Zurich’s approach to Enterprise Risk Management

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Zurich Global Corporate
Agenda

1. The risks we face
2. Strategy risk and risk tolerance
3. Zurich’s ERM framework
4. Capital and risk
5. Benefits and lessons
An insurance company is exposed to a wide range of risks...

- Stock markets
- Pandemics
- Exchange rates
- Credit spreads
- Company defaults
- IT risks
- Interest rates
- Company defaults
- Earthquakes
- Hurricanes
- Inflation
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- Earthquakes
Our risk universe and how we structure it
As most firms we are exposed to business & strategic risks

Managing strategic and business risks requires taking a broader view on risks from a strategic perspective

We identify, assess, manage and monitor strategic and business risks – but also all other risk types – through our Total Risk Profiling (TRP) process.
1. The risks we face

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Strategy and risk management – some key questions to be addressed

- Is the expected probability of an annual loss or reduction in the financial strengths rating in line with the perception of the risk the company takes?
- What level of earnings volatility can you afford?
- What level of economic capital volatility are you ready to accept?
- How frequently will you accept being forced to access capital markets?
- For what type of risk-taking do you want to use the balance sheet?
- Finally, what needs to be done to manage the company within an agreed risk tolerance?
  - Can you afford to take more risk? If yes – where should you do this?
  - Should you further de-risk? Where?
Risk Tolerance needs to be linked to strategy

Group Risk Tolerance and strategy

Group’s view on what type and level of risk is ‘acceptable’

Group Risk Tolerance

- Capital-at-Risk
- Earnings-at-Risk
- Financial flexibility
- Franchise value

Strategic direction

Coherent limit structure, risk management tools and processes

- Comprehensive Risk Tolerance framework links risk-taking, strategic & operational planning with comprehensive risk limit system
- It enables active risk-taking within a consistent framework across the entire group
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Zurich’s Enterprise Risk Management framework

- Protect capital, earnings and franchise value
- Define Zurich’s risk tolerance and appetite
- Drive discussions on aggregate risk, risk profile, risk-return trade-offs and optimization
- Embed sound risk awareness across all levels of the Group

- Provide a stable and consistent infrastructure and methodology for measuring risk
- Support segments, divisions, units and functions in identifying, assessing, quantifying and mitigating the risk they incur
- Measure and disclose risk profile to internal and external stakeholders and ensure compliance with regulatory requirements
- Defined responsibilities and clear accountability for risk management and risk taking
- Document and maintain policies and guidelines for risk management
- Embed culture of disciplined risk taking across the Group
ERM and control framework
Risk Management is well embedded in the business

- **Board of Directors**
  - Risk Committee
  - Audit Committee

- **CEO and Group Executive Committee**
  - Group Chief Risk Officer
  - Group Balance Sheet Committee
  - Group Finance & Risk Committee

- **Segment, Division, BU level**
  - Business Management
  - Audit, Risk and Control Committees
  - Risk Management Network (Including BD CROs & Local Risk Officers)

- **1st line of defense**
  - Risk Taking

- **2nd line of defense**
  - Risk Control

- **3rd line of defense**
  - Independent Assurance
We practice what we preach…

1. **Generic TRP process …**

   1. **Identify potential risk issues**
      - Open brainstorming
      - Review of generic scenarios
   
   2. **Develop risk scenarios**
      - Vulnerability
      - Trigger
      - Consequence
   
   3. **Assess and quantify current rating**
      - Severity / Probability
   
   4. **Define risk priority boundary and prioritize risk scenarios**
   
   5. **Develop improvement actions for the prioritized scenarios**
      - Assess target rating
      - Name a responsible person
      - Set a due date
   
   6. **Follow-up on improvement actions quarterly**

2. **… at all levels of the company**

   - **Group TRP**
   - **Global Life and General Insurance TRPs**
   - **Business Divisions TRPs**
   - **Regions and Business Units TRPs**

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Zurich HelpPoint
A comprehensive RM architecture fosters integrated view of risk

Risk Governance

More quantitative

Risk Tolerance
- Defines and informs risk limits
- Takes a shareholder view (eg. 1/10 and 1/50 years)
- CaR, EaR, financial flexibility and franchise value

Capital-at-Risk
Earnings-at-Risk

Risk-Based Capital (RBC)
- Sets target capitalization at AA level
- Takes a policyholder view (1/2000 years)
- Externally communicated

Total Risk Profiling (TRP)
- Management view of risks
- Proprietary tool for risk identification and assessment
- 3-5 year time horizon

More qualitative

Zurich Risk Policy (ZRP)
- Governs risk ownership, roles and responsibilities
- Sets limits by risk type
- Is mandatory across Group
- Is regularly updated and communicated

Operational Risk & Control
- Integrated Risk & Control framework and methodology
- Operational risk management
- Internal Control Framework (ICF)

Risk reporting
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... and we are disciplined in capital and risk management

Total allocated capital = USD 28bn RBC plus USD 2bn direct allocation to Farmers Management Services

- Investment credit risk: 3%
- Market / Asset & Liability Management risk: 24%
- Natural Catastrophe risk: 10%
- Life insurance risk: 1%
- Reinsurance credit risk: 4%
- Premium & Reserving risk: 41%
- Business risk: 8%
- Operational risk: 9%

- Our core business is insurance, not asset management or financial products.
- More than 60% of our capital is allocated to insurance compared with 40% five years ago.
Zurich’s strategic risk management – consistent implementation

**Zurich RBC\(^1\) by risk type**

- **2003**
  - Market/ALM risk: 40%
  - Business risk: 27%
  - Operational risk: 4%
  - P&R risk\(^2\): 4%
  - Re-ins credit risk: 4%
  - Natural cat risk: 9%
  - Life insurance risk: 11%
  - Investment credit risk: 4%
  - USD 27bn\(^1\)

- **2009**
  - Market/ALM risk: 24%
  - Business risk: 41%
  - Operational risk: 9%
  - P&R risk\(^2\): 9%
  - Re-ins credit risk: 8%
  - Natural cat risk: 3%
  - Life insurance risk: 1%
  - Investment credit risk: 1%
  - USD 28bn\(^1\) (estimate)

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1 Risk Based Capital (RBC) is based on expected risks to be taken during period, as of January 1
2 Premium and reserving risk

Graph taken from Zurich Risk Modeling Platform
De-risking and significant shift to General Insurance 2003 – 2009

Zurich RBC by segment

2003
- Farmers Mgmt Services¹: 9%
- General Insurance: 45%
- Global Life: 30%
- Other²: 16%

2009
- Farmers Mgmt Services¹: 10%
- General Insurance: 56%
- Global Life: 20%
- Other²: 14%

¹ Total allocated capital = USD 27bn (2003) and USD 28bn (2009) respectively plus USD 2bn direct allocation to Farmers Management Services
² Includes alternative investments managed by Investment Management

Graph taken from Zurich Risk Modeling Platform
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What does this all mean in practice? – some examples

- We consciously increased our net exposure to **natural catastrophe risk** from 4% in 2003 to 10% of RBC in 2009
  - We seek this kind of risk and hence accept the volatility that comes with it – as long as it stays within our Risk Tolerance
  - Results show that the strategy is working: even in 2005, the costliest catastrophe year for the industry, our BOP impact was less than 25% (Katrina, Rita, Wilma, floods in Europe)

- We consciously increased our net exposure to **General Insurance** (premium & reserving) risk from 27% in 2003 to 41% of RBC in 2009
  - Zurich is disciplined in its underwriting approach (e.g. well diversified limits profile and highly selective underwriting strategies, limiting exposure to financial crisis, with total GWP below 5% of total General Insurance GWP)

- From a segment perspective we consciously reduced our **Global Life** RBC from 30% in 2003 to 20% of RBC in 2009
  - E.g. product lines with significant embedded options and guarantees were actively scaled back or sold and focus put on capital efficient products.

- We consciously reduced our **market/ALM and credit risks** from 44% in 2003 to 27% of RBC in 2009
  - Our investment portfolio is conservative and balances risk and return (e.g. equity exposure was 3.3% at end of 2008 taking into account our hedging programs)
**RM lessons learned from the financial market crisis – and how they link to strategy**

<table>
<thead>
<tr>
<th>Thesis</th>
<th>Description</th>
<th>Strategic relevance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis 1</td>
<td>Risk management without aggregation of risk is not of much value</td>
<td>Prerequisite</td>
</tr>
<tr>
<td>Thesis 2</td>
<td>You cannot live without quantitative tools – but if you rely solely on them they are dangerous</td>
<td>Prerequisite</td>
</tr>
<tr>
<td>Thesis 3</td>
<td>Discussions on risk tolerance and risk appetite belong at the top of the agenda and need to take place on a regular basis</td>
<td>Yes</td>
</tr>
<tr>
<td>Thesis 4</td>
<td>We need to completely rethink the way we deal with extreme events</td>
<td>Prerequisite</td>
</tr>
<tr>
<td>Thesis 5</td>
<td>What is needed is a true risk culture – risk management is a top management responsibility</td>
<td>Yes</td>
</tr>
<tr>
<td>Thesis 6</td>
<td>Risk management of the future means making or keeping a company agile, flexible and adaptable to change</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Lessons for Enterprise Risk Management

<table>
<thead>
<tr>
<th>1. Risk assessment and risk aggregation are indispensable</th>
<th>Understanding individual risks is not enough; we must also account for inter-linkages and remote possibilities.</th>
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<tbody>
<tr>
<td>2. Extremes must be factored in</td>
<td>The world does not follow a normal distribution and “Black Swans” can appear at any time.</td>
</tr>
<tr>
<td>3. Quantitative tools are important, but informed qualitative judgments are indispensable</td>
<td>The arsenal of quantitative risk assessment tools is impressive, but models have their limits.</td>
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<td>4. We must ascertain our risk appetite</td>
<td>Enterprise risk management has a strategic function, to determine the organization’s choice of the trade-offs between risk and reward.</td>
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<td>5. The risk culture must be entrenched in the organization</td>
<td>There must be a strong, top-down risk assessment, and risk management capability must be applied across the organization.</td>
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</table>

Source: *Dealing with the Unexpected; Lessons for risk managers from the credit crisis;* A Zurich Report in Applied Risk Management, Zurich 2008
Want well managed insurers who can manage the risks that they face.

Customer Value

Capital regimes mean that risk management is having an impact on the level of capital required.

Reputation

Regulatory Capital

View of future earnings and sustainability is impacted by perception of risk and its management.

Rating Agencies are now looking at ERM. Risk management therefore impacting the cost of funding capital.

Rating

Cost of Capital

Zurich HelpPoint
Summary

- The dimensions of risk have become more complex – and complexity is a risk in itself
- Enterprise risk must be managed to maximize resilience, the risk/return-profile, and strategic growth
- Zurich practices what it preaches – our own risk management function has become a strategic driver that produces profitable growth, resilience and customer value
Thank you
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