



Swiss Re



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Hong Kong

*Session 9: Asia's Evolving Risk Based  
Capital Regimes - Implications for India*

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*Waves of Reforms...Oceans of Opportunities*

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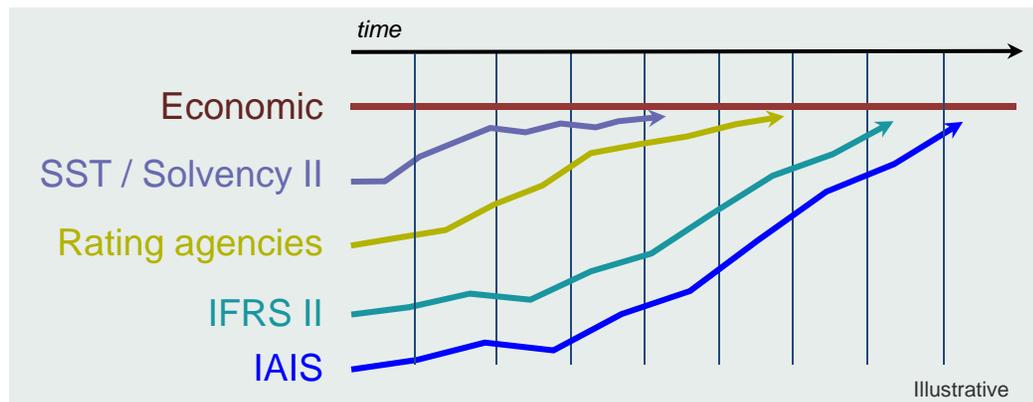


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## Worldwide trends in regulation

- Risk Based Capital
- Solvency Regulations

# Trend of rules and regulatory changes: International convergence of prudential regimes towards economic based frameworks



## United States

Federal Insurance Office (FIO)  
NAIC solvency modernization  
Systemic risk regulation  
Compensation regulation  
SEC roadmap to IFRS  
Rating agencies regulation

## Asia Pacific

Solvency reforms  
Investment rules  
Market access  
ASEAN Free Trade Area (AFTA)

## Europe

Solvency II implementing measures  
New supervisory architecture (ESAs, ESRB)  
Insurance guarantee schemes  
Crisis management and resolution  
Rating agencies regulation

## International

Financial Stability Board (FSB) agenda  
Basel III  
G-SIFI policy measures  
IASB & FASB project

- Switzerland moved to economic based solvency regime ahead of Solvency II
- Asia countries strengthening solvency standards (RBC based and stress tests)
- S&P planned review of internal models' to contribute to global convergence
- Statutory regulatory frameworks give different answers compared to SST/Solvency II



Total balance sheet and economic-based solvency framework increasingly referred as the international insurance solvency benchmarks

# ...with various – and mostly adverse – implications for insurers



Adverse regulatory implications	Examples
<ul style="list-style-type: none"><li>▪ Increased capital requirements</li><li>▪ Limits on activities and concerns over complexity</li><li>▪ Increased reporting requirements and overall costs</li><li>▪ Reputational risks in complying with changes</li><li>▪ Forced restructuring (incl. asset allocation)</li><li>▪ Extraterritoriality and discrimination</li></ul>	<ul style="list-style-type: none"><li>– Solvency II, US RBC</li><li>– G-SIFI policy measures</li><li>– Solvency II pillar III and ECB</li><li>– Solvency II implementation</li><li>– Solvency II</li><li>– US affiliated tax, Brazil restrictions</li></ul>
Positive regulatory effects	Examples
<ul style="list-style-type: none"><li>▪ Increased use of capital relief solutions</li><li>▪ Reduction of collateral requirements</li><li>▪ Harmonisation of supervision</li></ul>	<ul style="list-style-type: none"><li>– Solvency II / Asia RBC</li><li>– State initiatives, US surplus lines</li><li>– Equivalence (EU), FIO (US)</li></ul>

➤ Swiss Re is highly active in addressing these regulatory developments, through both direct contact with supervisors/policymakers and via key trade organisations



## The insurance and reinsurance industries weathered the financial crisis fairly well

- ✓ Insurance business was conducted as usual: cover was always provided both in insurance and reinsurance, and claims were paid as usual throughout the crisis.
- ✓ Prices and capacity remained stable in most lines of business.
- ✓ There was no experience of “runs on insurers” and lapse rates in life insurance remained stable.
- ✓ Most capital was lost on assets, but (re)insurers remained solvent throughout the crisis
- ✓ Problems were with monoline insurers involved in credit business and (re)insurers with FS operations
- ✓ Very few insurers needed government support – and the support needed was minimal compared with banks

# Capital management by insurance companies

## Management-Task Balancing act between risk and capital

### Low capital base:

Higher probability of not being able to pay justified claims



### High capital base:

High probability of not achieving a return on equity required by investors

## Key performance indicators for capital management

### Absolute Return

Examples::

- Economic Value Added (EVA)
- Net income

### Relative Return

Examples:

- Return on Equity
- EVA margin

### Others

Examples:

- Solvency II ratio
- Rating

# Solvency II



# Basic principles of Solvency II compared to Solvency I



- Solvency II is the new insurance supervision regime being introduced in the EEA (European Economic Area)

## The existing Solvency I regime

**Fixed formula** approach determining capital requirements based on **insurance risks** held



### Formula of Solvency I

Premium index (EUR)

$$[18\% \cdot \min(GPE; 50m) + 16\% \cdot \max(GPE - 50m; 0)]$$

Claims index (EUR)

$$[6\% \cdot \min(GCI; 35m) + 23\% \cdot \max(GCI - 35m; 0)]$$



### Key conclusions:

- Capital requirements driven by the volumes of business
- Only insurance risk considered
- Partial recognition of reinsurance (eg only up to 50 % in P&C)

Capital requirements **not** reflecting the underlying risk

## The anticipated Solvency II regime

**Economic framework** taking into account the **entire risk landscape** and **risk management framework**



### Principles of Solvency II

Pillar I	Pillar II	Pillar III
Quantitative requirements	Qualitative requirements	Market disclosure



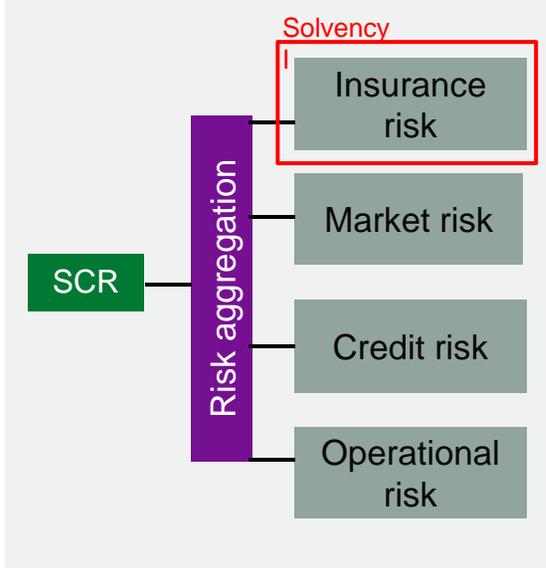
### Key conclusions:

- Capital requirements driven by the volatility of business
- Insurance, market, credit and operational risk considered
- Broader recognition of risk reduction techniques (eg reinsurance)

Capital requirements **adequately** reflecting the underlying risk

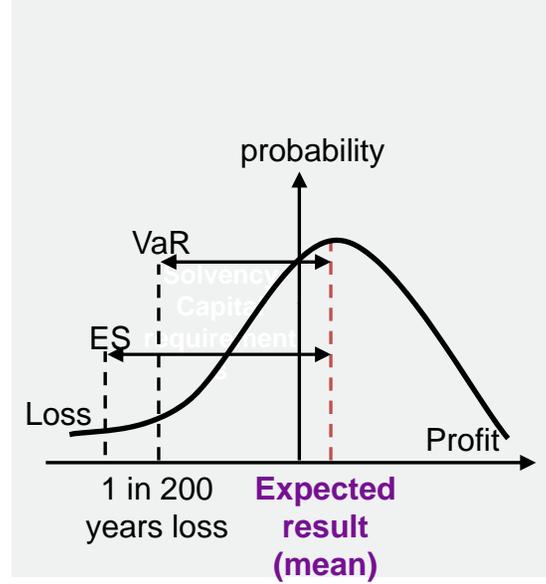
# Solvency II – Key elements

## Consideration of all risk categories



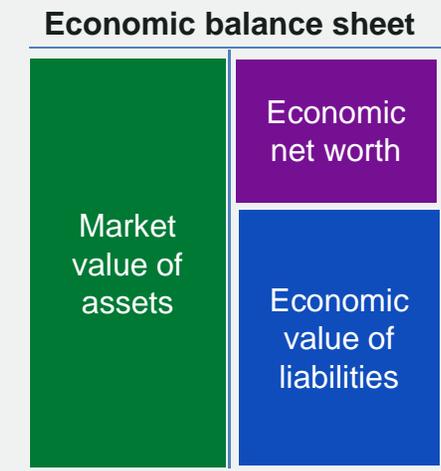
The Solvency I regime only considers the insurance risk and to some extent the market risk. Other risk categories are covered in different regulatory frameworks (eg upper limits for investments in certain asset categories)

## Probabilistic risk measurement



Solvency II risk measure will be based on a Value at Risk (VaR) level of 99.5% which is equivalent to a 0.5% target default probability, and specifies a time horizon of one year

## Economic balance sheet



- Introduction of market-consistent valuation of balance sheet items
- Increased volatility of balance sheet items expected

***“Under the best scenario, Solvency II could start to be implemented either 2015 or 2016, it depends on the length of the legal and political process” (From Insurance Insider magazine, the EIOPA chairman Gabriel Bernardino, October 2012)***

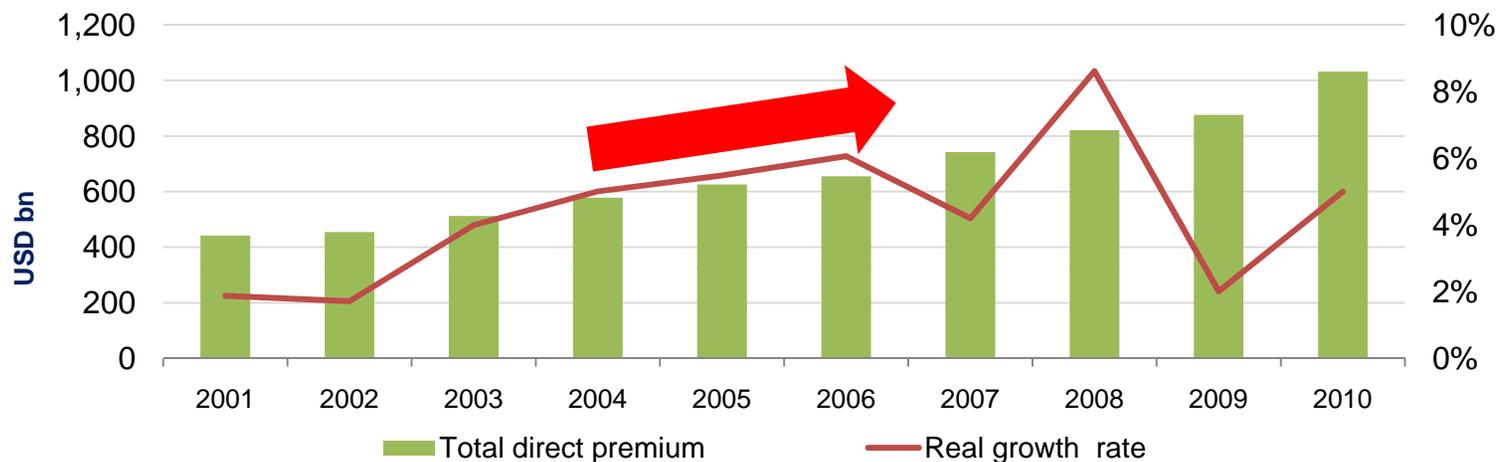


# Asia Insurance Overview

# The Asia market has been growing year after year



Asia insurance market (life and non-life)\*



## Deloitte.

"...it's only **natural for insurers to consider greener pastures in emerging markets** such as China, India and Brazil. While there are often obstacles to do business in such countries... **the need for insurance coverage to meet the financial security demands of an expanding middle class could provide significant growth opportunities** for those with the resources and capabilities to capitalize on them ..." (Deloitte, 2012 Global Insurance Outlook)

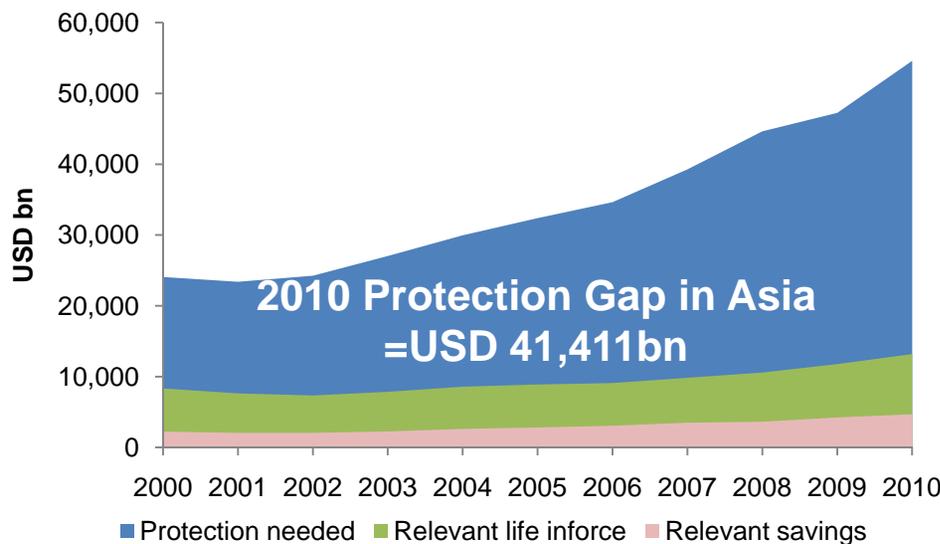
## NOMURA

"...the markets are very bullish about the long-term growth prospects for the insurance industry in Asia..." (Nomura, 24 Jan 2012)

# The huge protection gap in Asia implies great growth potential

## Mortality Protection Gap

- In 2011 Swiss Re's study revealed there is huge mortality protection gap in Asia, which implies massive room for insurers to offer good value insurance products to customers

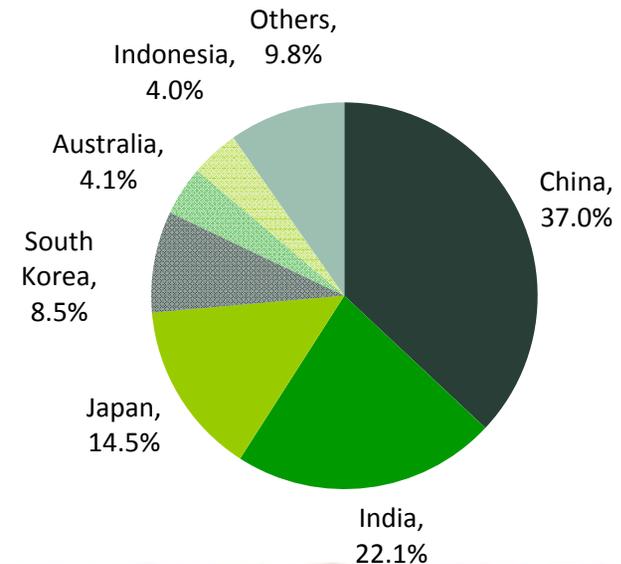


J.P.Morgan CAZENOVE

## Health Protection Gap

- In 2012 Swiss Re's study forecasted that there will be a huge health protection gap in Asia, valuing to USD 197bn in 2020

### Breakdown by market (2020)



"...Migration towards protection products is vital: We **applaud the shift in focus to protection products** as the low interest rate environment persists and insurance products slowly lose out to other financial products ..."  
 (JP Morgan 10 Jan 2012)

# Trends in regulation in Asia



## Risk-based capital development in Asia

### The IAIS is the driving force for the majority of insurance regulators:

- Newly adopted International Association of Insurance Supervisors (IAIS) Insurance Core Principles (ICPs)
- Many regulators in the region, and elsewhere in the world, are now citing the ICPs publicly as a driver of their regulatory reform packages
- The ICPs point towards a more risk-focused solvency capital calculation approach, with a greater focus on risk management practices and the links between risk and capital
- No requirement to copy from other supervisors – the ICPs allow flexibility

### The Simple Factor Based model cannot reflect the real risks...

- Current volatile stock and asset markets are unfavourable to unit-linked insurance-dominated market e.g. in Indonesia
- Low interest rate that will aggravate the problem of investment yield and negative spread e.g. in Japan and Taiwan
- Asia is a catastrophe-prone region e.g. in Thailand and Australia

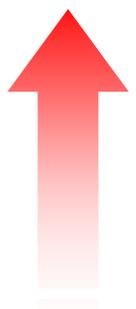
➤ *As a result, there is a need and trend for Asia to turn to a more sophisticated solvency regime, e.g. Risk Based Capital (RBC)*

# Solvency supervision in Asia is moving towards Risk Based Capital



Model-based

RBC-based



Solvency ratio

Market	Current regime	Expected changes
<b>Australia</b>	APRA standard models & internal models for non-life insurers	APRA's Life and General Insurance Capital Standards (LAGIC) review, with the aim of introducing more risk sensitive capital measures and improving the alignment of capital measurements across the industry, will be effective from 1 January 2013.
<b>Japan</b>	RBC-based (since 1997)	Economic value-based solvency regime to align with Solvency II
<b>Indonesia</b>	RBC-based (since 2000)	Improve enforcement
<b>Taiwan</b>	RBC-based (since 2003)	–
<b>Singapore</b>	RBC-based (since 2004)	–
<b>Malaysia</b>	RBC-based (since 2009)	–
<b>South Korea</b>	RBC-based (since 2011)	Phase in more stringent capital loadings with effect from 1 June 2012; use of internal models
<b>Thailand</b>	RBC-based (since 2011)	–
<b>Hong Kong</b>	Solvency ratio/margin	Consultation launched for transition to RBC
<b>India</b>	Solvency ratio/margin	Studying the next generation solvency regime
<b>China</b>	Solvency ratio/margin	Studying the next generation solvency regime
<b>Philippines</b>	Solvency ratio/margin	RBC rules passed, pending implementation, increasing minimum capital requirements
<b>Vietnam</b>	Solvency ratio/margin	Considering RBC

Sources: National insurance regulators, Axco Reports, Swiss Re ER&C.

# Case study – Malaysia RBC Framework - Life



Malaysia RBC was introduced in 2009

$$\text{RBC Ratio} = \frac{\text{Total Capital Available}}{\text{Total Capital Required}} \times 100 \quad \text{Statutory minimum: 130\%}$$

## Total Capital Available:

- Aggregate of Tier 1 and Tier 2 capital less deductions such as goodwill, deferred tax assets
- Classification of Tier 1 and Tier 2 depends on degree of permanence and free and clear of any encumbrances
- Examples of Tier 1 capital: issued and fully paid-up ordinary shares; paid-up non-cumulative irredeemable preference shares; retained profits
- Examples of Tier 2 capital: cumulative irredeemable preference shares; subordinated term debts

## Risk-based Capital is function including 4 components:

Surrender value, credit risk, market risk, insurance liability and operational risk

$$TCR = \text{Max} [\text{Surrender value capital charges} \sum, (\text{Credit risk capital charges} + \text{market risk capital charges} + \text{Life Insurance liability capital charges} + \text{Operational risk capital charges})]$$

# Case study – Malaysia RBC Framework – Non Life



Malaysia RBC was introduced in 2009

$$\text{RBC Ratio} = \frac{\text{Total Capital Available}}{\text{Total Capital Required}} \times 100 \quad \text{Statutory minimum: 130\%}$$

## Total Capital Available:

- Aggregate of Tier 1 and Tier 2 capital less deductions such as goodwill, deferred tax assets
- Classification of Tier 1 and Tier 2 depends on degree of permanence and free and clear of any encumbrances
- Examples of Tier 1 capital: issued and fully paid-up ordinary shares; paid-up non-cumulative irredeemable preference shares; retained profits
- Examples of Tier 2 capital: cumulative irredeemable preference shares; subordinated term debts

## Risk-based Capital is function including 4 components:

Credit risk, market risk, insurance liability and operational risk

$$TCR = \sum (\text{Credit risk capital charges} + \text{market risk capital charges} + \text{General Insurance liability capital charges} + \text{Operational risk capital charges})$$

## There is also more codification of allowable structures, for example, Financial Reinsurance in Japan...

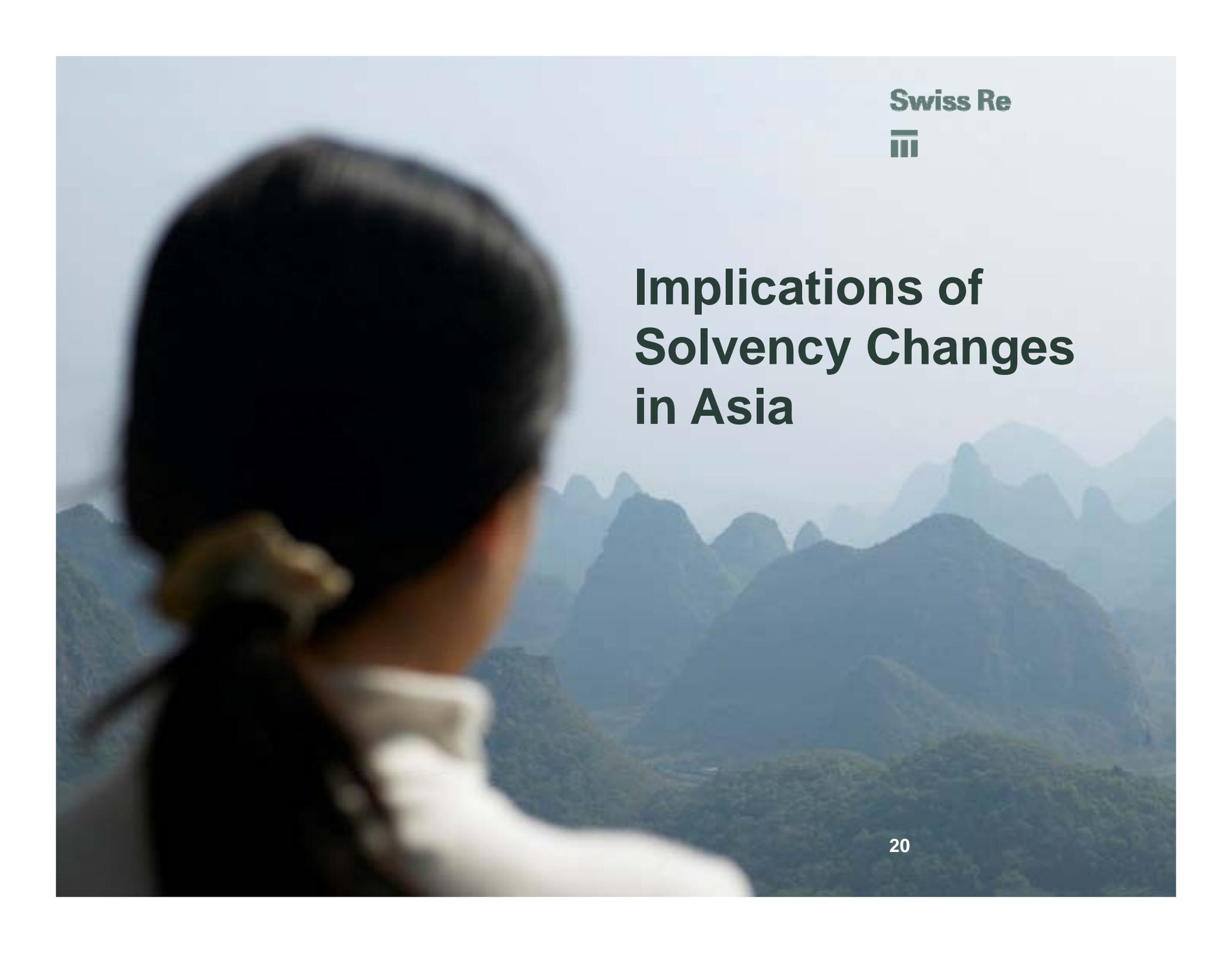


- In Japan, precise definitions and criterion have been outlined by FSA on financial reinsurance.

Financial Reinsurance is defined where initial reinsurance commission is calculated based on future expected profit from the reinsured block of business and paid to a cedant. All risks related to the reinsured block are transferred from a cedant to a reinsurer.

- In addition there is a clear definition of remote risk reinsurance for new business financing which is used extensively by Japanese companies
- New business financing can provide upfront financing to insurers as acquisition cost reimbursement. These new business financing deals have been understood by the FSA as coinsurance. The generally accepted view in the market is that as long as the amount of reinsurance financing does not exceed actual acquisition costs, the FSA will not scrutinize or object to such structures.

The guidelines provided by the regulators will help insurers and reinsurers to carry out business more effectively. Reinsurance can act as an alternative source of capital to insurers and help them to improve capital positions.

A person with dark hair tied back in a ponytail is seen from the side, looking out over a vast, misty mountain range. The mountains are layered and hazy, creating a sense of depth. The person is wearing a white shirt. The overall scene is serene and atmospheric.

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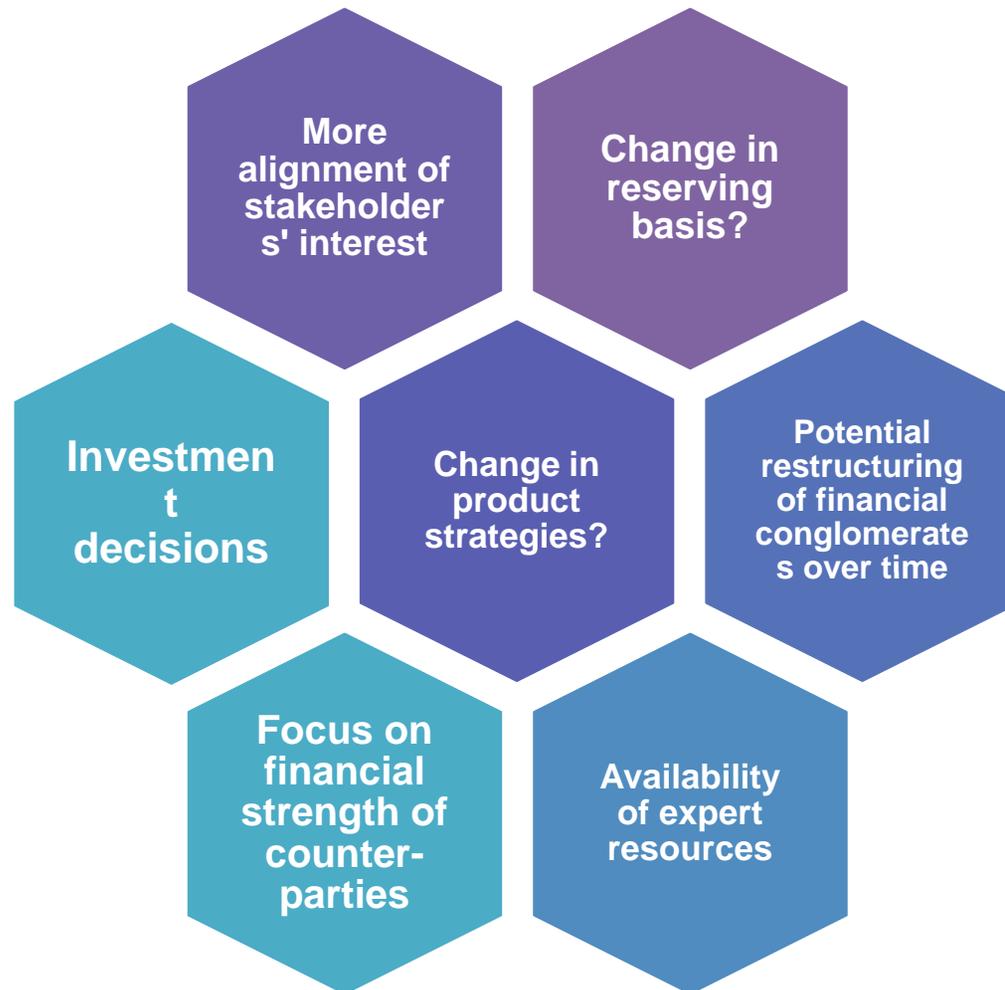
# Implications of Solvency Changes in Asia

## Implications of Solvency Changes – Market Consolidation in Asia? For example, Malaysia

- Since Malaysia implemented RBC in 2009, M&A activity has increased substantially, especially the P&C market

Date	Acquirer	Acquired	Life / P&C
2007	Allianz General Insurance Company	Commerce Assurance Berhad	P&C
2008	Tokio Marine Insurancs (Malaysia) Berhad	PanGlobal Insurance Berhad	P&C
2010	MSIG Insurance (Malaysia) Berhad	Hong Leong Assurance Berhad	Life , P&C
2010	Overseas Assurance Corporation Malaysia	Tahan Insurance Berhad	P&C
2010	AXA Affin General Insurance Berhad	BH Insurance Berhad	P&C
2010	Fairfax Asia Ltd	Pacific Insurance Berhad	P&C
2010	Ace Insurance	Jerneh Insurance Berhad	P&C
2011	Zurich	MAA Berhad	Life , P&C
2011	AMG Insurance (IAG's 49% JV )	Kurnia Insurans (Malaysia) Berhad	P&C
2012	AIA Group Limited	ING Malaysia	Life

## Other implications to consider...



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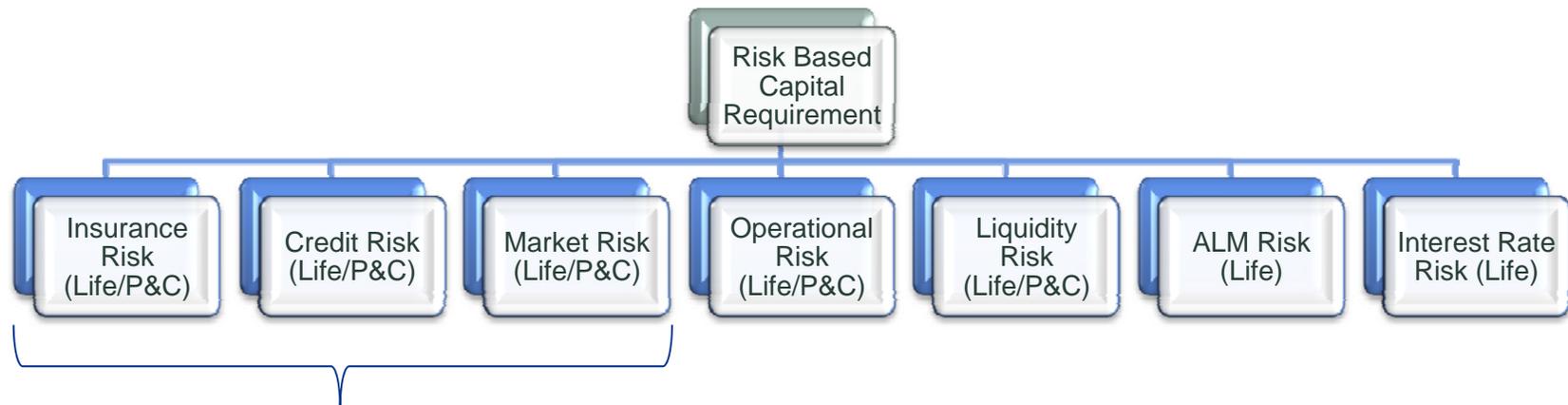


# Outlook



## Expected typical model for Risk Based Capital in Asia

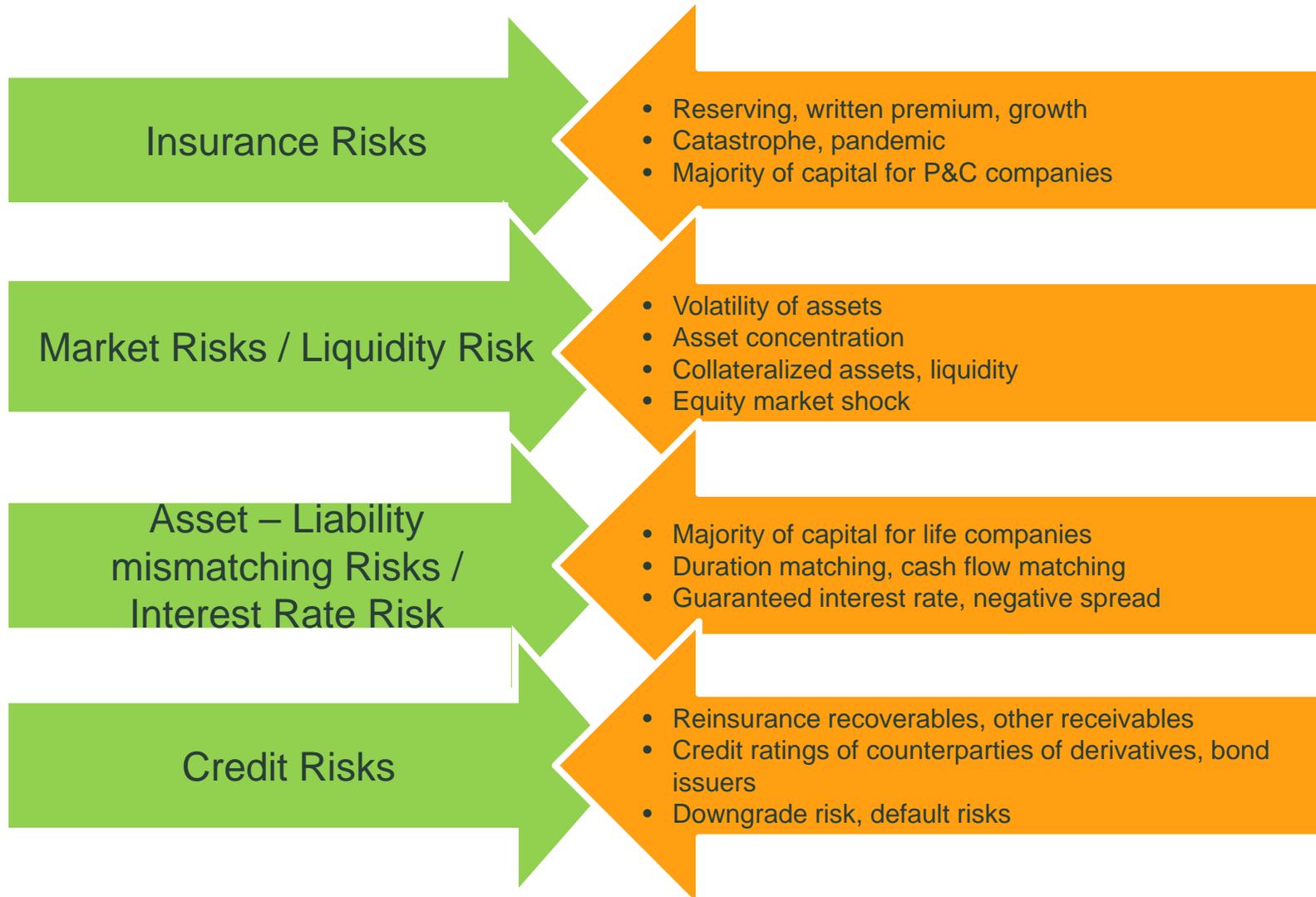
- Typically the RBC model attempt to take into account all sources of risk that could affect insurer solvency

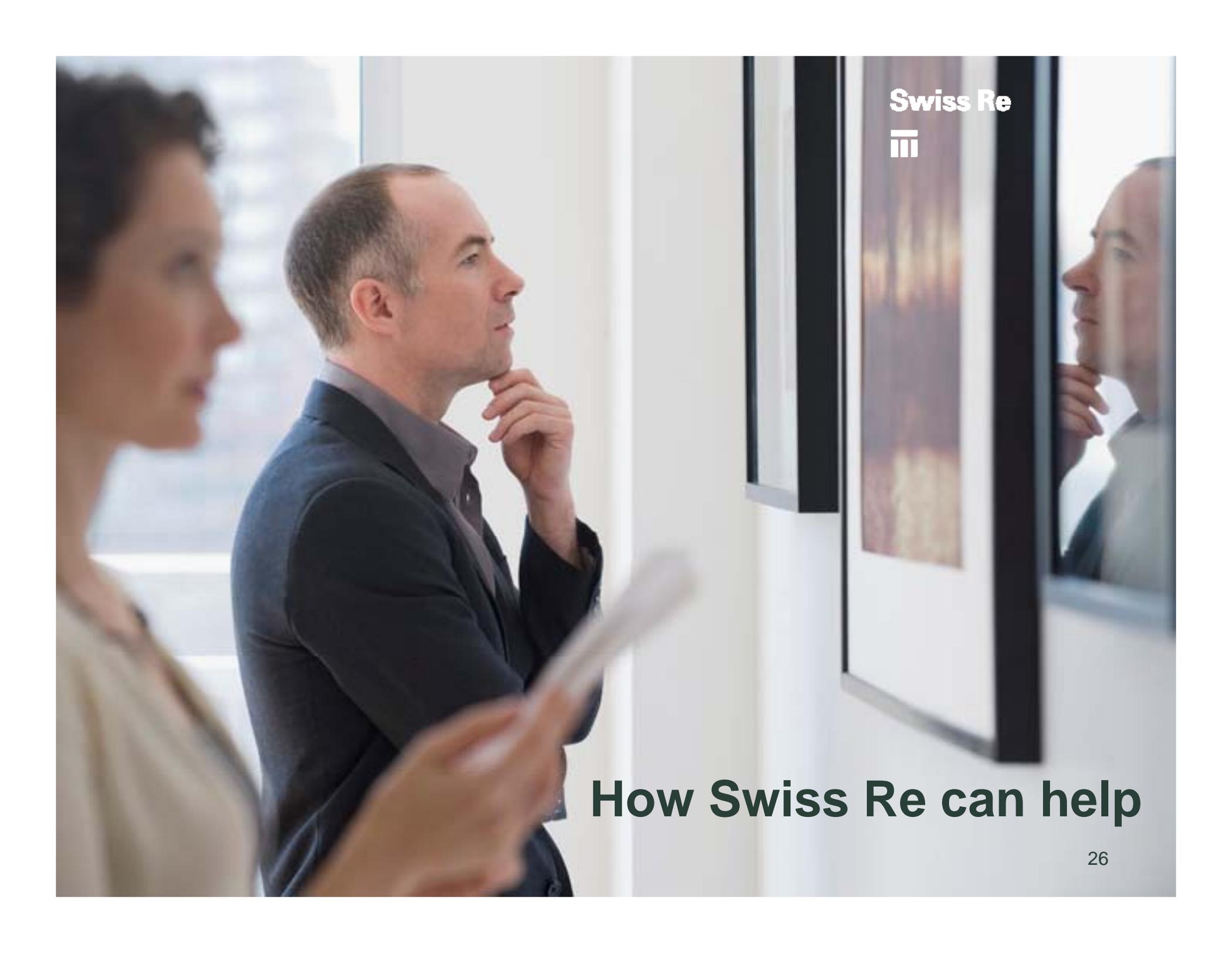


Some risks are inter-related

- e.g. Reinsurance arrangement covers both Insurance Risk and Credit Risk
  - e.g. Bond investment covers both Market Risk and Credit Risk
- There will be allowances for diversification, correlation and stress scenarios

# Implications of the different risk factors





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**How Swiss Re can help**

# Bespoke solutions can be provided in the Life and Health arena



	Yearly Renewable Terms	Coinsurance on In Force	Structured reinsurance solution	Contingent reinsurance solution	Innovative Reserve Management	Claims volatility cover	Securitisatio n of extreme mortality risk	Risk swap
Improve solvency capital	✓	✓	✓		✓			
Reduce earnings volatility	✓	✓		✓	✓	✓		
As an alternative source of capital		✓	✓	✓	✓			
Decrease extreme risk exposure	✓	✓			✓	✓	✓	✓
More diversified risk portfolio							✓	✓

# ... as well as in the Property and Casualty arena



some sample solutions

	Retrospective cover : LPT/ ADC	Volatility protection solution	Flexible quota share treaty	Insurance linked securities
Improve solvency ratio	✓	✓ *	✓	✓
Reduce earnings volatility	✓	✓	✓ **	✓
Decrease risk exposure	✓	✓	✓	✓
Upfront P&L benefit to insurers	✓ ***			

- ✓\* The effect will depend on the solvency regime, this solution is not effective under Solvency I.
- ✓\*\* A quota share treaty with fixed commission won't necessarily reduce volatility on earnings.
- ✓\*\*\* The positive impact on insurers' P&L will normally emerge when there is a difference on reserve valuation basis (discounted or nominal).

## Examples of recent Swiss Re deals with capital motivation

<p>2008</p> <p><b>Cashless Reinsurance Financing</b> Regulatory capital support</p> <p><i>Global insurer in Taiwan</i></p> <p>Amount: USD 70m+</p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>	<p>2001 onwards</p> <p><b>Cashless new business Financing</b> Risk protection for annuities</p> <p><i>Foreign insurer in Japan</i></p> <p>Many years of ongoing new financing</p> <p>Reinsurer:</p> <p><b>Swiss Re</b>  </p>	<p>2010 onwards</p> <p><b>Coinsurance</b> Coinsurance on large block of health business, fund-withheld structure</p> <p><i>Large domestic insurer in China</i></p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>	<p>2010</p> <p><b>Innovative Reserve Management</b> Participating business</p> <p><i>Large global insurer in HK</i></p> <p>Reserve/ capital relief for insured: USD 300m</p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>
<p>2011</p> <p><b>Innovative Reserve Management</b> Quota share on guaranteed risk premium basis</p> <p><i>Mid-sized domestic insurer in China</i></p> <p>Reserve/ capital relief for client: USD 95m (to help improve solvency at Q2 and Q4)</p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>	<p>2011</p> <p><b>Coinsurance on In Force</b> Medical insurance business in Japan</p> <p><i>Global insurer in Japan</i></p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>	<p>2011</p> <p><b>Flexible Quota Share</b> Regulatory solvency capital support</p> <p><i>Large domestic insurer in China</i></p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>	<p>2012</p> <p><b>P&amp;C Solution</b> Solvency capital support</p> <p><i>Large insurer in Malaysia</i></p> <p>Sole reinsurer:</p> <p><b>Swiss Re</b>  </p>



# Q&A

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