Capital management, capital allocation and the demand for insurance and reinsurance

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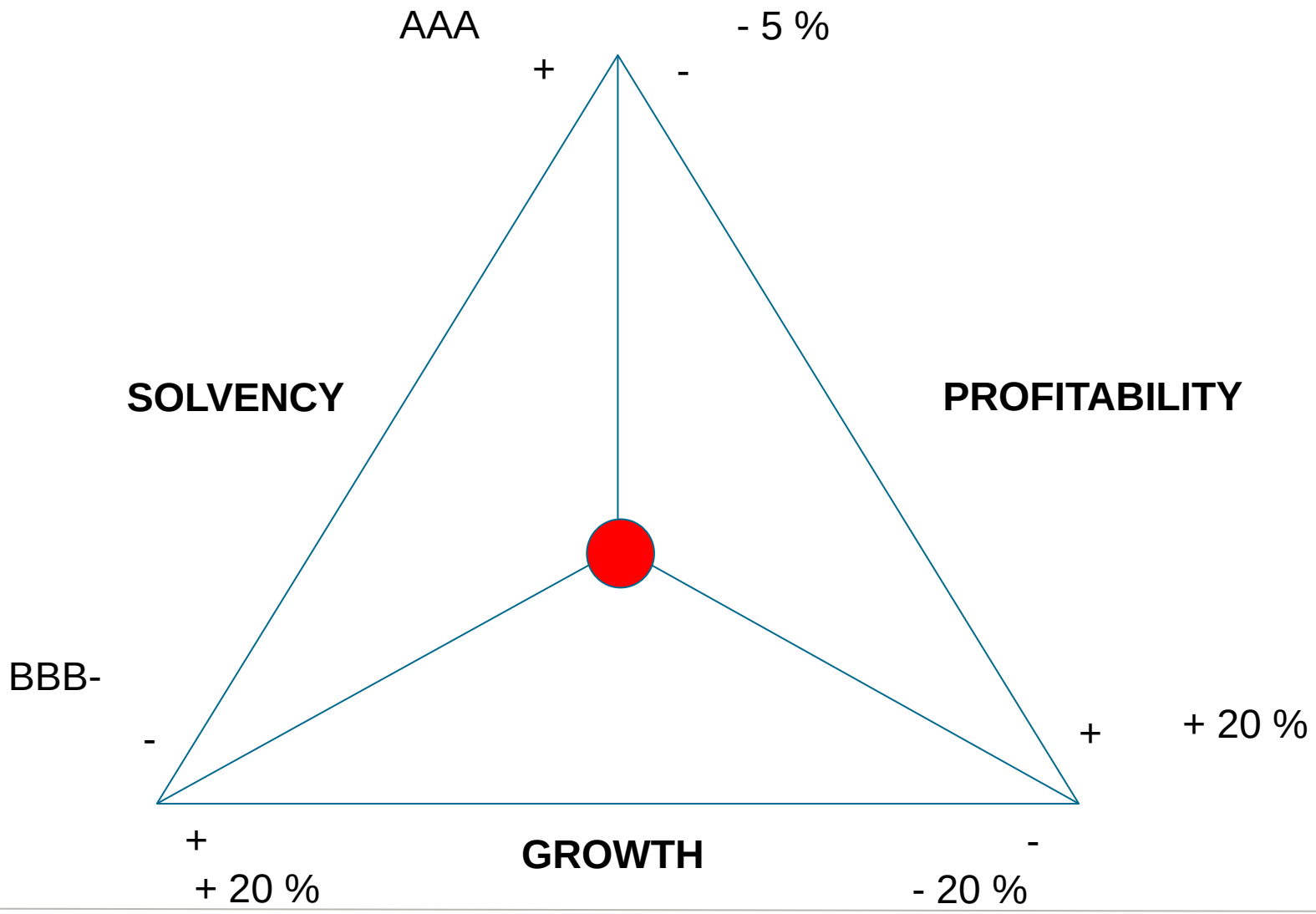
SCOR

Capital management, capital allocation and the demand for insurance and reinsurance

Theme	Speaker
Regulatory developments and adequacy of the capacity offered on the market and the demand for insurance and reinsurance	**Richard Ward** **CEO of Lloyd's**
How can (re)insurers best raise capital? Is the industry doing enough to make it relevant for investors?	**Mike Mc Gavick** **CEO of XL Group**
The impact of Solvency II on S&P's capital models, ratings and processes, and its wider implications on the credit rating agency business	**Dominic Crawley** **Global Head of Financial Services Ratings** **Standard & Poor's**
Managing the capital of a (re)insurance group today: internal, regulatory and rating agency models and their impact on business decisions	**Michel Liès** **CEO of Swiss Re**

Capital stands at the confluence of seemingly conflicting objectives



Managing the capital of a (re)insurance company is all about optimizing under constraints

- Capital management and allocation must meet **a series of constraints** that can be expressed in terms of “risk tolerances”

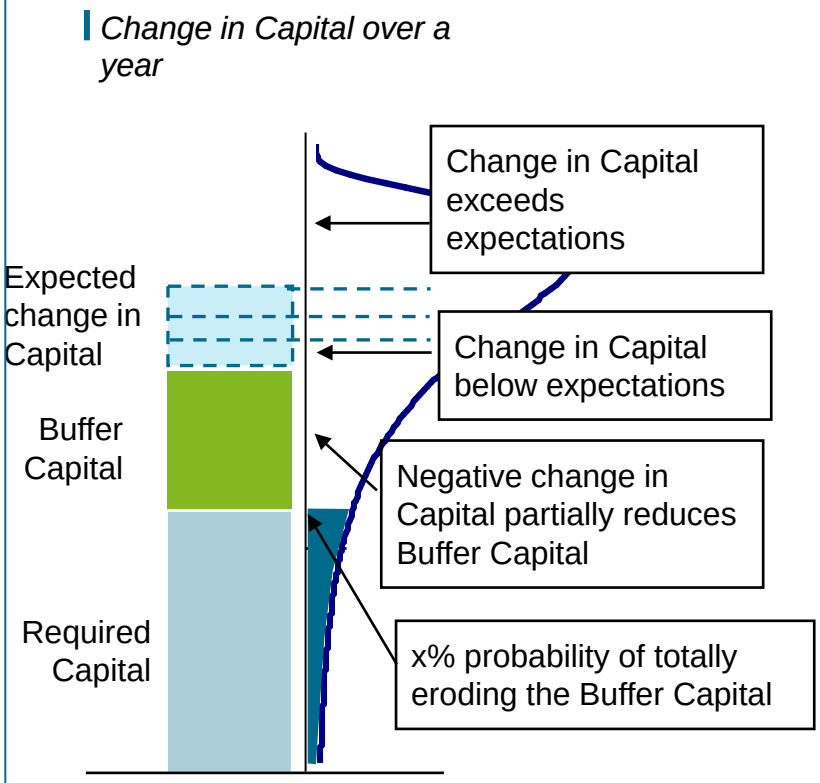
- A few examples of **risk tolerances**:
  - Probability of shareholders’ equity being wiped out must be < X
  - Probability of regulatory capital (i.e. SCR under Solvency 2) being dented must be < X
  - Limits per extreme scenario, per LOB and per individual risk:
    - Amount of losses for each extreme scenario must be < X% of the total available capital
    - 95% xtVaR for each LOB must be < X % of the total available capital
    - Maximum loss for each single risk must be < X million euros

- At first glance, **managing capital may appear to only consist in minimizing capital (or maximizing risks) while respecting the risk tolerances**

- But **capital optimization can create value** by increasing expected returns for a given level of risk

One typical “risk tolerance” relates to the probability of the Available capital falling below the Required capital level

The Buffer capital reduces the probability of denting the Required capital

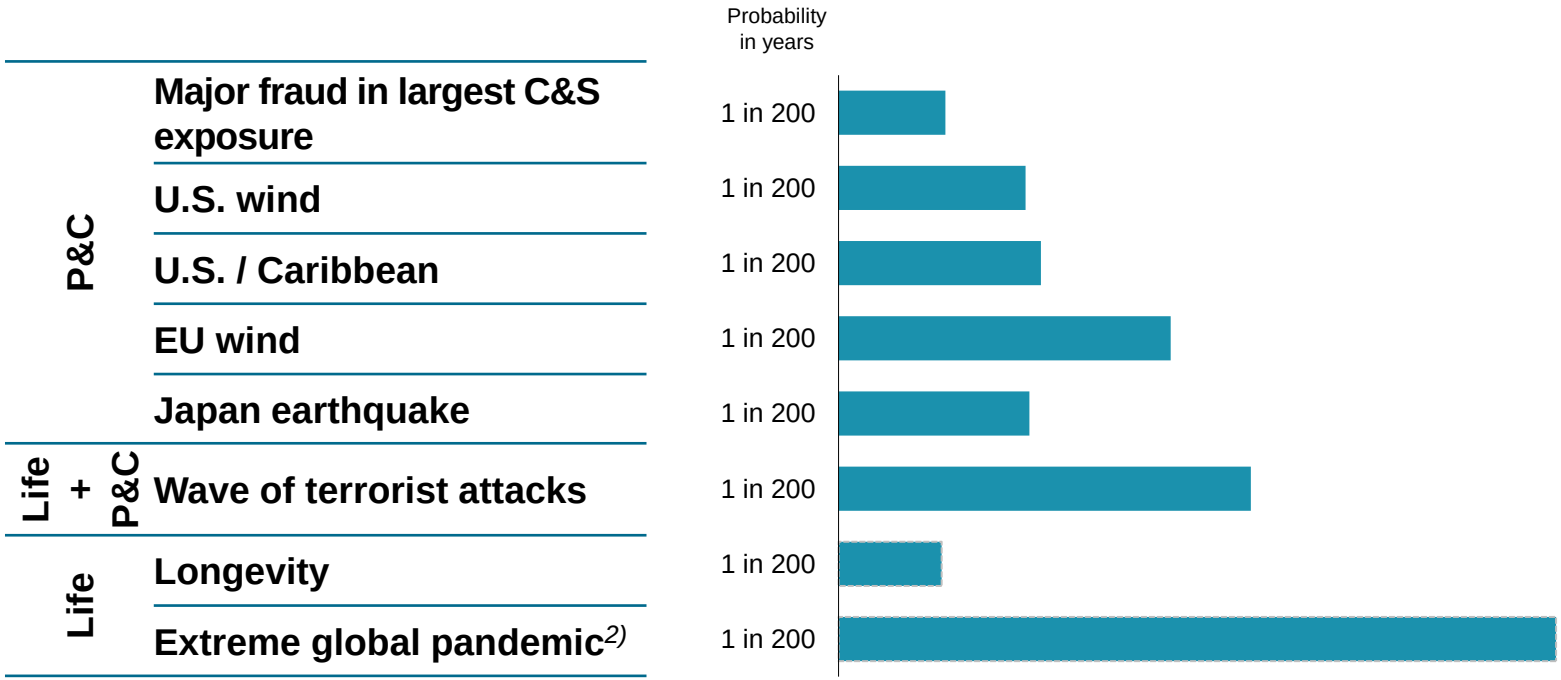


- **Required capital** is determined according to regulatory constraints (ex.: Solvency II)
- **Buffer Capital** enables the company not to fall below the level of Required Capital with a probability higher than x%
- **Target Capital** = Required Capital + Buffer Capital

Source : SCOR internal model

Another typical “risk tolerance” relates to the impact of extreme scenarios on the available capital

Extreme scenarios can generate considerable losses



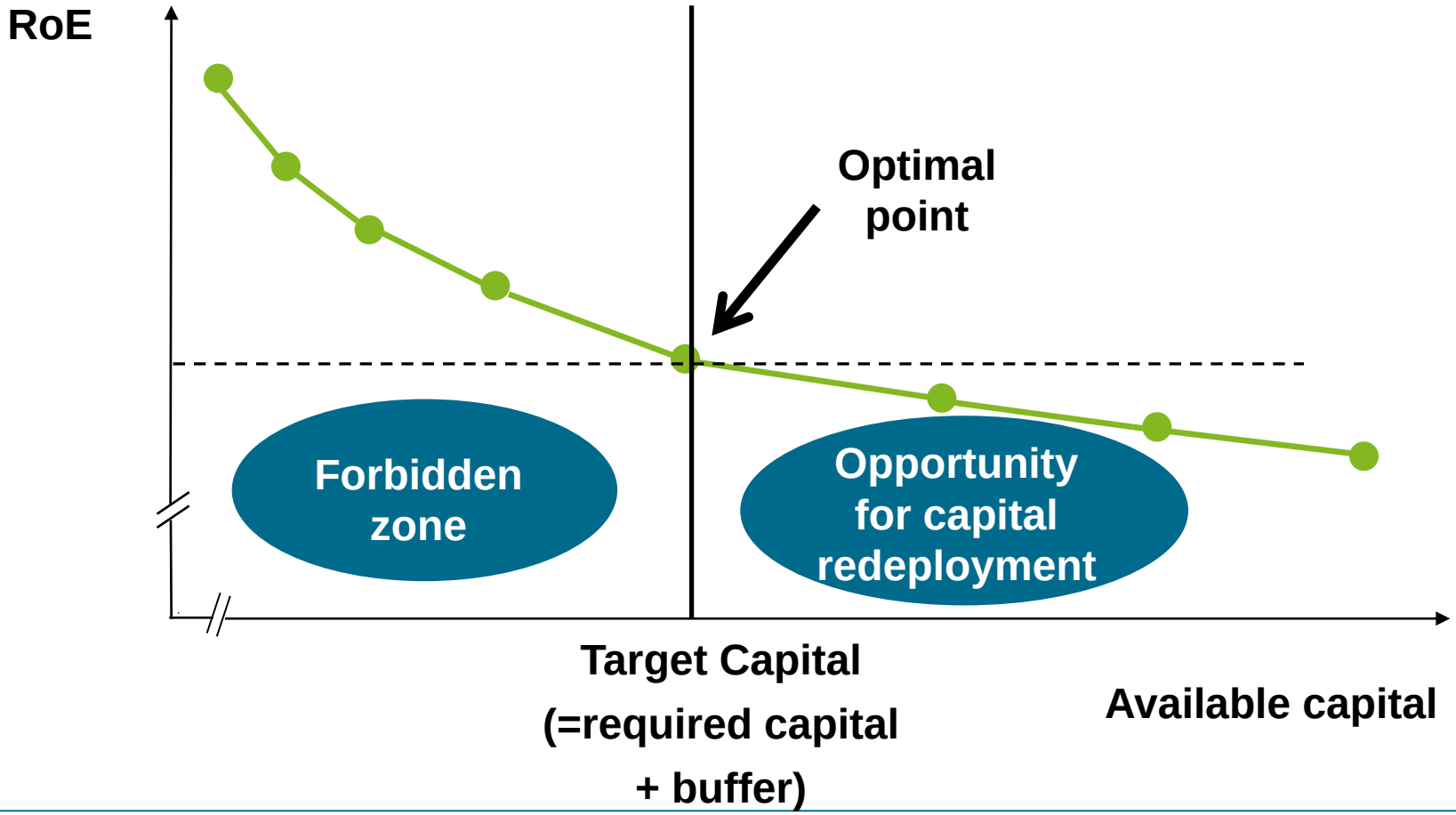
- A (re)insurer would typically decide that the amount of losses for each extreme scenario must be < X% of the total available capital

Source : SCOR internal model

Risk tolerances are subjective

At first glance, managing capital may appear to only consist in minimizing capital (or maximizing risks) while respecting the risk tolerances

The expected ROE is very sensitive to the amount of Available capital

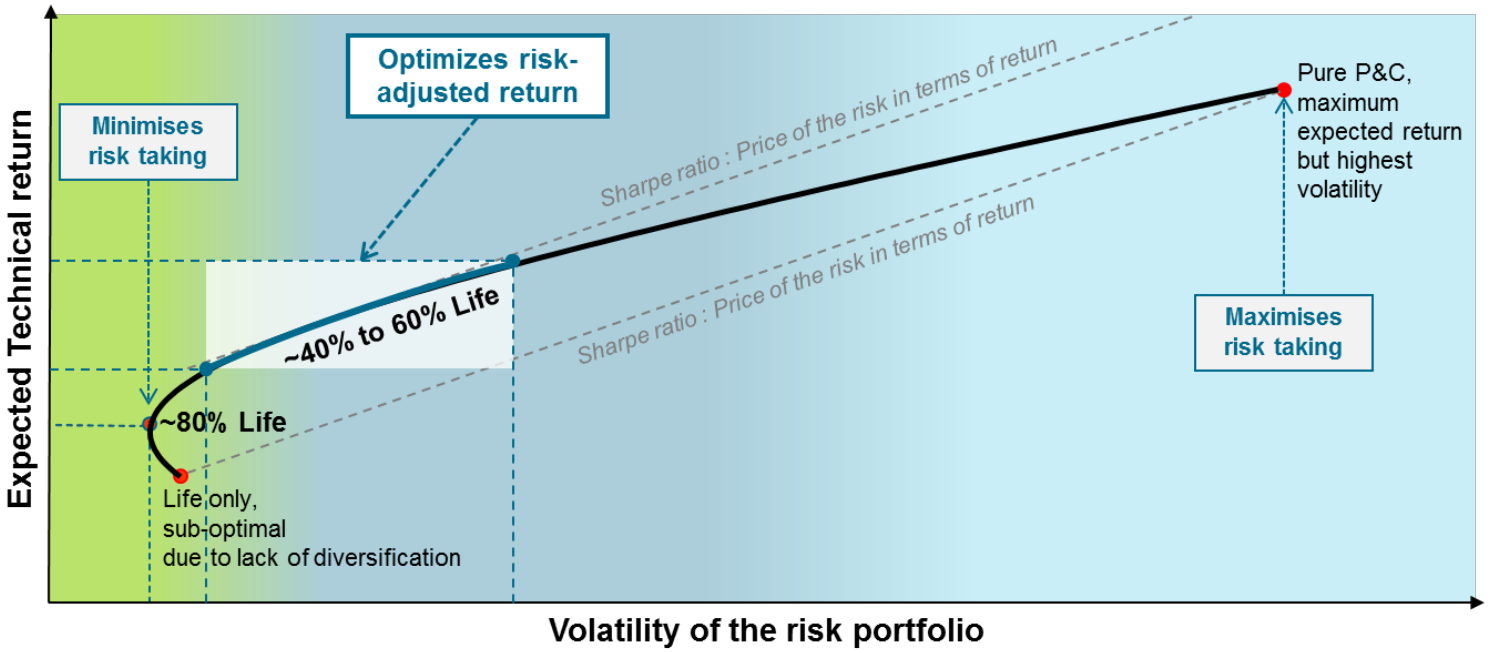


Source : SCOR internal model

But capital optimization can create value (1)

One way of optimizing capital is to reduce capital needs

- Full integration of capital needs in **pricing and business decisions** (including asset allocation)
- Special attention paid to **capital-intensive** LOBs
- Recourse to **reinsurance, retrocession and ILS** to minimize capital needs
- **Diversification** by region and by LOBs (notable Life and Non-Life):



Stylized representation of the expected technical return and volatility of the portfolio of a multi-line reinsurer as a function of the relative weights of P&C and Life business

Capital optimization can create value (2)

Diversifying capital sources provides additional flexibility

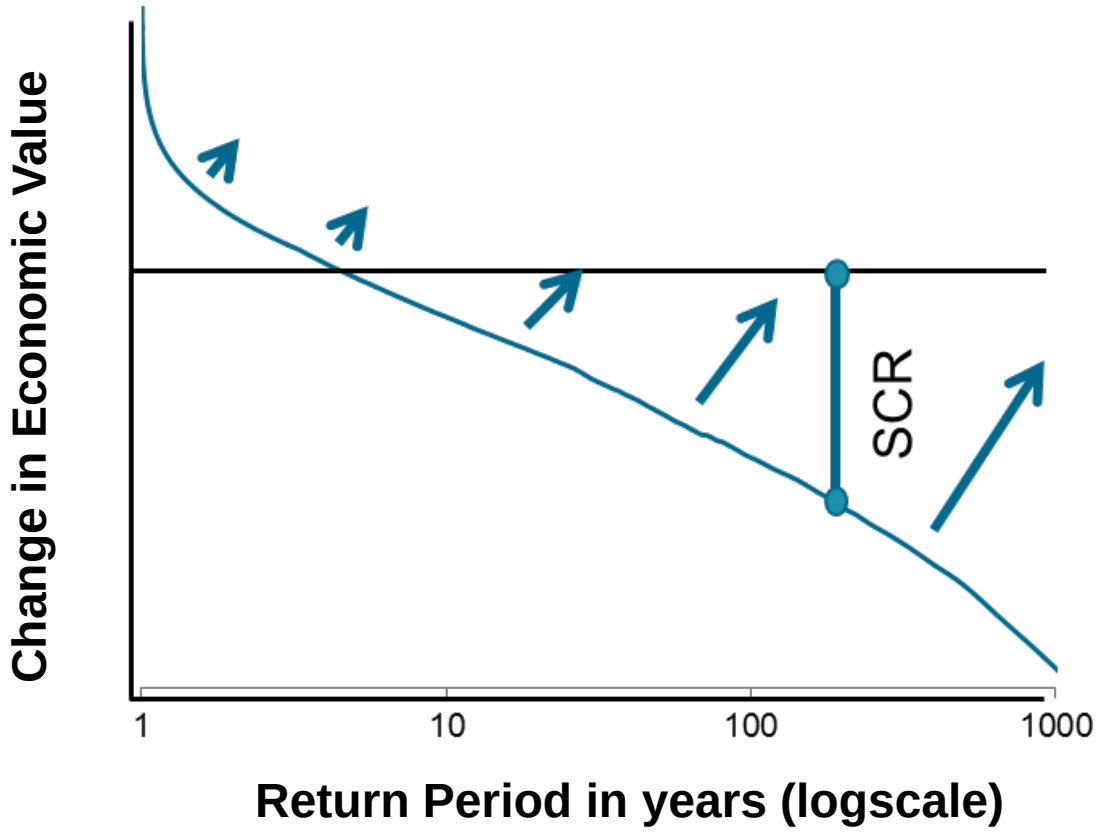
	Advantages	Constraints
Hybrid debt	Lower cost than equity	Financial leverage & Interest coverage ratio
Contingent capital	Lower cost than equity	Shareholder dilution if triggered

Fungibility is key in order to make the Available capital really… available

- Specific regulatory constraints put fungibility under strain:
  - **Capital and collateral requirements** at legal entity level
  - **Treatment of branches** in some jurisdictions
- Fungibility management is key for reinsurance companies
  - Reduction in the number of legal entities (**branches, Societas Europaea** status, etc.)
  - **Internal retrocession**

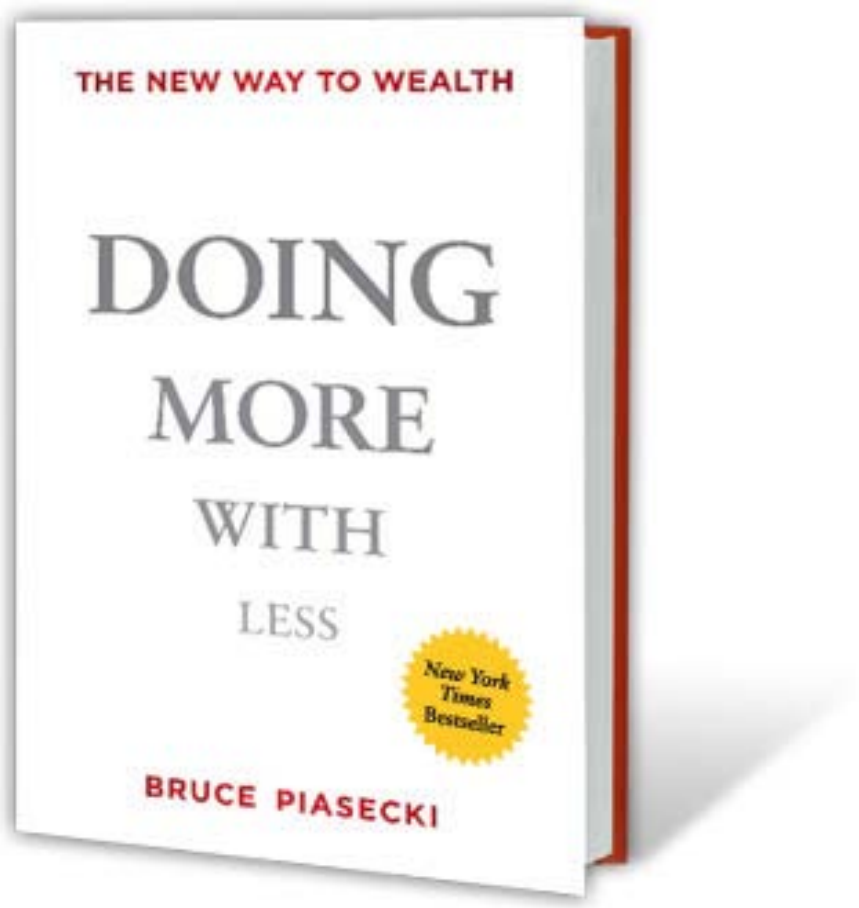
Capital optimization allows for higher expected returns for a given level of risk

Capital optimization results in a better risk/return profile



Curve based on SCOR internal model

The new way to wealth for (re)insurers…



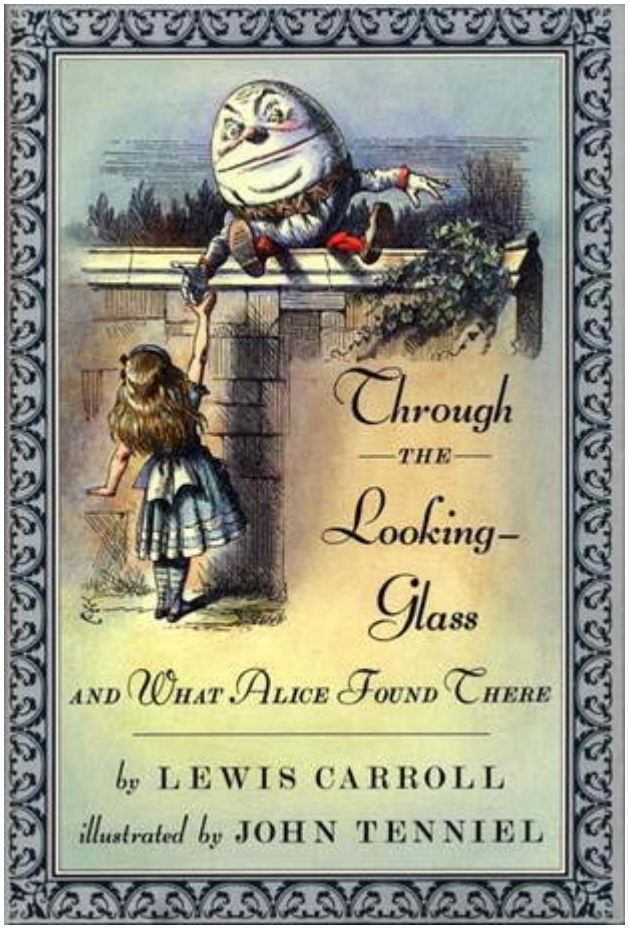
By the way, what do you call “capital”? (1)

- Regulators, Rating Agencies, Auditors and Analysts all have different definitions of “Capital”
  - Auditors focus on **IFRS equity**. Analysts sometimes use **IFRS tangible equity**
  - Regulators (under Solvency II) and Rating agencies are adjusting IFRS balance sheets to obtain “**Economic Capital**” under their own definitions

Examples of different approaches to Capital according to different solvency frameworks

	IFRS	Solvency I		Solvency II (Internal Model)		S&P model		AM Best (BCAR)	
		Available Capital	**Required Capital**	**Available Capital**	**Required Capital**	**Available Capital**	**Required Capital**	**Available Capital**	**Required Capital**
Cat Risk Charge		No Cat charge			Capital Charge based on **1 in 200Y net PML**		Capital Charge based on **1 in 250Y net PML**	reduction in surplus of max (**100-year wind; net PML, a 250-year earthquake net PML, recent large loss)**	
Life Future Profit	VOBA / DAC	No credit to VOBA/DAC nor VIF		100% of VIF		50% of PVFP (incl. cost of capital)		50% of VIF	
Risk Margin		NA		Deduction of Life and P&C risk margin		NA		NA	
Diversification			No diversification		**Internal Model:** • Complex dependencies modelling (copulas) **Standard Formula:** ▪ Covariance formula		▪ Covariance formula ▪ 50% haircut applied		Covariance formula

By the way, what do you call “capital”? (2)



"When *I* use a word," Humpty Dumpty said, in rather a scornful tone, "it means just what I choose it to mean—neither more nor less."

"The question is," said Alice, "whether you *can* make words mean so many different things."

"The question is," said Humpty Dumpty, "which is to be master - that's all."

Convergence is badly needed

- … in order to reduce the **administrative burden and costs** generated by conflicting definitions
- … in order to reduce the **economic inefficiency** generated by duplicative constraints that make economic optimization difficult
- Giving **a bigger role to internal models** (notably rating agency models) would be a way of achieving this
- Ultimate goal: **to align external reporting and compliance metrics with the metrics** that management uses daily to make decisions

Solvency II and S&P – the first kiss may be some time…

Appendices

New regulations imply a far more elaborate vision of capital

Banking

Basel 1: 1988 | **Basel 2: 2007** | **Basel 2.5: 2010** | **Basel 3: 2013**

Basel 1

_ basic quantification of risks

Basel 2

_ 3-pillar approach (minimum capital requirements, supervisory review, market discipline)
_ quantification of market risk (based on VaR) and operational risk

Basel 2.5

_ increased capital requirements on traded market risk
_ stressed VaR to take into account stressed market conditions

Basel 3

_ increased quality of capital (focus on core Tier one)
_ focus on counterparty risk
_ countercyclical buffers
_ additional rules for SIFIs
_ liquidity and leverage ratios

Insurance

Solvency 1-2004-2013 | **Solvency 2: 2014**

Solvency 1

_ basic quantification of risks

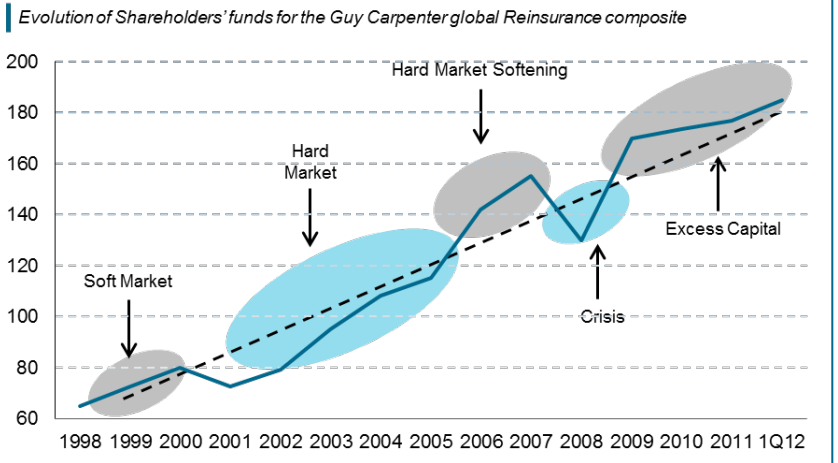
Solvency 2

_ 3-pillar approach (capital requirements, governance, disclosure)
_ detailed risk-based calculation of required capital taking into account diversification benefits and internal models

Source: Factset as of 6 September 2012

Too much capital in the reinsurance industry?

At first glance, the reinsurance industry could appear overly capitalized…



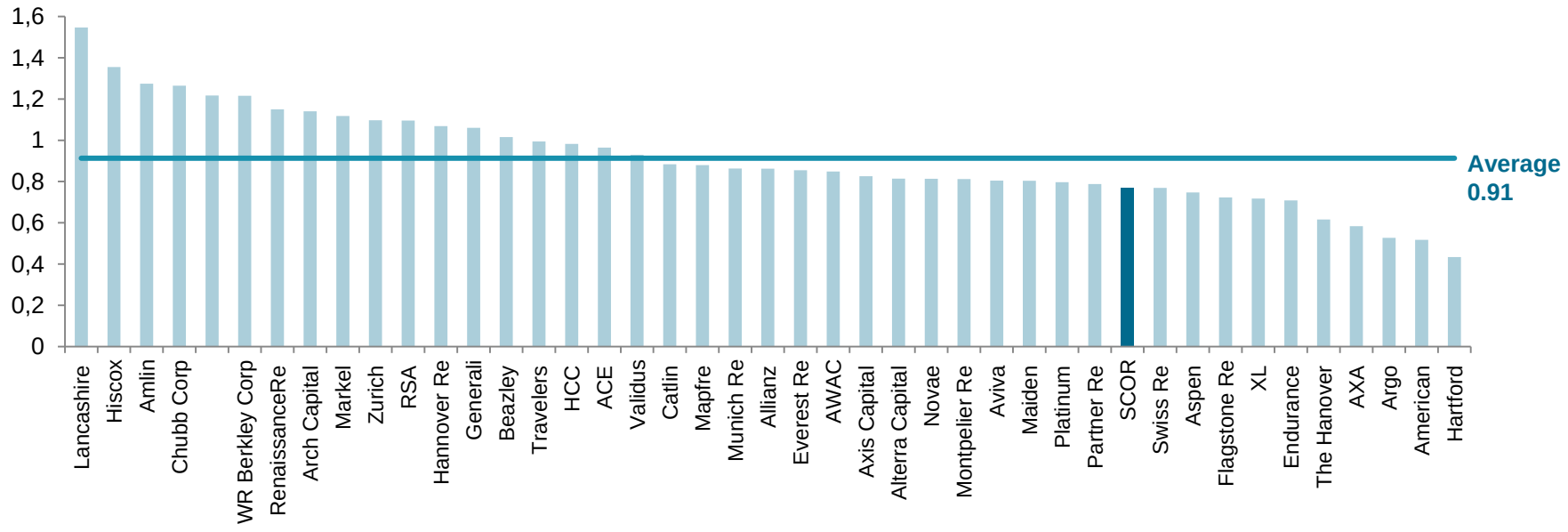
… but the reality is more complex

- Markets are increasingly **fragmented**.
- Not all capital is put to work. **Working capacity** is more stable than overall capital.
- **Non-traditional market capacity** (cat bonds, collateralized reinsurance, retrocession, ILW, etc.) plays a role in certain markets.
- **1 euro of capital** today does not cover the same amount of risks as yesterday:
  - 2011 Cat events have led reinsurers to **re-assess their real exposures**: more capital is needed to cover certain risks.
  - Conversely, increased sophistication leads to **capital optimization** and to a less intensive use of capital

Source: Guy Carpenter

Does the amount of capital in the reinsurance industry allow adequate returns for shareholders?

On average, (re)insurers trade below book value



Sell-side analysts reckon that the industry is underpriced by the markets

	Average recommendation from sell-side analysts
BUY	70%
HOLD	30%
SELL	0%

Source: Factset as of 6 September 2012