

Swiss Re



Enterprise Risk Management at Swiss Re

Dr. Peter Sohre
Managing Director, Risk Management
Swiss Reinsurance Company Ltd.

SWISS RE
150
YEARS



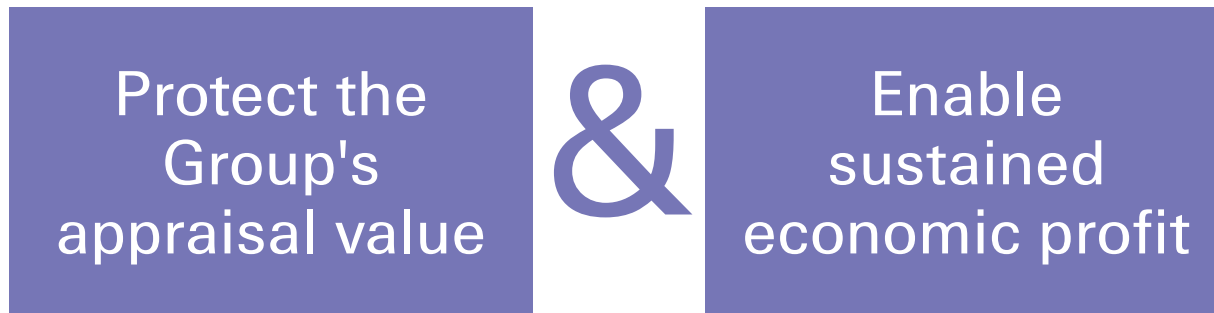
Agenda

- Enterprise Risk Management (ERM) – Our definition
- Risk Tolerance, Risk Appetite and Risk Limits
- Complexity of the Internal Risk Model
- ALM and Investment Strategies
- ERM and Strategic Decision Making

ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

Enterprise Risk Management

Principles established and **processes** executed to **systematically** and **comprehensively** address risks (threats and opportunities) **across all functions** in order to:





ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

Key tasks to enable sustained economic profit

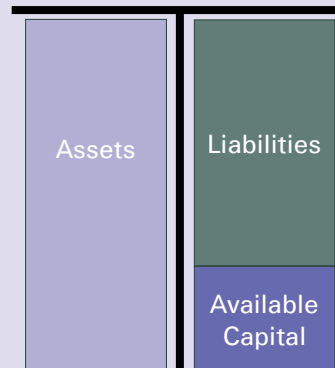
Capital and liquidity risk management

Four key control requirements of insurers ...

Insurer balance sheet

Ensure asset liquidity

Hold enough liquid assets to meet expected and unexpected liquidity requirements



Control diversification

Pool large number of sufficiently independent risks, to make aggregate claims more predictable

Ensure capital adequacy

Hold risk capital to absorb unexpected losses

Control ALM risk

Invest premiums and capital to match market risk of liabilities

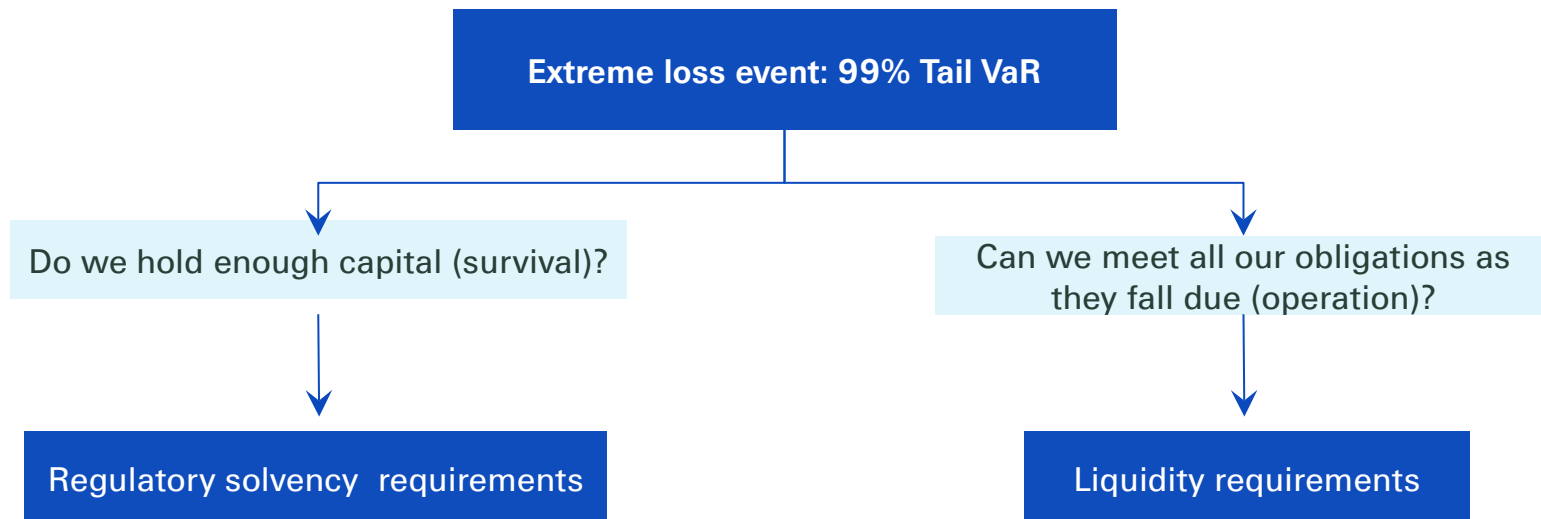
Risk tolerance

Basis for risk steering and limit setting

The **amount of risk** Swiss Re is willing to accept **within the constraints** imposed by its **capital and liquidity resources**, its **strategy**, its **risk appetite**, and the **regulatory and rating agency environment**

Objectives

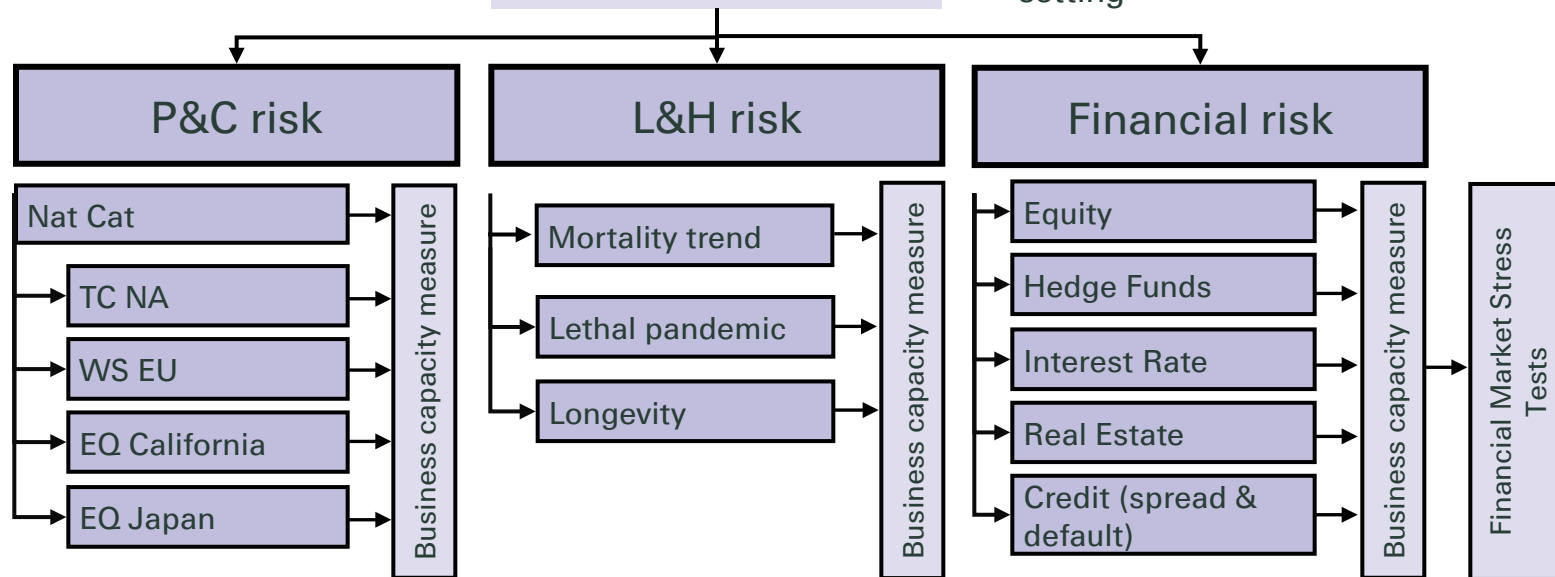
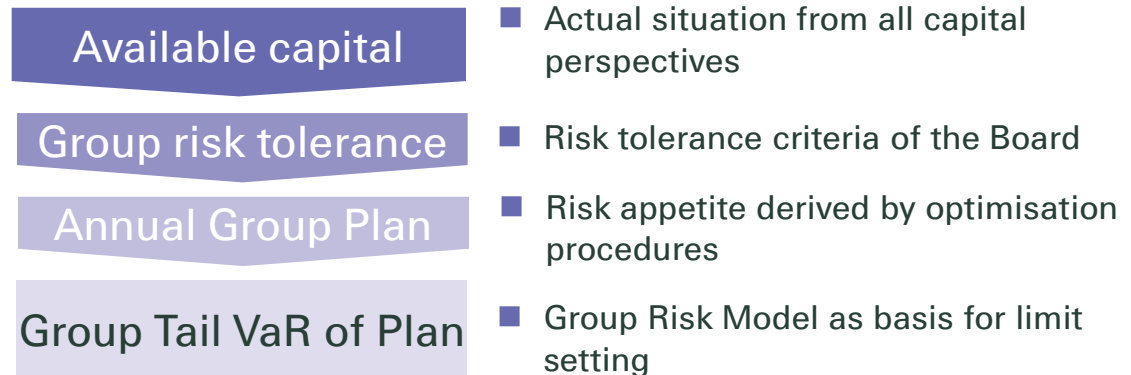
- Maintain capital and liquidity that are sufficiently **attractive from a client perspective**, and that **meet regulatory requirements** and expectations (respectability criteria)
- Be able to **continue to operate following an extreme loss event** (extreme loss criteria):



ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

Quantitative Risk Limit Framework

Translating risk tolerance into defined risk appetite



ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

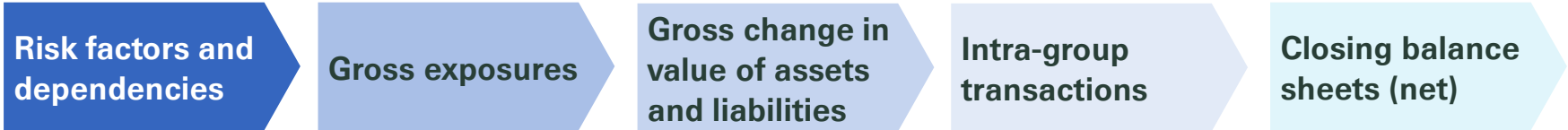
Swiss Re's internal model approach relies on various types of models

- Economic (market-consistent) valuation models for assets and liabilities
- Risk Factor models describing the uncertainty of the outside world over a one year time horizon
- Dependency models describing the joint behaviour of these risk factors
- Exposure models describing how economic values respond to realisations of the risk factors

➤ Swiss Re's modelling approach distinguishes risk and exposure to risk

Internal risk model

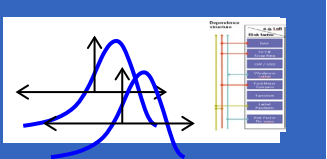
Capital assessment of Group and entities based on full bottom-up economic analysis



This calculation is performed for 1'000'000 **joint** realisations of all risk factors

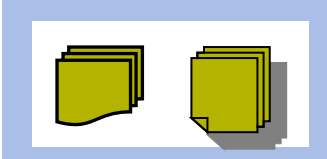
Distribution for each relevant risk factor

Dependency structure among risk factors



External world around Swiss Re

Exposures describing how economic values of assets and liabilities respond to realisations of risk factors



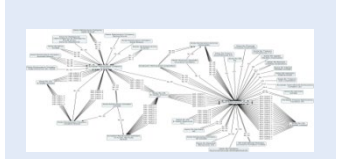
Swiss Re's link to the external world

Exposures are combined with risk factor realisations to obtain the change in value of assets and liabilities per realisation



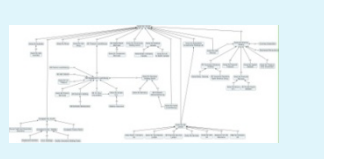
Impact of external world on Swiss Re's portfolios

All losses are ceded according to network of intra-group transactions and booked on the relevant balance sheets as profits or losses



Network of intra-group transactions

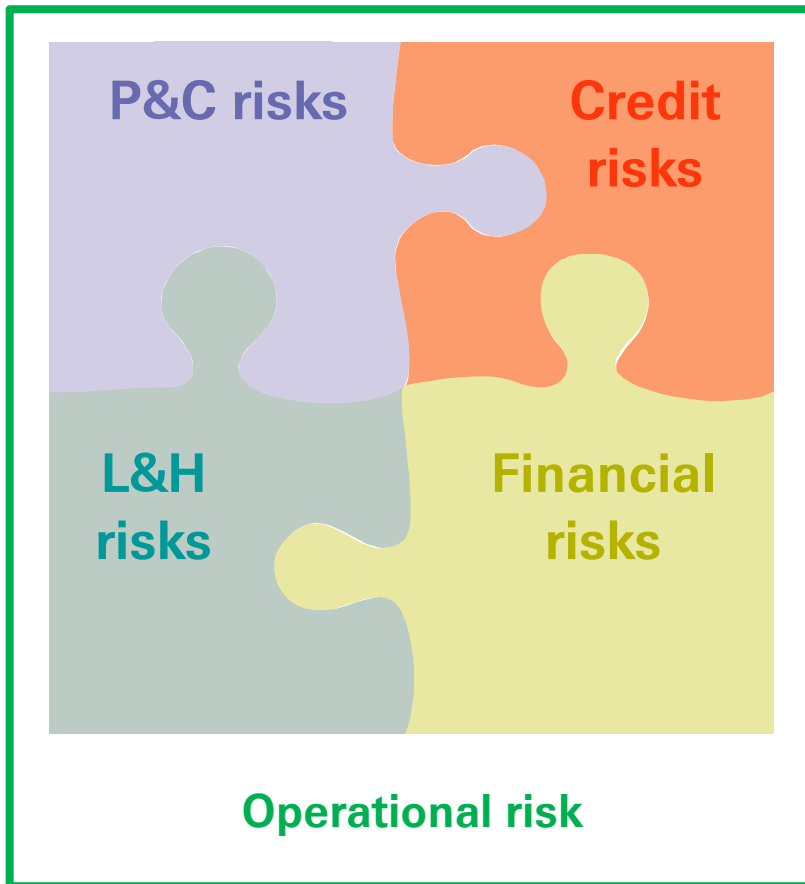
Economic net worth of all financial reporting entities is calculated including participation values



Network of legal entities belonging to the Group

Leading-edge internal model continuously enhanced to reflect changing risk environment

ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making



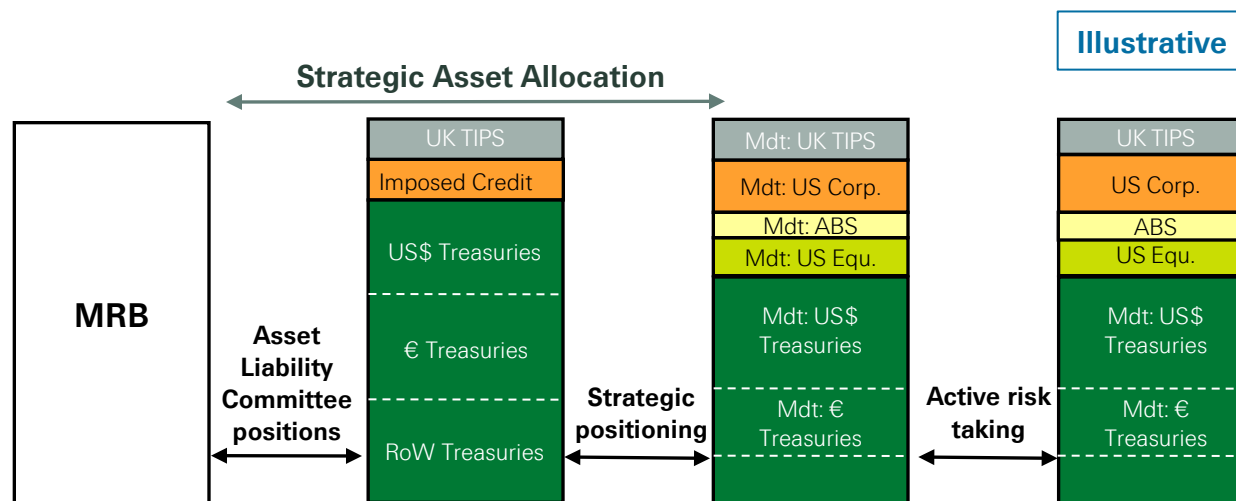
Time-tested expertise

- More than 15 years experience in integrated risk modelling
- Consideration of entity relationships and intra-group transactions
- Strong governance around model changes: any major model change needs to be approved at EC level by the Group Risk and Capital Committee
- External model reviews



ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

ALM and Investment Strategies based on our model framework



	Minimum Risk Benchmark	AM Reference Benchmark	Mandate Benchmark	Invested Portfolio
Description	Investment portfolio that minimises the firm's economic market risk	Investment portfolio driven by Group considerations	Aggregated investment benchmark of all investment mandates	Portfolios of invested securities according to investment mandates
Purpose	Split performance between underwriting and asset management activities	Separates Group capital and liquidity considerations from investment views	Reflects the SAA, at the same time benchmark for portfolio managers	Mandates to ensure compliance with legal entity investment guidelines

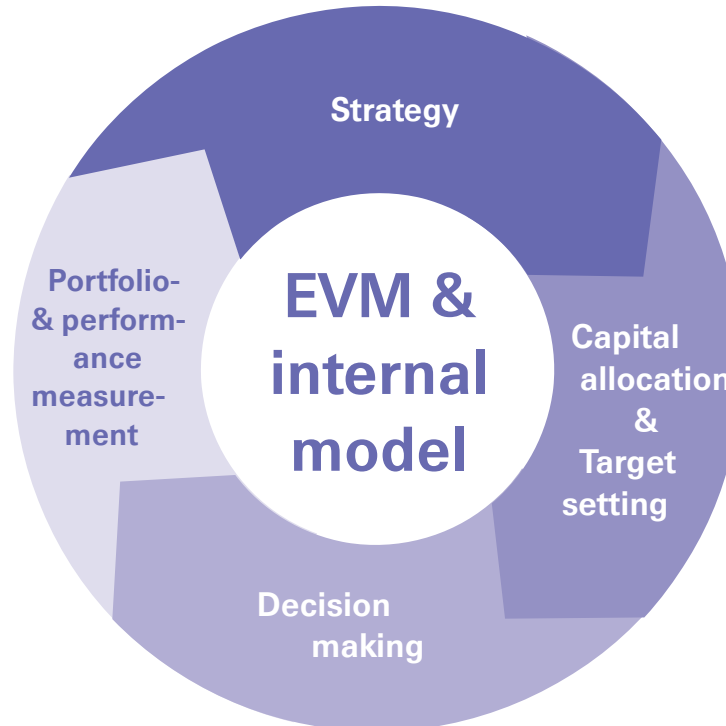
ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

Swiss Re's performance cycle

Risk management is embedded across the cycle

- Group risk policy
- Group risk tolerance

- Limit monitoring
- Accumulation control
- Reporting of changes in risk landscape
- Reserving
- Capital cost allocation



- Risk model input into optimization
- Testing of risk tolerance
- Limit framework

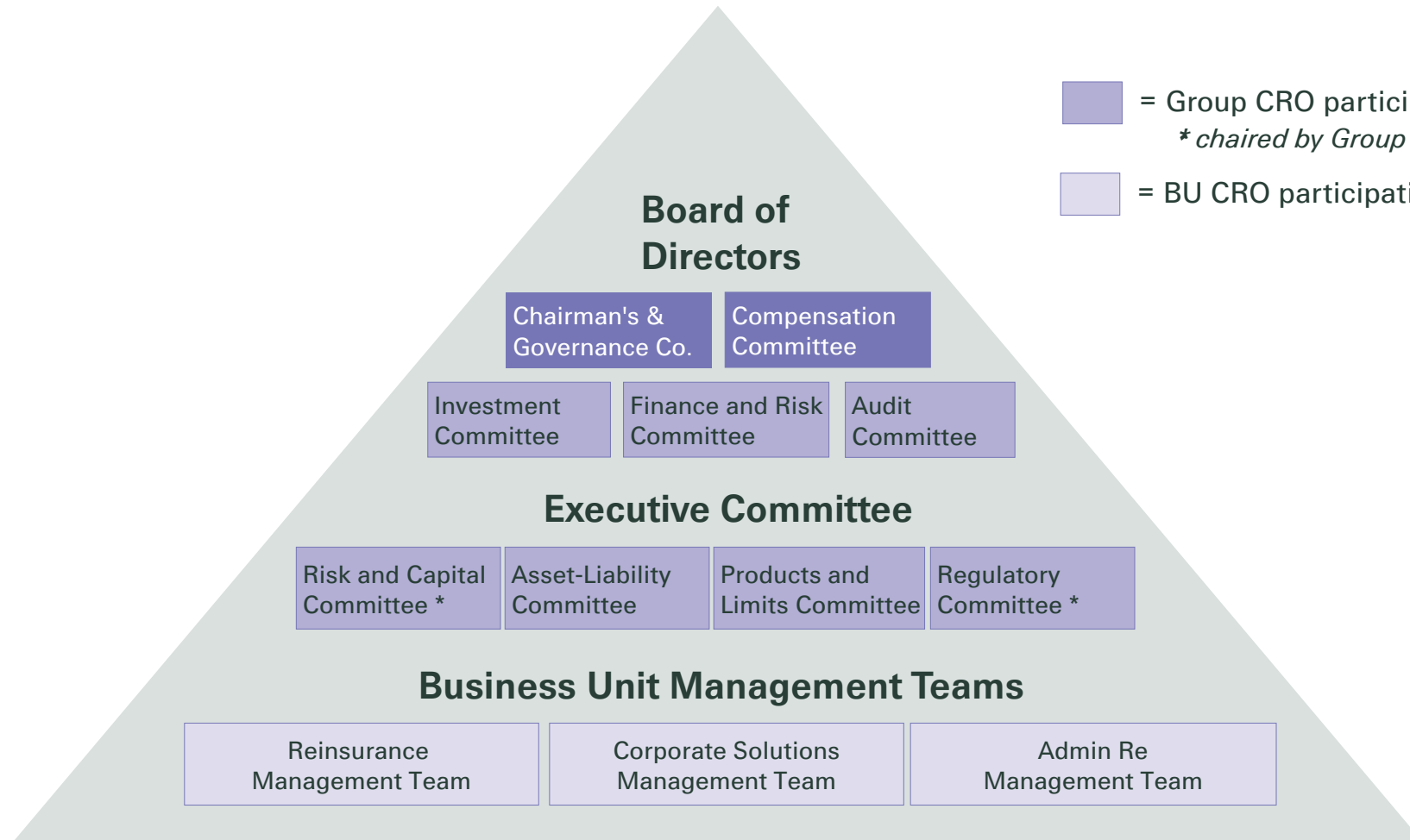
- Risk Management Standards
- Part of all decision making bodies concerned with risk taking
- Large transaction approval



ERM
Risk Tolerance
Internal Risk Model
Investment Strategies
Strategic Decision Making

Group Risk Governance

CROs participating in all risk-taking committees



Swiss Re



Thank you

SWISS RE
150
YEARS



Legal notice

©2013 Swiss Re. All rights reserved. You are not permitted to create any modifications or derivatives of this presentation or to use it for commercial or other public purposes without the prior written permission of Swiss Re.

Although all the information used was taken from reliable sources, Swiss Re does not accept any responsibility for the accuracy or comprehensiveness of the details given. All liability for the accuracy and completeness thereof or for any damage resulting from the use of the information contained in this presentation is expressly excluded. Under no circumstances shall Swiss Re or its Group companies be liable for any financial and/or consequential loss relating to this presentation.