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Playing with fire -

Insurance & Sustainability

Insurance / Strategy / SRI

Dual role of insurers: underwriters & asset managers

- insurance companies' sustainability balance

Assets (investment side)

Climate change

Market reactions to major loss events; economic costs; MVaR

Genetic engineering

The case of Monsanto, biotech stocks

Geopolitical risks

Market reactions to the terrorist attacks of 11th September; overreactions, herd mentality

Liabilities (claims side)

Climate change

Losses resulting from natural catastrophe: Tenfold increase since the 1950s

Genetic engineering

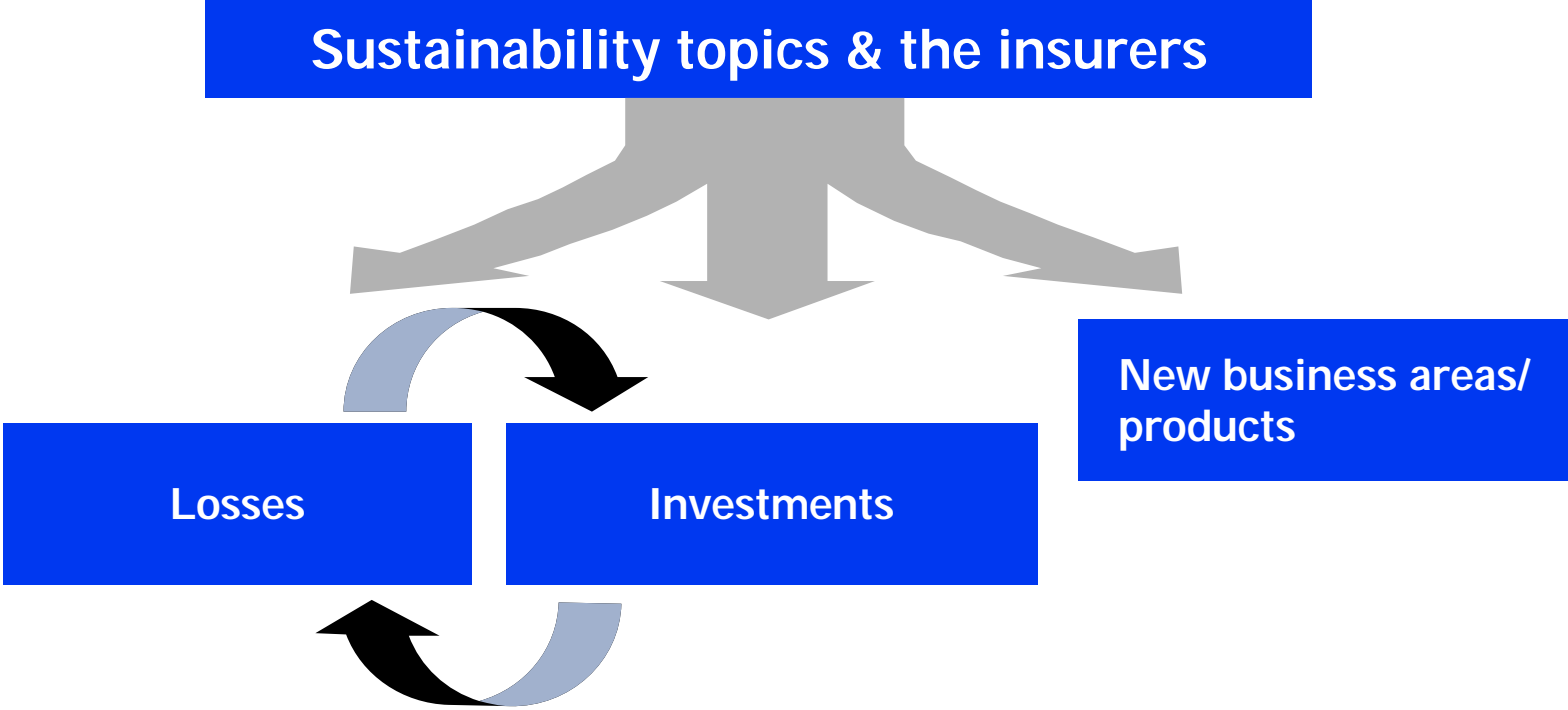
Genetic testing improves pricing & Risk selection

Geopolitical risks

WTC attack led to underwriting losses worth around \$20bn

Structure of the UNEP FI study

TRIPLE-PILLAR STRUCTURE & DUAL INTERDEPENDENT EXPOSURE



SRI performance: “It pays off to be good”

$$r_{P,t} - r_{f,t} = \mathbf{a}_P + \mathbf{b}_{P,M} \cdot (r_{M,t} - r_{f,t}) + \mathbf{b}_{P,Value} \cdot (r_{V,t} - r_{G,t}) + \mathbf{b}_{P,Size} \cdot (r_{Small,t} - r_{Large,t}) + \mathbf{e}_{P,t}$$

Regression result multi-factor model (OLS estimates, t-values in brackets)

	Old result (01/99 – 10/02)	Overall period (inc. retrospective bias) (01/99 – 08/03)	Since start of index (10/01 – 08/03)	Since peak of speculation bubble (03/00 – 08/03)
Alpha	0.1706* (1.736)	0.2572*** (2.989)	0.2521** (2.507)	0.3156*** (2.817)
Market beta	1.0248 (68.925)	1.0361 (80.781)	1.0464 (85.275)	1.0404 (72.615)
Size beta	-0.2436 (-8.707)	-0.2299 (-9.023)	-0.1543 (-3.862)	-0.2423 (-7.833)
Value/growth beta	0.1020 (5.594)	0.0968 (5.488)	-0.0178 (-0.509)	0.0661 (2.050)

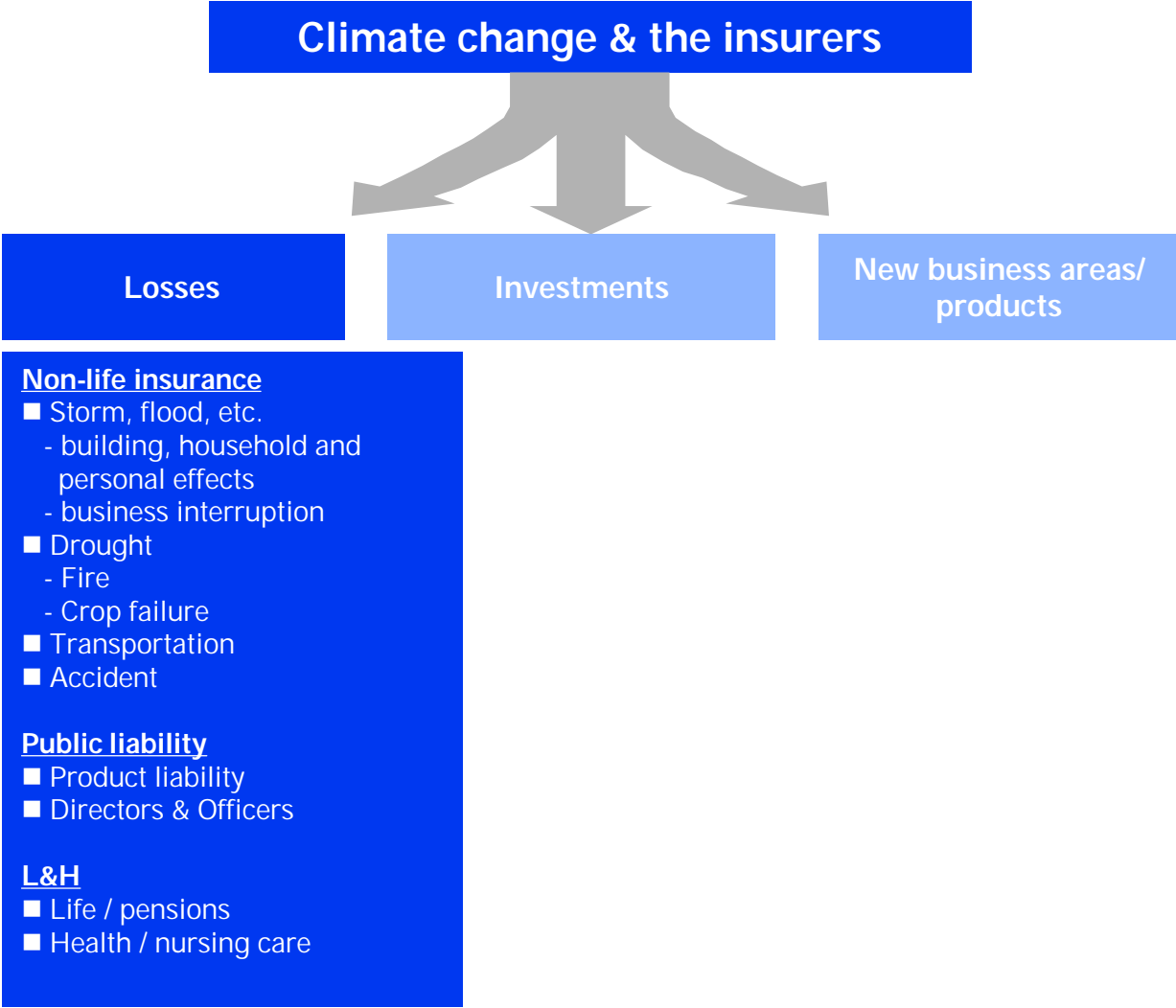
* = 10% level, ** = 5% level, *** = 1% level

Source WestLB Equity Markets

- Individual examples, theoretical considerations with regard to the elements driving shareholder value, but especially empirical analyses prove that sustainability is evidently an independent factor driving profitability.
- Our conclusion “It pays to be good” is therefore a call for the general introduction of a structured SRI approach to the insurers’ asset management.

Climate change & insurers- claims side

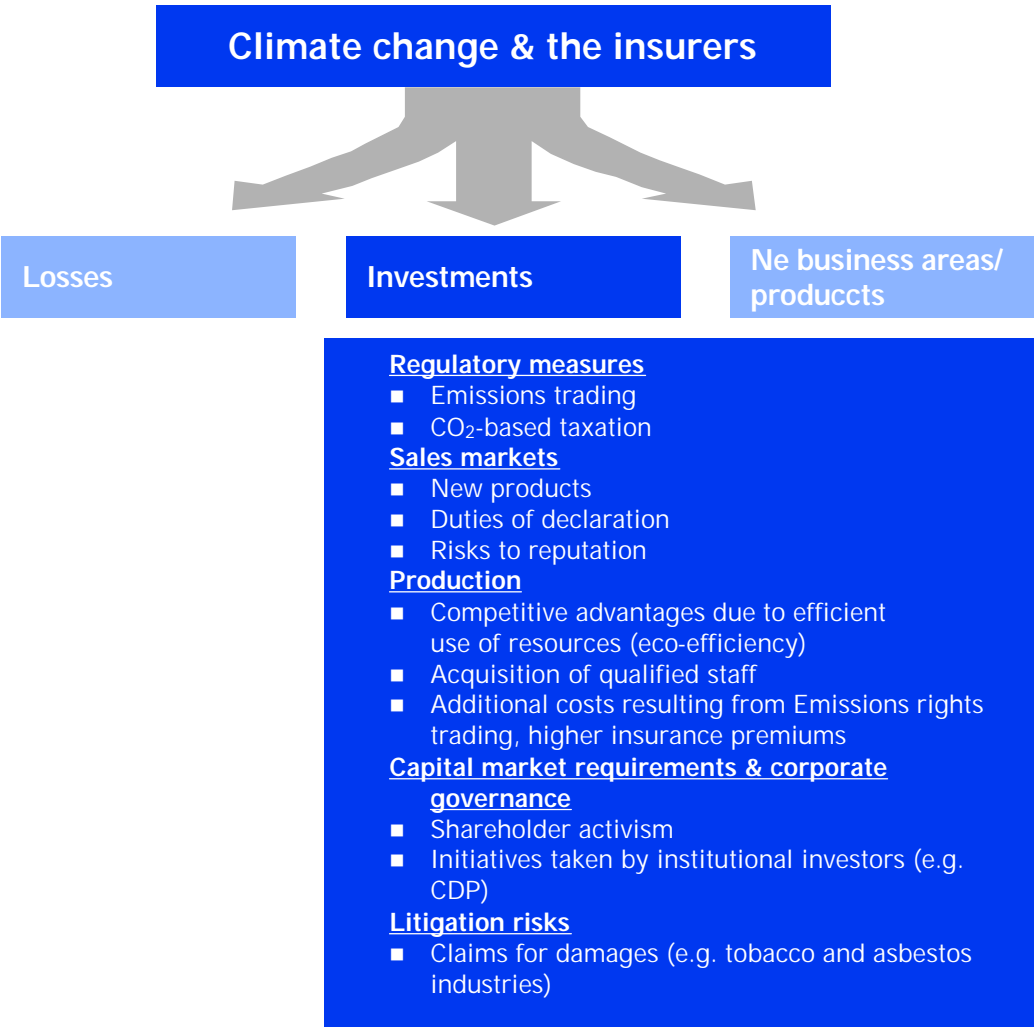
CLIMATE CHANGE AND REPERCUSSIONS ON THE CLAIMS PROCESS OF INSURANCE COMPANIES



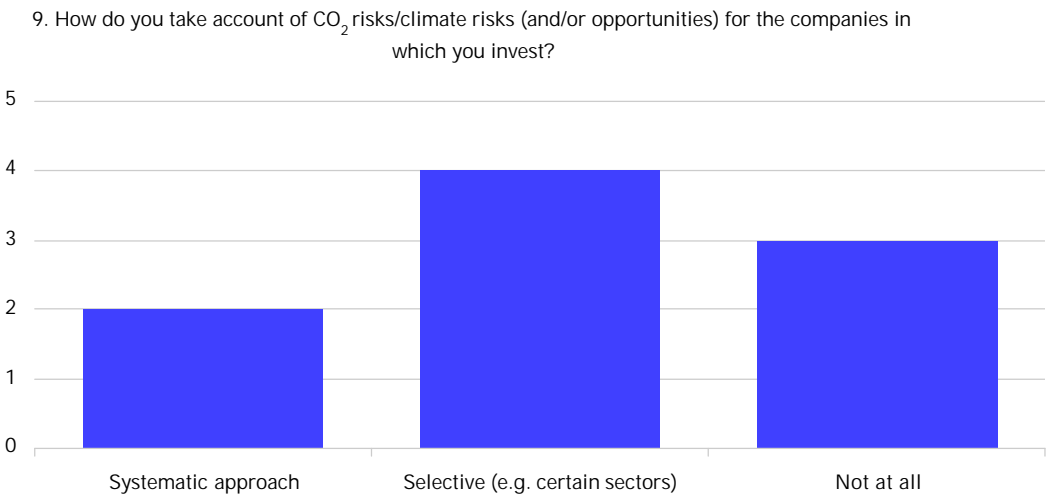
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Climate change and the insurers' investment business

CLIMATE CHANGE AND ITS REPERCUSSIONS ON THE INSURERS' CAPITAL INVESTMENTS



SURVEY – CLIMATE CHANGE AND CAPITAL INVESTMENTS

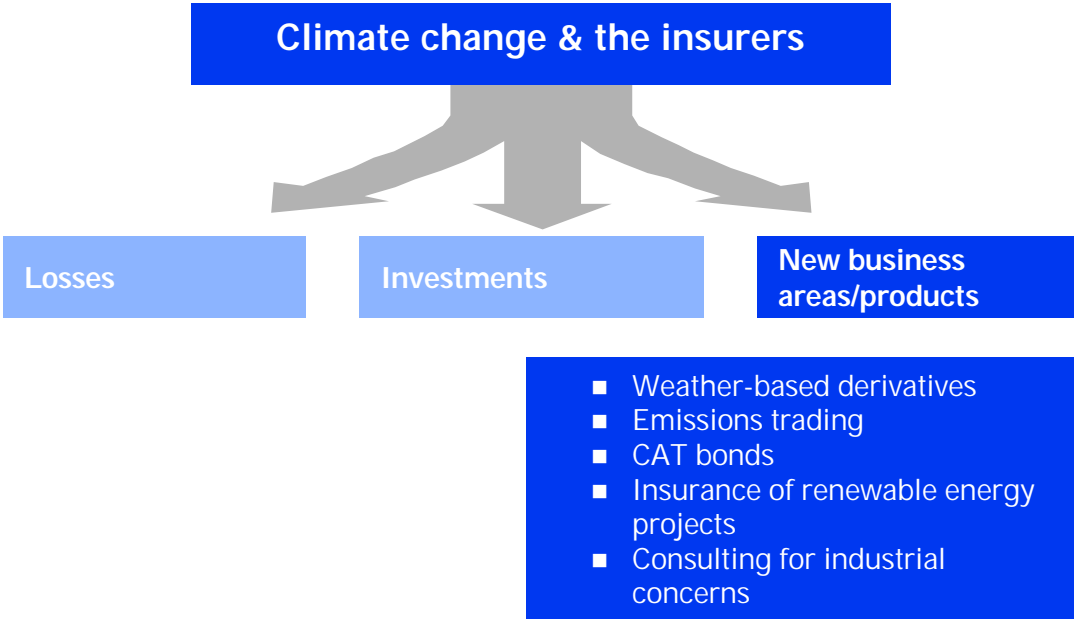


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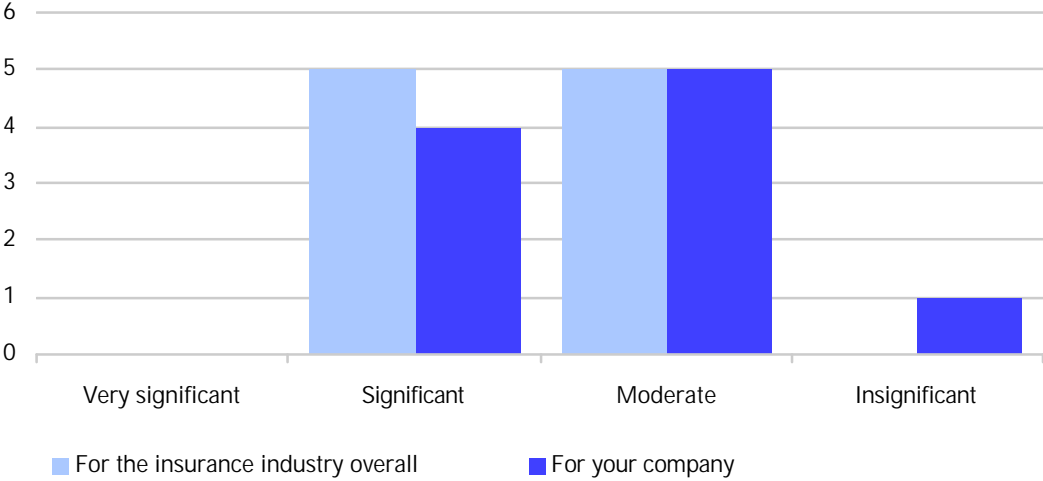
Climate change and impact on insurers' product business

CLIMATE CHANGE AND ITS REPERCUSSIONS ON INSURERS' PRODUCT SIDE



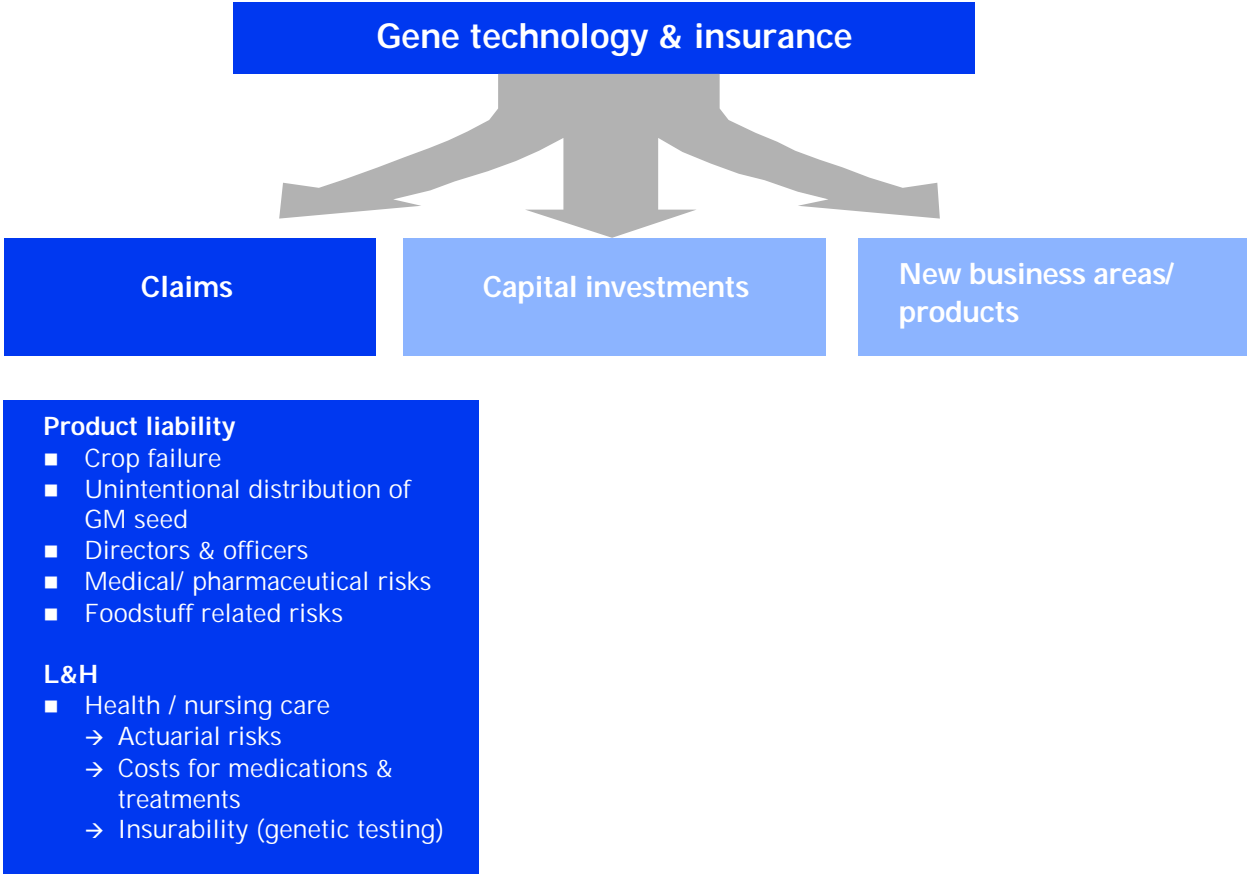
SURVEY – CLIMATE CHANGE AND THE PRODUCT SIDE

10. How do you assess the (growth) opportunities for new products/business lines arising from risks associated with climate change?



Gene technology & insurers - brave new world?

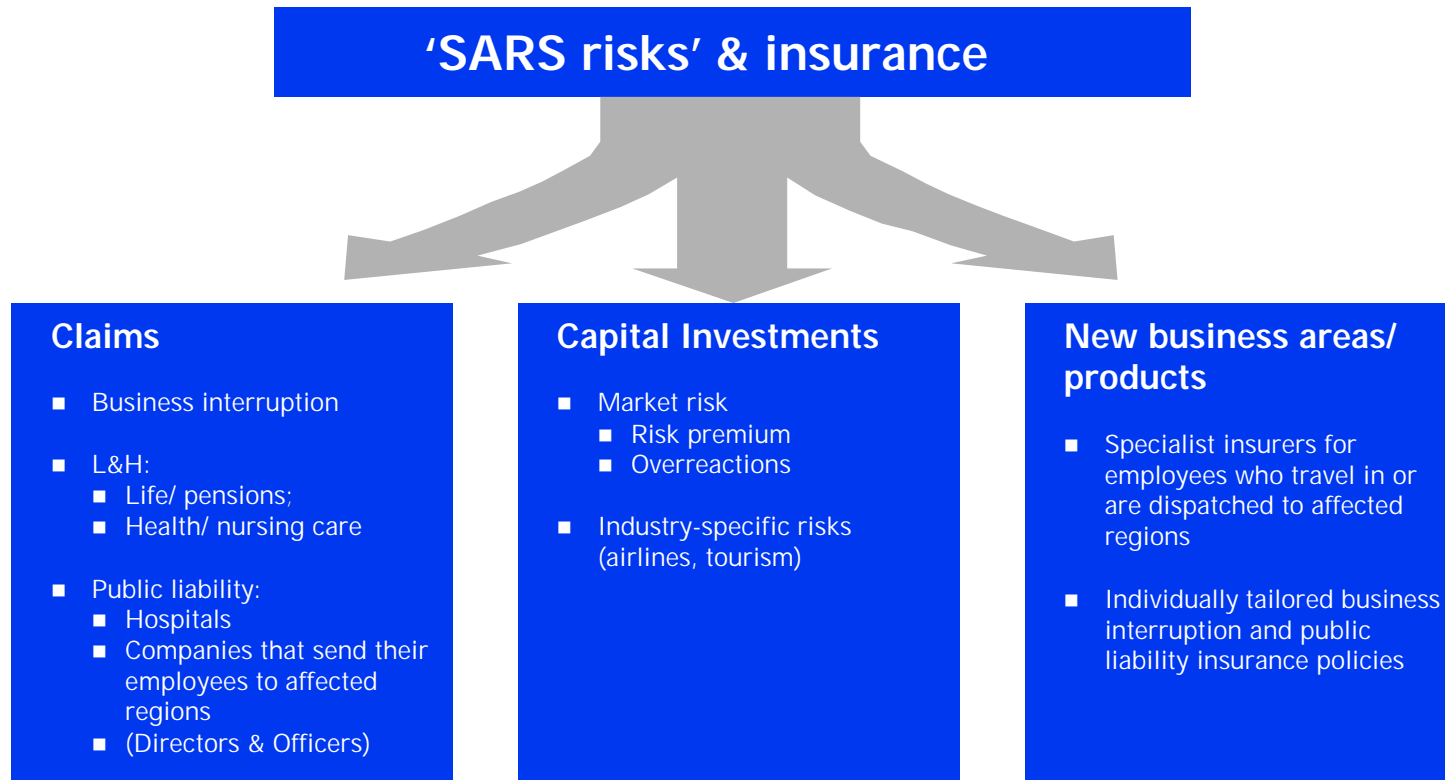
GENE TECHNOLOGY AND REPERCUSSIONS ON THE CLAIMS PROCESS OF INSURANCE COMPANIES



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Geopolitical risks - uncertain times

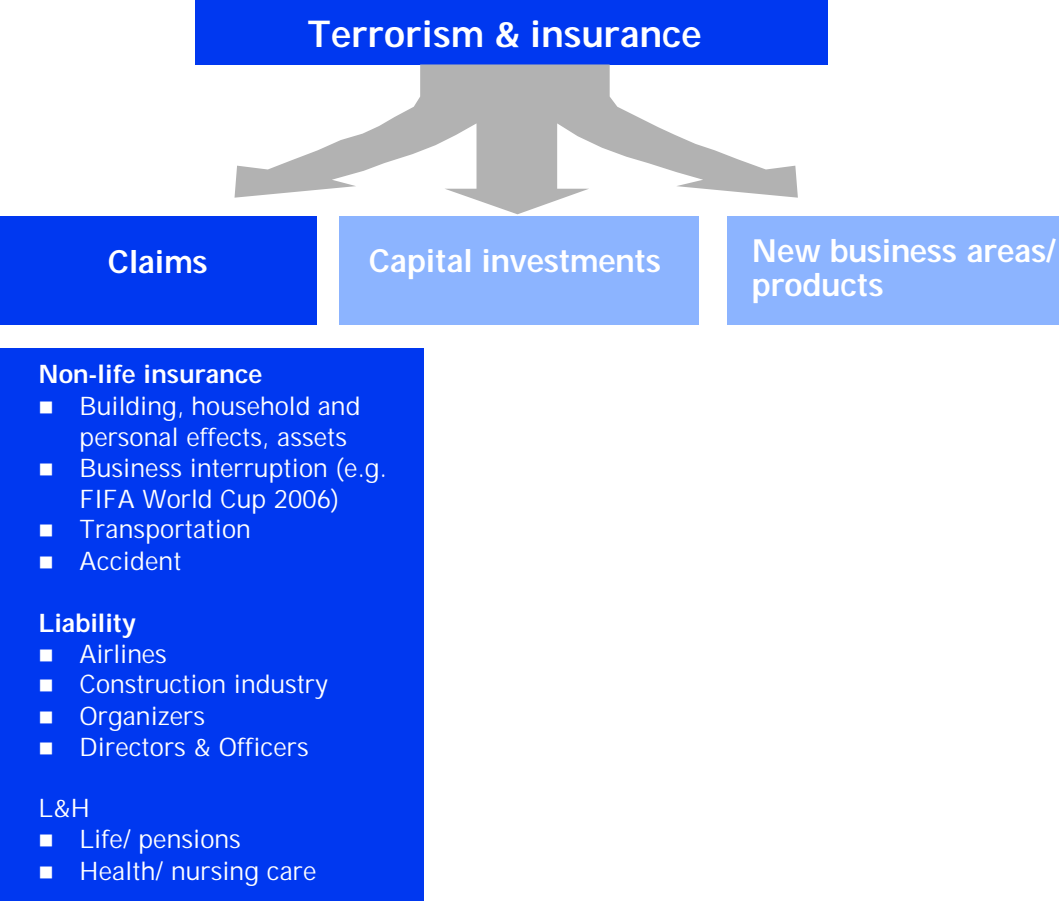
'SARS RISKS' AND THEIR IMPACT ON THE INSURANCE INDUSTRY



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Geopolitical risks - uncertain times

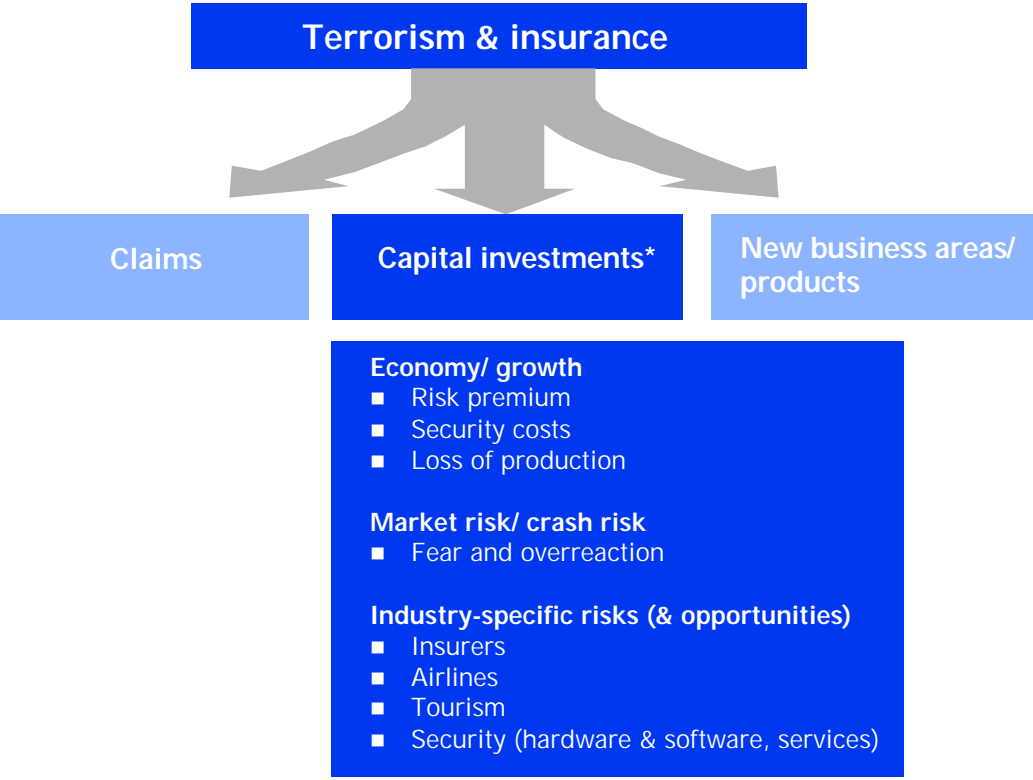
SURVEY – TERRORISM RISKS AND THEIR REPERCUSSIONS ON THE CLAIMS PROCESS



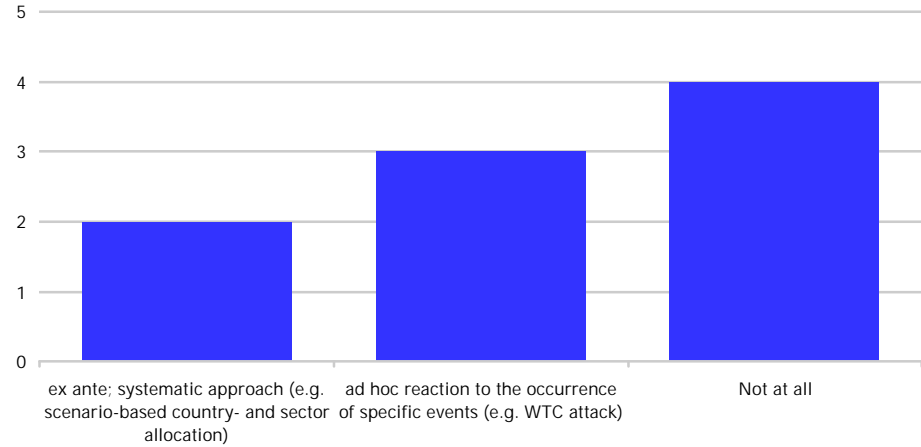
Source WestLB Equity Markets

Geopolitical risks - uncertain times

SURVEY – TERRORISM RISKS AND THEIR REPERCUSSIONS ON THE CAPITAL INVESTMENTS SIDE



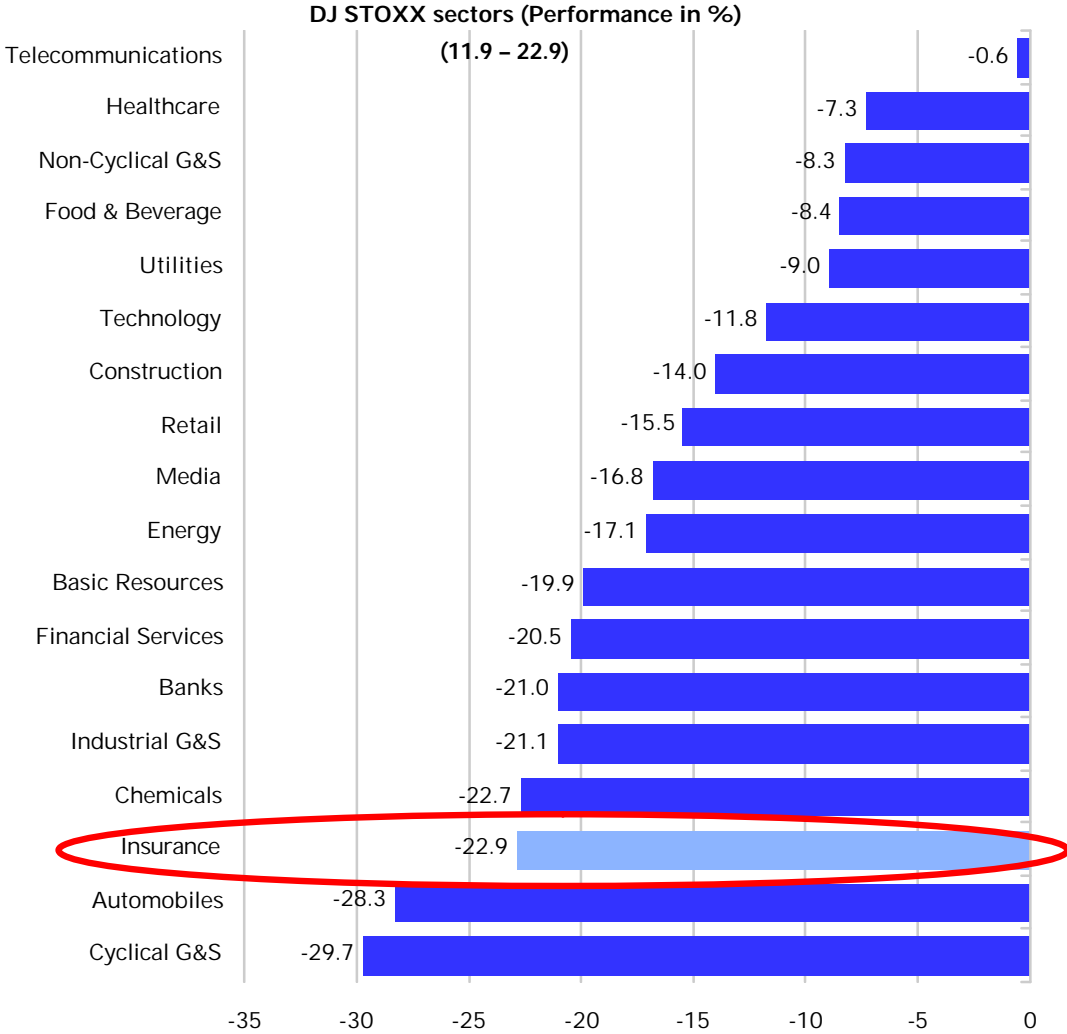
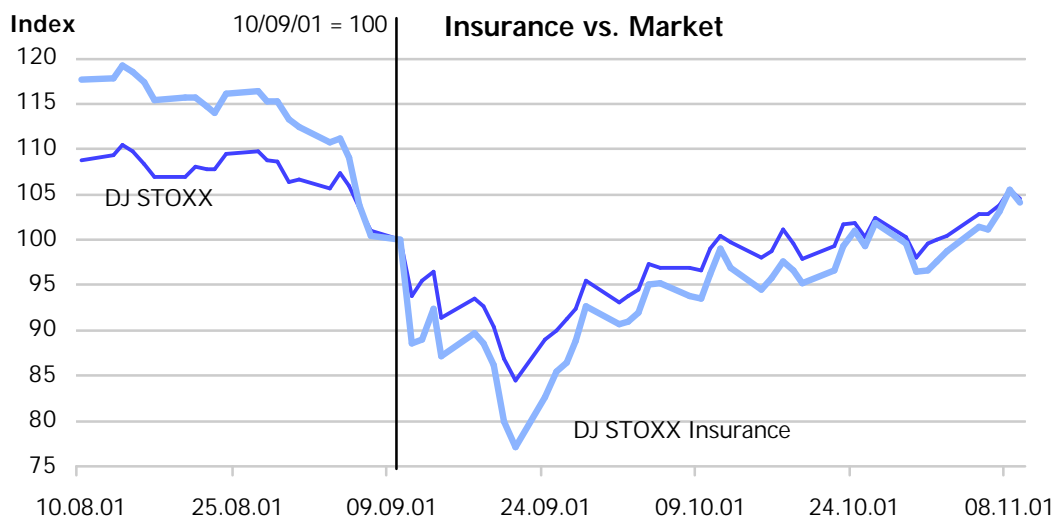
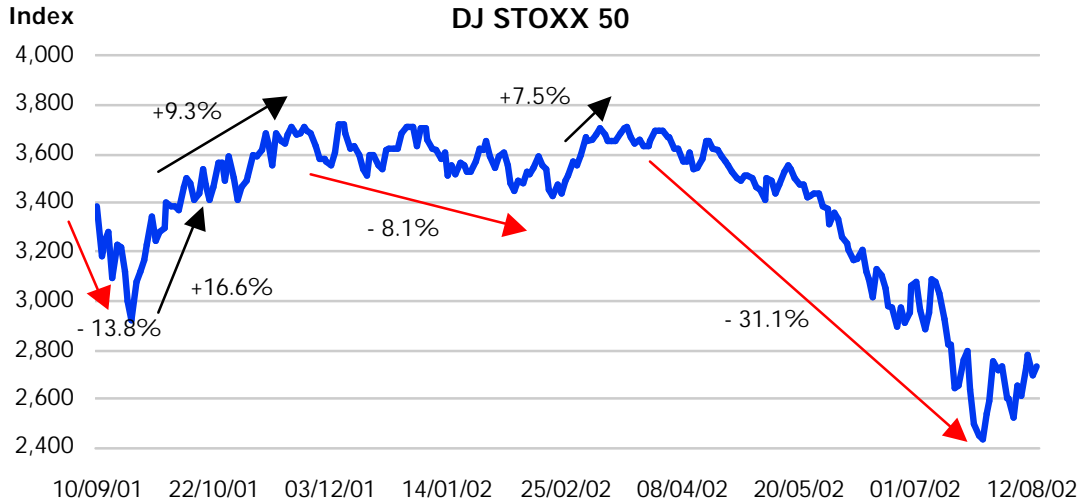
24. How do you take account of terrorism risks (and/or opportunities) for the companies in which you invest?



Source WestLB Equity Markets

Geopolitical risks - major loss events also impact the investment side

PERFORMANCE AFTER 11 SEPTEMBER



Source Datastream, WestLB Equity Markets



Geopolitical risks - uncertain times

EMERGING MARKETS - RISKS AND OPPORTUNITIES FOR INSURANCE COMPANIES

Emerging markets & insurance



Underwriting business: opportunities and risks

Particular EM risks

- Underwriting risks:
 - Political Risks
 - Fraud risks
 - Health risks (e.g. SARS)
 - Accident risks
 - Financial risks
- Operative risks:
 - Political risks
 - Currency risks (incl. transfer risks)
 - (premium-) default risks
 - Fraud risks

Products

- Adaptation of conventional insurance products to meet special EM conditions
- Growth: rising standard of living and population growth imply rising premium volumes
- New product: political risk insurance

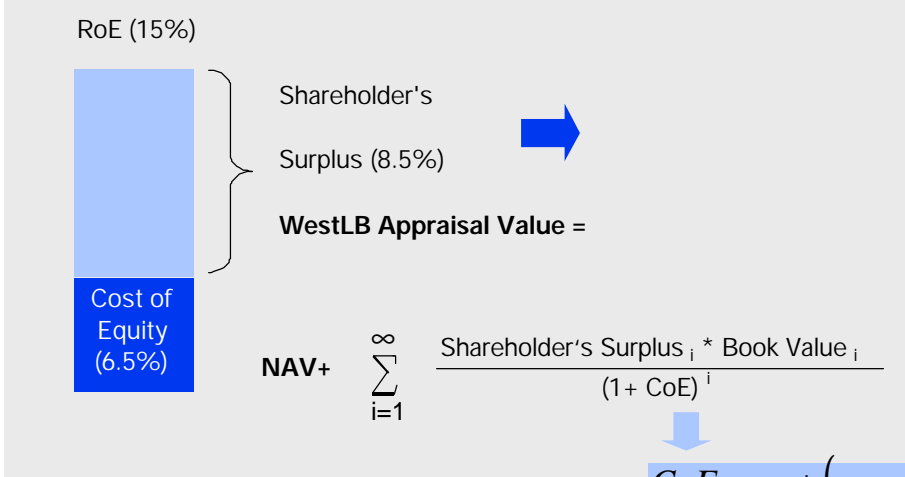
Capital investments

- Financial and currency risks
- Instability of the financial sector
- Corporate governance
- Fraud risks
- Investment restrictions, Congruency principle

Source WestLB Equity Markets

Sustainability Value Added - incorporating sustainability risk in company valuation

Valuation of insurance companies: WestLB Appraisal Value model with sustainability risk adjustment

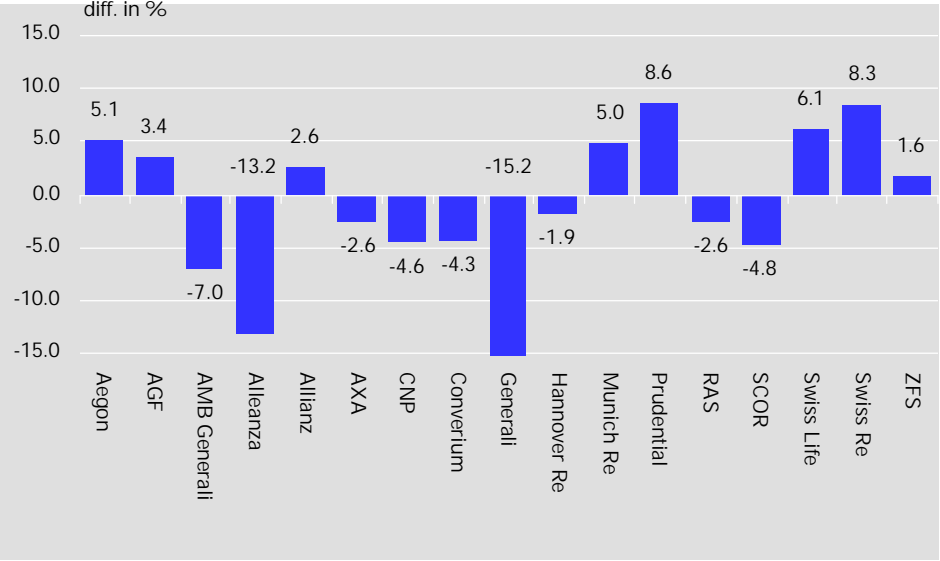


$$\text{CoE} = r_f + (r_M - r_f) \cdot b$$

- forecast risk
- liquidity risk
- financial risk
-
- sustainability risk

Source WestLB Equity Markets

WestLB Appraisal Value model: valuation gap implied by sustainability risk



Source WestLB Equity Markets

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Whichever valuation method is used there is a significant risk that the target price will not be achieved within the expected timeframe. Risk factors include unforeseen changes in competitive pressures or in the level of demand for the company's products. Such demand variations may result from changes in technology, in the overall level of economic activity or, in some cases, in fashion. Valuations may also be affected by changes in taxation, in exchange rates and, in certain industries, in regulations. This discussion of valuation methods and risk factors is not comprehensive – further information is available if required.

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