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Study of Insurance Economics

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Études et Dossiers No. 326

The Insurance Industry: Risk Governance and Solvency II

Milan, 28 November 2006

&

A Reputational Risk Management Framework

Report prepared for The Geneva Association
and Macros Research

by Dr. Riccardo Bigio

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Layout & Distribution: Valéria Kozakova

ERM: Key Drivers of a Global Player from a Strategic Viewpoint

Mel Carvill

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Agenda

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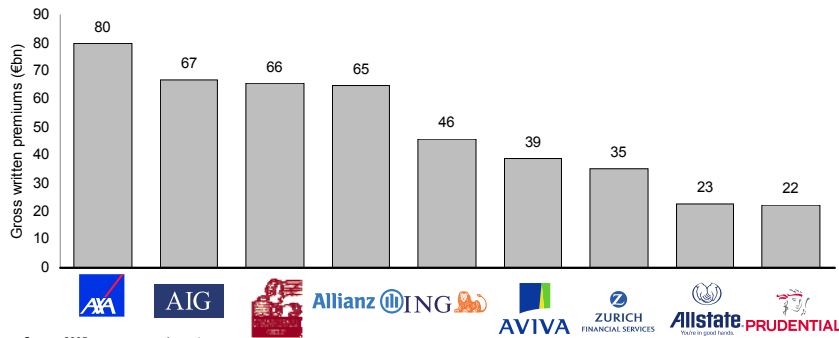
- ▶ **Generali**
 - Overview
 - Enterprise Risk Management at Generali
 - Conclusion



Generali – a large complex group

3

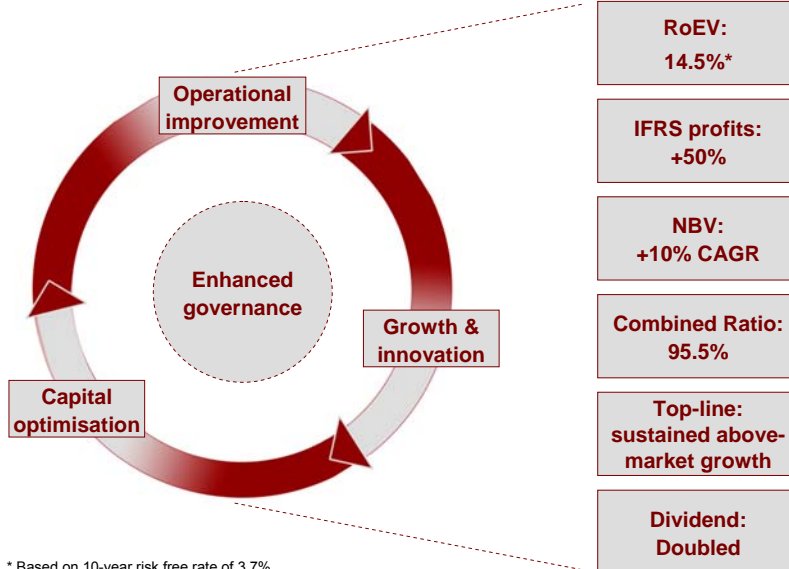
- Life and P&C
- Insurance, asset management and banking
- 40 countries
- Over 300 companies
- Ranking 3rd by premiums



Source: 2005 company annual reports
 • AXA includes Winterthur
 • Generali includes Toro

Generali 2006-8 Strategic Plan – continued focus on value creation

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* Based on 10-year risk free rate of 3.7%

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Generali

► **Overview**

Enterprise Risk Management at Generali

Conclusion




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Enterprise Risk Management at Generali 6

**ERM at
Generali**

- Not just about value protection but value creation
- A core competence – insurers manage the risks of others
- A key input to strategy and business decision making
- Risk based approach to capital management
- Culture of Risk Management




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Enterprise Risk Management at Generali 7

Some Challenges

- Centralisation vs decentralisation
- Need for global and local view
- Overcoming the silo mentality
- Fully integrate risk management into business decisions
- Minorities



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Generali

Overview

▶ **Enterprise Risk Management at Generali**

Conclusion



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Enterprise Risk Management 9

1 Overview	<ul style="list-style-type: none"> ▪ Manage risk to achieve objectives ▪ Culture of Risk Management
2 Organisation	<div style="text-align: center;"> <pre> graph TD subgraph Pillars [Solvency II - three pillars] FS[Financial strength] SR[Supervisory review] MD[Market discipline] end FS --> EBS[Economic Balance Sheet] SR --> RG[Risk Governance] MD --> TRD[Target & Results disclosure] EBS --> RRT[Risk / Return trade-off] RG --> RRT TRD --> RRT MA[Management action] --> RRT subgraph PlusOne [Plus One] MA end </pre> </div>
3 Generali's ERM	
4 ERM: Group Risk Committee	<ul style="list-style-type: none"> ▪ Analyses risk map ▪ Approves the framework for risk identification and control ▪ Challenges strategic risk proposals (asset allocation, reinsurance)
5 Solvency II: what we like	<ul style="list-style-type: none"> ▪ Market based approach to assets, liabilities and risk ▪ Discounting of P&C liabilities
6 Solvency II: what we still want	<ul style="list-style-type: none"> ▪ Diversification between legal entities ▪ Lead supervisor ▪ IASB convergence

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The Four Pillars of ERM 10

Enterprise Risk Management.. <i>..co-ordinated management of risk and reward</i>	Pillars	Description
	Risk mapping <i>Pillar I</i>	<ul style="list-style-type: none"> ▪ Integrated market-consistent asset and liability view ▪ Capital adequacy (regulatory, rating and economic view) ▪ Value at Risk/Stress scenarios ▪ Internal capital model, bottom-up analysis of ALM/market and credit, insurance and operational risks
	Risk governance <i>Pillar II</i>	<ul style="list-style-type: none"> ▪ Group Risk Committee & local Risk Management Committees create framework for ERM implementation ▪ Incentivize local risk mitigation activities ▪ Internal audit oversight of process integrity
	Risk reporting <i>Pillar III</i>	<ul style="list-style-type: none"> ▪ Risk reports detailing risk processes, exposures and solvency ▪ Raising a culture of risk awareness and risk mitigation
	Risk management <i>Plus One</i>	<ul style="list-style-type: none"> ▪ Risk based approach to capital management & allocation, asset allocation, reinsurance & product pricing ▪ Standards for underwriting and new products ▪ Risk and VBM indicators e.g. RoEC, VaR, risk exposures

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Generali

Overview

▶ **Enterprise Risk Management at Generali**

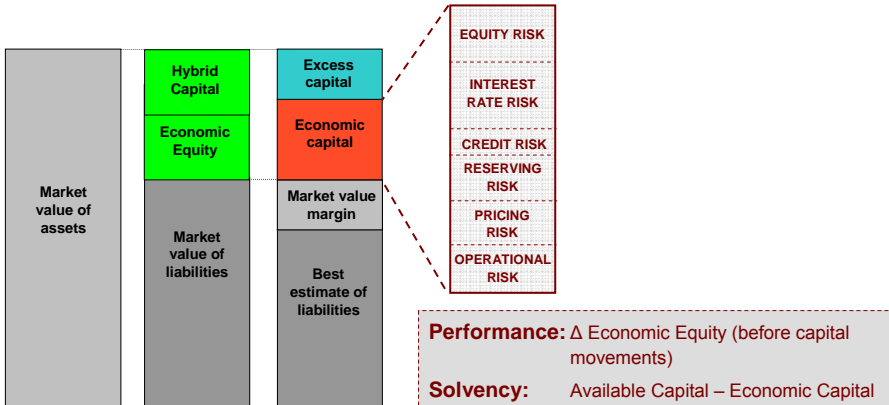
- ▶ **Pillar 1 – Risk Mapping – Economic Balance Sheet**
- ▶ Pillar 2 – Risk Governance
- ▶ Pillar 3 – Risk Reporting
- ▶ Pillar 4 – Risk Management

Conclusion



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Economic Capital and the Economic Balance Sheet 12




Market value of assets	<div style="background-color: #00FF00; padding: 2px;">Hybrid Capital</div> <div style="background-color: #00FF00; padding: 2px;">Economic Equity</div> <div style="background-color: #808080; padding: 2px;">Market value of liabilities</div>	<div style="background-color: #00FFFF; padding: 2px;">Excess capital</div> <div style="background-color: #FF0000; padding: 2px;">Economic capital</div> <div style="background-color: #808080; padding: 2px;">Market value margin</div> <div style="background-color: #808080; padding: 2px;">Best estimate of liabilities</div>
Assets	Available Capital	Solvency

Performance: Δ Economic Equity (before capital movements)

Solvency: Available Capital – Economic Capital

DEFINITIONS:

1. Best Estimate Liabilities: expected value of stochastic cash flows to policyholders + debt at market value + other liabilities (IFRS value)
2. Market Value Margin: cost of capital to support unhedgeable risks (CRO Forum)
3. Economic Capital: based on Internal Model calibrated to 99.5% confidence over one year



Total Balance Sheet approach – Risk, Capital and Value

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Group Corporate Centre manages a vast, but single, entity

- Manages Group Solvency and Group Risk Profile through the Group Risk Committee
- Designs and implements the Group Internal Model
- Lays down and implements the Group Economic Capital Methodology
- Implements and Audits the Group Risk Governance program
- Sets the Group Strategy, allocates the Group Capital
- Conducts relations with capital markets
- Maintains relations with rating agencies

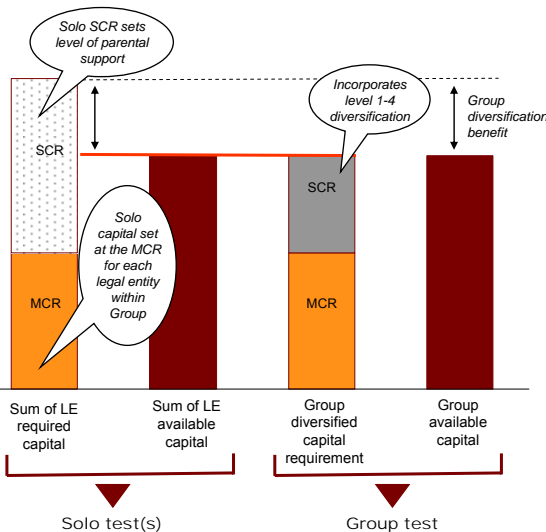
Regulatory requirements should mirror the economics of the business

- We manage the business as a single entity
- Capital markets finance a single group strategy
- Regulators & Supervisors should create a market environment that:
 - Promotes sound risk management based on market economics
 - Treats the Group as a single risk taker and risk manager
 - Penalizes companies that fail to meet governance standards
- **Requires a strong Lead Supervisor to control the Group Solvency**



Solo and Group Solvency allowing for local safety net

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LE = Legal Entity,
SCR= Solvency capital requirement,
MCR= Minimum Capital Requirement

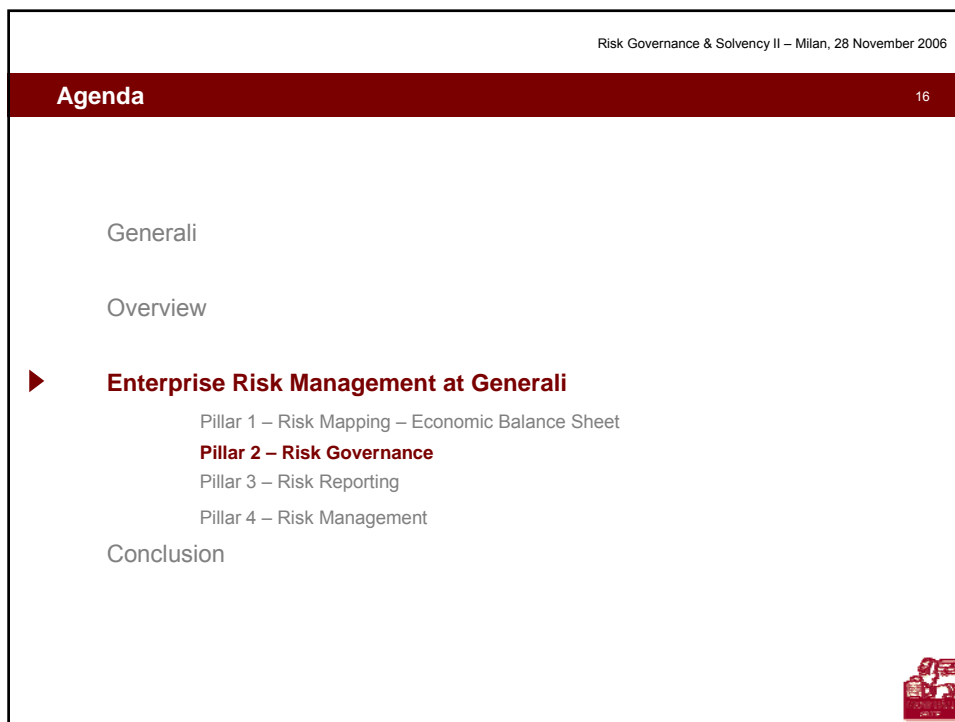
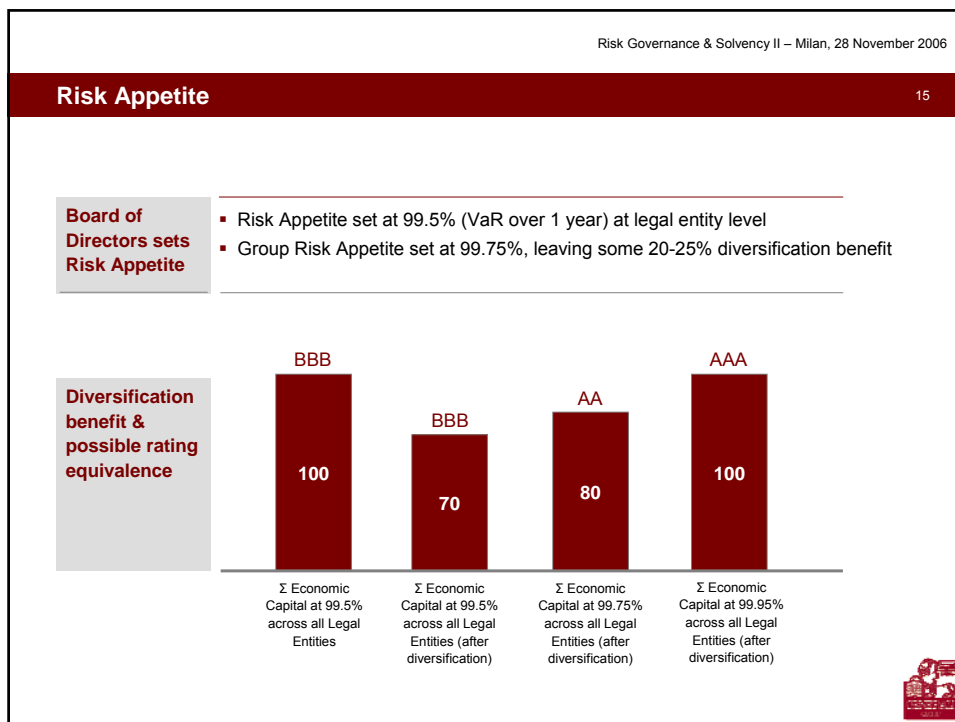
Diversification Levels

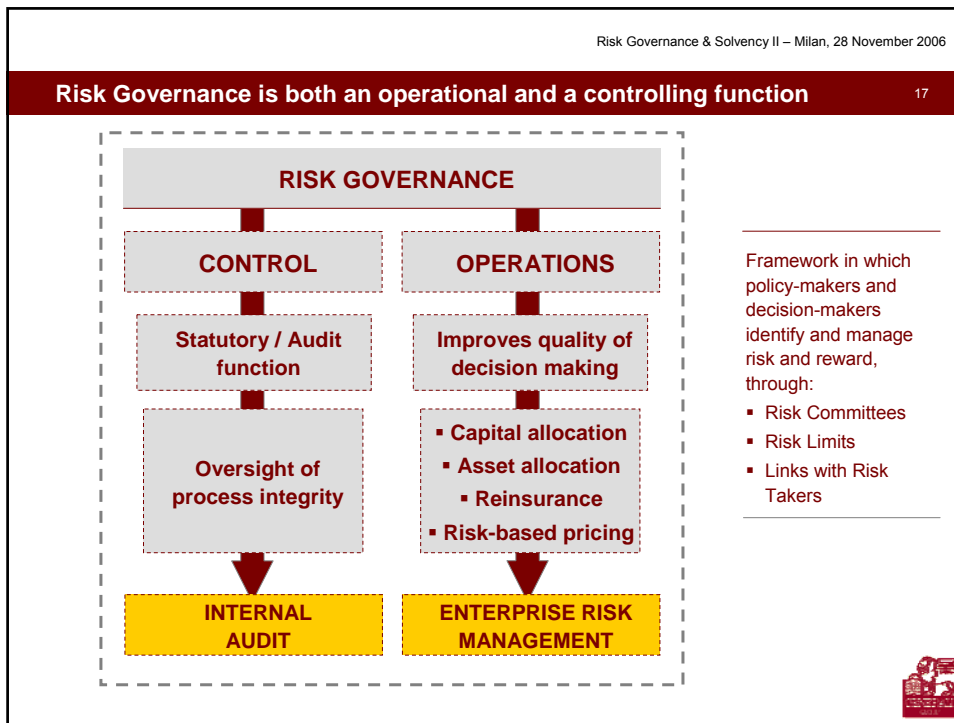
Level 1	▪ Within a risk factor
Level 2	▪ Within a company ▪ Between risk factors
Level 3	▪ Within a country
Level 4	▪ Between companies ▪ Between countries

Solo safety net approach

- Reduced complexity: fewer company and supervisory contractual arrangements
- Reduced cost of supervision: meets Single Market objective
- Solo supervisory capital control reduced, but offset by enhanced supervisory governance and control responsibilities








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High level overview of duties 18

Board of Directors	<ul style="list-style-type: none"> ▪ Approves strategic plans, governance framework, assigns responsibilities ▪ Approves capital structure, risk appetite, rating target
CEOs	<ul style="list-style-type: none"> ▪ Assigns risk adjusted performance targets aligned to capital management strategy ▪ Approves risk management strategies & initiatives, risk profile & risk exposures
Group Risk Committee	<ul style="list-style-type: none"> ▪ Approves the framework for risk identification and control (operating limits, risk reports) ▪ Develops proposals for capital management optimization ▪ Challenges strategic risk proposals (capital allocation, asset allocation, reinsurance, pricing)
ERM	<ul style="list-style-type: none"> ▪ Implementation of the ERM framework across corporate center and group companies ▪ Assists risk owners in developing risk management strategies ▪ Prepare Group Economic Capital Methodology and risk aggregation principles
SAA	<ul style="list-style-type: none"> ▪ Develop strategic asset allocation processes consistent with capital management ▪ Run the Group economic scenario generator
FRC	<ul style="list-style-type: none"> ▪ Monitor and report exposures to market risks at Group / Country / Company consolidation levels (data warehouse)


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High level overview of duties	
Life Technical	<ul style="list-style-type: none"> ▪ Assist companies in developing product strategies, addressing coverage and pricing issues together with the expected impact on risk exposures levels ▪ Monitor and report exposures to ALM risks at Group / Country / Company consolidation levels ▪ Monitor the implementation of actions to mitigate exposures to ALM risks
P&C Technical	<ul style="list-style-type: none"> ▪ Assist companies in developing product strategies, addressing coverage and pricing issues together with the expected impact on risk exposures levels ▪ Monitor and report exposures to risks at Group / Country / Company levels ▪ Assist companies in managing their reinsurance strategy, improving capital efficiency and value enhancement
IFICC	<ul style="list-style-type: none"> ▪ Align corporate center data model to support gathering and reporting of key risk adjusted performance indicators ▪ Provide CC functions with key risk adjusted performance indicators
Internal Audit	<ul style="list-style-type: none"> ▪ Include risk mapping and risk management processes in the audit scope ▪ Check coherence of risk governance framework with regulations
Investor Relations	<ul style="list-style-type: none"> ▪ Proactively sell the Group ERM model as the most suitable to Generali Group



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Operating Limits Handbook													
Operating Limits approved by Group Risk Committee	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Strategic Asset Allocation </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Asset classes and allocation limits / trading corridors ▪ Bond duration limits ▪ Return expectations / performance fees </td> </tr> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Credit & Currency Limits </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Sub-asset classes ▪ Credit exposure by ratings ▪ Concentration / Liquidity / Currency exposures </td> </tr> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ P&C Underwriting </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Permitted classes / occupancies ▪ Underwriting limits (gross & net of reinsurance) ▪ Company / Agents' / Distributors' underwriting power </td> </tr> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Life Underwriting </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Underwriting limits per risk (net & treaty limits) ▪ Company / Agents' / Distributors' underwriting power </td> </tr> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Product Approval </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Match customer needs / Sales force training ▪ Supports commercial & marketing strategy ▪ Product economics and volumes </td> </tr> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Structure </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ▪ Framework enabling documents requiring companies to formalise internal limits cascade ▪ Fully documented limits / Personal accountability ▪ Enforced, with process for prior approval of exceptions </td> </tr> </table>	<ul style="list-style-type: none"> ▪ Strategic Asset Allocation 	<ul style="list-style-type: none"> ▪ Asset classes and allocation limits / trading corridors ▪ Bond duration limits ▪ Return expectations / performance fees 	<ul style="list-style-type: none"> ▪ Credit & Currency Limits 	<ul style="list-style-type: none"> ▪ Sub-asset classes ▪ Credit exposure by ratings ▪ Concentration / Liquidity / Currency exposures 	<ul style="list-style-type: none"> ▪ P&C Underwriting 	<ul style="list-style-type: none"> ▪ Permitted classes / occupancies ▪ Underwriting limits (gross & net of reinsurance) ▪ Company / Agents' / Distributors' underwriting power 	<ul style="list-style-type: none"> ▪ Life Underwriting 	<ul style="list-style-type: none"> ▪ Underwriting limits per risk (net & treaty limits) ▪ Company / Agents' / Distributors' underwriting power 	<ul style="list-style-type: none"> ▪ Product Approval 	<ul style="list-style-type: none"> ▪ Match customer needs / Sales force training ▪ Supports commercial & marketing strategy ▪ Product economics and volumes 	<ul style="list-style-type: none"> ▪ Structure 	<ul style="list-style-type: none"> ▪ Framework enabling documents requiring companies to formalise internal limits cascade ▪ Fully documented limits / Personal accountability ▪ Enforced, with process for prior approval of exceptions
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Internal Risk Reporting 22

OBJECTIVE: Provide Group Risk Committee with comprehensive risk position and risk profile of entire group on a timely basis	<ul style="list-style-type: none"> ▪ Investments <ul style="list-style-type: none"> ▪ Asset allocation (equity, real estate, durations) ▪ Credit, Concentrations & Currency exposures ▪ Alternative investments ▪ Derivatives ▪ Strategic Participations
	<ul style="list-style-type: none"> ▪ P&C Insurance <ul style="list-style-type: none"> ▪ Risk retentions (by line of business/company) ▪ Treaty reinsurance protections
	<ul style="list-style-type: none"> ▪ Life Insurance <ul style="list-style-type: none"> ▪ Per risk mortality retentions and autonomy (by company) ▪ New business financial guarantees (by company)
	<ul style="list-style-type: none"> ▪ Solvency <ul style="list-style-type: none"> ▪ Risk heat map (bottom-up) ▪ Group & local company economic solvency ▪ Distribution of excess capital (bottom-up)
	<ul style="list-style-type: none"> ▪ Risk Compliance <ul style="list-style-type: none"> ▪ Risk Report detailing process, methods and gap analysis ▪ Breach of limits ▪ Approved Limit exceptions



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External Risk Reporting 23

<p>OBJECTIVE:</p> <p>Aid greater comparability of quantitative and qualitative risk and capital disclosures</p>	<ul style="list-style-type: none"> ▪ General principles 	<ul style="list-style-type: none"> ▪ Relevant; ▪ Timely; ▪ Accessible without due costs; ▪ Comprehensive and meaningful; ▪ Reliable; ▪ Comparable; ▪ Consistent over time
	<ul style="list-style-type: none"> ▪ Coverage 	<ul style="list-style-type: none"> ▪ Description of risks and exposures ▪ Approach to modelling and diversification ▪ Solvency ▪ Reconciliation to accounting disclosures
	<ul style="list-style-type: none"> ▪ Risk Governance Framework 	<ul style="list-style-type: none"> ▪ Appropriate management oversight (risk governance); ▪ Comprehensive and documented policies and procedures; ▪ Robust valuation / risk systems;



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Recent Strategic Initiatives linked to ERM
26

<p>Some of the value creating initiatives linked to capital and risk management</p>	<ul style="list-style-type: none"> Strategic Asset Allocation Life guarantees Strategic Strategic Planning 	<ul style="list-style-type: none"> Lengthen bond durations Disciplined risk-based approach to credit and equity exposure Introduced “at maturity” guarantees in Italy to replace “annual” guarantees in Italy Exit Group Life business in Switzerland Exit Industrial Risk market in Germany Exit London Market business Focus on value versus volume (2003-5) Focus on risk reward relationship (2006-8)
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