings
Dying early

Risks that customers transfer to life insurers

Competition reduces as we approach the core

Health / General Insurers (34)
Life Insurers (24)
Gold
AMCs (>45)
Banks (>2100)

Sources: www.rbi.org.in; www.sebi.gov.in; www.irdai.gov.in
And how do life insurers generate value?

- Spread
  - Savings
    - Market-linked
  - Annuity
    - Traditional
  - Protection
    - Term
    - Health
- Risk charge
Till recently, the focus was on savings in line with cultural and socio-economic factors.

**LIC of India is formed**
Absorbing many Indian & non-Indian insurers

**1956**

**The monoline industry era**
One company
One channel
One product category

**1960-99**

**Opening up of sector to private insurers**
New licenses issued and a competitive environment ushered in

**2000**

End result - lot of savings were mobilised, but **inadequate risk transfer**
After emulating LIC for a while, private insurers expanded the market with product innovation in savings (ULIPs)…

ULIPs mobilised more savings, while competing with other financial/non-financial products… **but no material risk transfer yet!**

*(While total premiums grew at a CAGR of ~26%, sum assured grew slower by ~21% between FY06 and FY10)*

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**Private industry product mix**

<table>
<thead>
<tr>
<th>Year</th>
<th>Traditional</th>
<th>ULIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>2004</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>2005</td>
<td>71%</td>
<td>29%</td>
</tr>
<tr>
<td>2006</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>2007</td>
<td>89%</td>
<td>11%</td>
</tr>
<tr>
<td>2008</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>2009</td>
<td>86%</td>
<td>14%</td>
</tr>
<tr>
<td>2010</td>
<td>83%</td>
<td>17%</td>
</tr>
</tbody>
</table>

*Note: 1. Based on New business premium, Source: IRDAI Handbook and Annual report, Internal estimate*
HDFC Life crafted propositions across life stages for diverse risk appetites

Customer objective

Our approach: Understand and respond to evolving customer needs, socio-economic changes

Our approach was validated with a number of our propositions becoming the industry norm!
Expanding market through consistent product innovation

- **Retirement**: Early commitment to the category
- **Annuity deferment**: Introduced concept with Pension Guaranteed Plan
- **Long term guarantees**: Advanced risk management with Sanchay Plus
- **Cost effective ULIP, even at higher ages**: Joint life concept innovatively used in Classic One
- **Online sale of protection**: Popularized with our flagship Click2Protect
- **Credit Life**: Leveraged a prominent white space
- **Low charge ULIP**: Pioneered with Click2Invest
- **Niche health concerns**: Addressed with products like Cancer Care
- **Long term solution with cash payouts**: Creatively structured via Sanchay Par Advantage
- **Flexible term protection plan**: Auto balance death and critical illness cover or receive income payouts from age 60 via Click2Protect Life
- **Standardized term and pension plan**: Saral Jeevan Bima & Saral Pension plan
- **Risk transfer solutions**: *Industry firsts

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**Children’s plans**: Expanded the category with our Youngstar brand

**Women as a category**: Introduced concept with Smart Woman
But, risk management can be tricky...

- Being a first mover, might get it wrong
- Frauds, lack of hedging options
- Not enough credible data
- Capital strain, losing street credibility
First step is to understand the risks

1. Risks we cover for customers
   - Mortality (Dying early)
   - Longevity (Outliving savings)
   - Morbidity (Illness/disease)
   - Interest rate (Guarantees)

2. Risks intrinsic to our business
   - Operational risks (Persistency, Mortality, Expense)
   - Economic risks (Equity markets, Interest rates, Credit risk)
Risk management measures - Mortality & Morbidity

1. Reducing incidence of fraud & early claims
   - Analytics and Data Enrichment
     - Risk+ (AI-ML based risk models, rule engines, credit bureaus etc.)
   - No 'one size fits all' underwriting
     - Dynamic classification depending on profile, detailed medical & financial underwriting
   - Regular portfolio review
     - To identify emerging trends, outliers and take corrective actions

2. Limiting impact on profitability & solvency
   - Reinsurance
     - Optimized reinsurance strategies for risk transfer
   - Catastrophe agreement
     - To protect excess loss
   - Proactive reserving
     - Well provisioned to prevent sudden shocks from current pandemic

3. Balancing pricing & underwriting
   - Active re-pricing
     - Ongoing wherever required (mostly applies for Group schemes)
   - Product boundary conditions
     - Gate criteria depending upon customer profile and sourcing channel

4. Strong governance & audits @Partners
   - TPAs & medical centers
     - Ensure process & quality adherence
   - Distribution partners
     - Adherence to best practices and continuous monitoring of risk

Mortality & Morbidity

Adherence to best practices and continuous monitoring of risk
1. **Product design & mix monitoring**
   - **Prudent pricing assumptions**
     - Interest rate, risk margins
   - **High Annuity ROPP business**
     - Return of premium annuity products (>95% of annuity)
   - **Regular monitoring & repricing**
     - Monitoring of interest rates and business mix; repricing to align benefits with prevailing rates

2. **Prudent ALM approach**
   - **Cash flow matching**
     - For Non-par savings + Group protection portfolio to manage non-parallel shifts & convexity
   - **Duration matching**
     - Immunise overall portfolio to manage parallel shifts in yield curve
   - **Enabled by a deep and liquid long sovereign bond market**

3. **Natural hedges & residual strategy**
   - **Naturally hedged product lines**
     - Protection and longevity
     - Unit linked and Non-par savings
   - **External hedging**
     - Instruments such as FRAs, IRFs, Swaps, amongst others

4. **Validation**
   - **Stress test scenarios**
     - Low Interest rates, high persistency
   - **External validation (Milliman)**
     - ALM strategy appropriate to meet policyholder liabilities & positive net asset-liability position under extreme stresses

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Risk management measures - Interest rate & Longevity
Risk management measures - Operational and Economic

1. **Operational risks: Diversified, balanced, future ready**
   - **Addressing key opportunities**
     - Savings, Retirals, Protection
   - **Balanced product mix**
     - To manage risk of changing customer preferences
   - **Diversified distribution**
     - Scale benefits with operating leverage
   - **Future-proof operating model**
     - Significant Tech investments to stay ahead of the curve
   - **Regular experience analysis**
     - Regular, granular review of experience vs assumptions, with corrective actions

2. **Economic risks: Conservative, calibrated**
   - **Conservative investment strategy**
     - Focus on delivering risk adjusted returns over the long term
     - Sovereign/ AAA rated ~97%; < AA assets 0.3% of AUM
   - **Regular monitoring**
     - Portfolio review, ALM, Credit risk
Illustrative example: Automated dashboards of lead indicators help us flag problem areas well in advance

Lead indicators help identify segments that are more vs. less elastic in terms of mortality rate

- **Trend-Gender segments**
- **Trend-Age segments**
- **Trend-Occupation segments**
- **Trend-Income segments**

Note: Lead indicator shown for segments above is crude death rate
Illustrative example: Robust data architecture and analytical talent combine to provide a granular, accurate projection of claims in uncertain environments.

Claims by intimation (NOP)

- Steady state deaths
- Future deaths from wave 2
- Spillover from wave 2
- Spillover from wave 1
- Claims received till date

Claims by intimation (Sum Assured)

- Steady state deaths
- Future deaths from wave 2
- Spillover from wave 2
- Spillover from wave 1
- Claims received till date

Note: M1 = Month 1, M2 = Month 2, etc.
Identification of emerging risks is key

Economic
- Lower “forever” interest rates
- Stress on jobs
- Credit defaults

Technology
- Disruption from outside the industry
- Cyber terrorism

Societal / Health
- Change in attitudes towards family life and wealth creation
- Lifestyle, mental illness (e.g. obesity, depression)
- More pandemic outbreaks

Regulatory
- Change in tax laws
- Change in data protection laws

Geopolitical
- Protectionist policies and trade wars
- Tension with neighbouring countries
- Social unrest

Environmental
- Climate change
- Fresh water crisis
- Loss of bio-diversity
In conclusion: Building a sustainable and differentiated business through risk management

**Stable/ declining trend of sensitivity to key risk factors**

**Operational risks**
- **Persistency**
- **Expenses**
- **Mortality / Morbidity**

**Economic risks**
- **Reference rate**
- **Equity markets**

**Business of risk transfer**

**Diversification, balance, innovation**

**Disclosures to aid monitoring**
- Economic value translating into cash
- Actual experience vs assumptions
- Sensitivity/ volatility
Thank You