Investors’ Day
Integrated value management

Bruno Pfister, Hans-Juergen Wolter
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The elements of Swiss Life’s value management are interlinked with each other.
1. Product controlling: From product development to profitability controlling  
   H.J. Wolter

2. Liability management: Reserving and crediting approach  
   H.J. Wolter

3. Asset management: Interest rate scenarios  
   B. Pfister

4. Valuation principles: Economic profit and embedded value  
   B. Pfister

5. Summary  
   B. Pfister
Our corporate governance enables a balance between local focus and central control

Principles

- Guidelines defined by head office
- Responsibility for profit and risks with market units
- Methodologies prescribed
- No product launch without approval

Processes

<table>
<thead>
<tr>
<th>Product development</th>
<th>Underwriting/re-insurance</th>
<th>Profitability controlling</th>
</tr>
</thead>
</table>

The roles, processes and responsibilities between market units and head office are clearly defined.
Product controlling processes cover the entire product life cycle

**Product development**
- Guidelines on procedures
- Strict compliance by market units
- Methodologies prescribed (economic pricing principles)
- ExB decision required if hurdle rate not met

**Underwriting/reinsurance**
- Limit adherence
- Decentralised approach

**Profitability controlling**
- Standardised reporting requirements
- Global monitoring on group level

**Principles**
- Minimum task list
- Profit testing/business case
- Documentation
- Sign-off by BU
- Audit procedure possible
- Actual product development (local)

**Processes**
- Limit setting
- Escalating approval procedure
- Reinsurance guidelines

- Regular reporting based on:
  - Embedded value
  - Economic profit
**Profitability controlling: Economic profit as well as embedded value used to assess business**

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic profit</td>
<td>Cons</td>
</tr>
<tr>
<td>• Embedded options and guarantees are considered explicitly</td>
<td>• Not applicable for</td>
</tr>
<tr>
<td>• No assumption about future returns</td>
<td>- In force business</td>
</tr>
<tr>
<td>• Small set of assumptions</td>
<td>- All products</td>
</tr>
<tr>
<td>• Margin control in projected profits</td>
<td>- No external review</td>
</tr>
<tr>
<td>• Applicable to all lines of business</td>
<td>• Only implicit for guarantees and embedded options</td>
</tr>
<tr>
<td>• External review</td>
<td>• Not fair to all products</td>
</tr>
<tr>
<td></td>
<td>• Large set of assumptions required</td>
</tr>
</tbody>
</table>

**Used for product development**

**Used for external reporting**
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Reserving: Prudent reserving is one of our strengths

**Our standards**
- No compromise of prudence principle
- Clear policy for additional reserves and reinforcements

**IFRS reserves**
- Reserves are set up according to a Group-wide standard
- No additional reserves permitted

**Local statutory reserves**
- In each country reserves are set up according to local regulations
- Additional reserves are set up according to local recommendations

- Reserves are audited by the external auditor (PwC)
- Additionally, the parent company and branches are audited by a technical auditor
Reserving: Accounts for all dimensions of the insurance business

Additional reserves accounting for the dynamics of the mortality tables covering:
• Longevity
• Disability

Minimum **General reserves** are set up according to **local regulations**

- **Swiss Life** covers dynamics due to early adaptation of mortality tables
- Compared to European peers the more advanced mortality tables are used
Crediting policy: Looks at competitors’ and customers’ behaviour

Ensure being in the comfort zone in order to balance danger of disproportionate loss of market share and marginal gain in market share.
Crediting policy: Allows all stakeholders to benefit from Swiss Life’s results

Sources of funds

- Risk result
- Cost result
- Investment result

Crediters policy

- Reserve strengthening
- Shareholder return
- Bonus reserves

<table>
<thead>
<tr>
<th>Company</th>
<th>Reserve strengthening</th>
<th>Shareholder return</th>
<th>Bonus</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Zurich individual</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SL Zurich group</td>
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<td>SL Germany</td>
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<td>SL France</td>
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<td>SL Netherlands</td>
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We are prepared for all economic environments

Starting point with closed duration gap

Customers’ reactions to interest rate movements

Management of our assets according to expected changes in liabilities

Allocation of gains to different stakeholders
Closed duration gap provides maximum flexibility to asset management

- Economically safe
- Full flexibility to react to market moves
- Less than 5% of bonds classified as HTM

1) wdg: weighted duration gap = $\alpha D_A - \beta D_L$

- Stable economic net worth
- Increase in economic net worth
- Decrease in economic net worth
Surrender rate lower than rationally predictable

Historical surrender rates are lower than the ones of the homo oeconomicus

Note: $\text{client} = \text{Net client return}$
Duration of insurance liabilities change constantly

Sources of duration contribution

- Guarantees determine maximum duration of insurance liabilities
- Rising interest rates decrease the duration of total insurance liabilities and vice versa
Assets have to be actively managed depending on expected interest rate scenario

**Falling interest rates**
- L-duration rises due to lower bonuses
- Asset duration too short
- Consumed available risk capital
- Increased solvency

- Asset duration will be lengthened
- Create profitable products suiting customers’ needs in low interest rate environment

**Rising interest rates**
- L-duration falls due to higher bonuses
- Cross-subsidisation of the in force business with the new business
- Solvency decreases to a stable value of 142%

- Restructure asset portfolio in such a way that the duration gap is negative before valuation reserves on bonds vanish
- Create profitable products allowing customers to participate in rising interest rates

Impact on duration gap

- - 0 +

- - 0 +
Policyholders provide part of the risk capital

Statutory balance sheet

- Assets
  - Gains on bonds

- Liabilities
  - Liability reserves
    - Free bonus reserves
    - Fund for future appropriation
    - Statutory equity

Statutory risk capital
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For Swiss Life importance of options often overestimated

**Definition**
Policyholder’s right to change certain terms of the policy during its lifetime
- Legal rights
- Contractual rights

**Examples**
- Right to surrender
- Right to stop paying premiums
- Right to take capital instead of annuity

Example of surrender option after interest rates have risen

![Diagram](SIMPLIFIED)

- Value of future cash flows
- Surrender value
- Value of surrender option
### Reduced exposure of Swiss Life to surrender options

**Percent**

<table>
<thead>
<tr>
<th>Peer comparison</th>
<th>“Surrender penalty” in individual business Switzerland (Pillar 3b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swiss Life</td>
<td>Periodic premium: 33% Single premium: 20%</td>
</tr>
<tr>
<td>Peer 1</td>
<td>Periodic premium: 0% Single premium: 12%</td>
</tr>
<tr>
<td>Peer 2</td>
<td>Periodic premium: 0% Single premium: 0%</td>
</tr>
</tbody>
</table>

#### Implications on value of embedded options

- **New contracts** with low interest rates
  - Little incentive to surrender since surrender values are interest rate dependent
  - Low option value

- **Old contracts** with higher technical interest rates
  - Little incentive to surrender
  - Low option value
Agenda

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Integrated model creates full coherence and greater effectiveness

- Each value management element is measurable independently
- The art of value management lies in balancing every element with the others
- Communication between the departments involved is crucial
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