

# Agenda

Moderator for morning session:  JIANG Xianxue, Director General of Accounting Dept., CIRC	
9:00- 9:05	Introduction
9:05- 9:20	Opening Remarks  XIANG Junbo, Chairman, CIRC
9:25-10:00	Presentation  The Reform of Solvency Supervision in China  CHEN Wenhui, Vice Chairman, CIRC
10:00-10:30	Discussion
10:30-11:00	Coffee Break
11:00-11:30	Presentation  Hong Kong Regulatory Reform: Development of a Risk-based Capital Framework in Hong Kong  Annie CHOI, Commissioner of Insurance, HKOCI
11:30-11:50	Discussion
12:00-13:30	Lunch
Moderator for afternoon session:  JIANG Bo, Director General of International Dept., CIRC	
13:30-13:50	Presentation  Insurance Solvency Regulation and Supervision-



	<p>Movement towards global convergence?</p> <p>Dave FINNIS, IAIS</p>
13:50-14:05	<p>Presentation</p> <p>A Global Capital Standard for Insurance?</p> <p>Jonathan DIXON, Financial Services Board, South Africa</p>
14:05-14:30	<p>Discussion</p>
14:30-15:00	<p>Presentation</p> <p>Solvency Assessment and Management (SAM)</p> <p>Ian MARSHALL, Financial Services Board, South Africa</p>
15:00-15:20	<p>Discussion</p>
15:20-15:50	<p>Coffee Break</p>
15:50-16:20	<p>Presentation</p> <p>Solvency Regulatory Reform in Singapore: RBC2 &amp; ORSA</p> <p>Gilbert CHIN Keat Howe, Monetary Authority of Singapore</p>
16:20-16:40	<p>Discussion</p>
16:40-17:10	<p>Presentation</p> <p>Development of Solvency Regulatory Reform for Life Companies in Asia</p>



	Mark Edward TUCKER, Group Chief Executive & President, AIA
17:10-17:20	Discussion
17:20-17:30	Closing Remarks JIANG Xianxue, CIRC
17:30-18:00	Cocktails & Snacks
Moderator for Dinner session: JIANG Xianxue, Director General of Accounting Dept., CIRC	
18:00-18:05	Dinner Toast CHEN Wenhui, Vice Chairman, CIRC
18:05-20:00	Dinner



# **The Reform of Solvency Supervision in China**

CHEN Wenhui

GIRC

Beijing, July 5, 2013

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**I. The trends of international solvency supervision – our understanding**

**II. Solvency supervision reform in China – our choice**

**III. What is C-ROSS? – an introduction**

**IV. Closer exchange and cooperation among emerging markets – a proposal**



I. The trends of international solvency supervision  
— our understanding



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China Insurance Regulatory Commission

a. Solvency supervision means more than before

- From qualitative supervisory approach to the 3-pillar supervisory framework
- From solvency of companies to solvency of groups
- From micro prudential regulation to macro prudential regulation:
  - pro-cyclical effects
  - systemically important institutions
  - liquidity risk

I. The trends of international solvency supervision  
— our understanding



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China Insurance Regulatory Commission

b. More risk-oriented

- Capital requirements better reflecting the actual risk profile
- More accurate risk classification and assessment
- More attention on the assessment of risk management capability of insurance undertakings



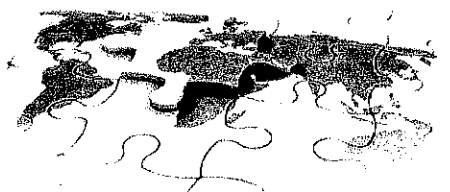
I. The trends of international solvency supervision  
- our understanding



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c. Solvency supervisory systems in different countries are showing signs of integration as well as characteristics of their own

- Trying to embrace what is universally accepted in reform
- Reflecting national features in specific supervisory standards



I. The trends of international solvency supervision  
- our understanding



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d. Closer international cooperation

- Global integration of economy and insurance operation
- Emerging markets are taking on a more active role in international cooperation and standard-setting of insurance supervision.





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## II. Solvency supervision reform in China – our choice



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a. The current solvency supervision system in China

➤ First established in 2003

➤ It became a complete system in 2007  
Internal risk management regime,  
Solvency assessment regime,  
Financial analysis and examination mechanism,  
Supervisory intervention and  
Bankruptcy aid

➤ It has helped insurance undertakings to establish the concept of capital management.



## II. Solvency supervision reform in China



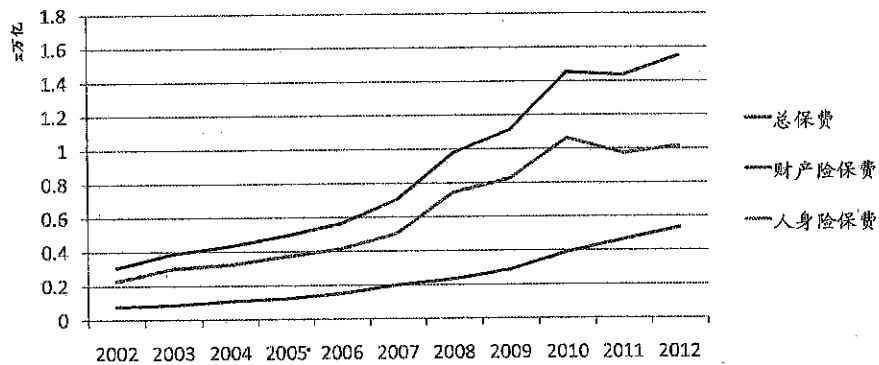
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- our choice

### b. Fast development of the insurance industry in China

By the end of 2012,

- Premium income: RMB 1.5 trillion Yuan
- Annual growth rate: 18 %



## II. Solvency supervision reform in China



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China Insurance Regulatory Commission

- our choice

### c. Direction of solvency supervisory reform in China

Problems existing in the current system:

- Some risks are left out and the measurement of risks needs upgrading.
- There are some flaws with the current supervisory framework.
- Qualitative supervision need to be strengthened.



## II. Solvency supervision reform in China

– our choice



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### c. The direction of reform

#### 1. Getting in line with international developments

to establish a 3-pillar framework

to develop risk-oriented supervisory standards

#### 2. Basing the reform on the realities of China

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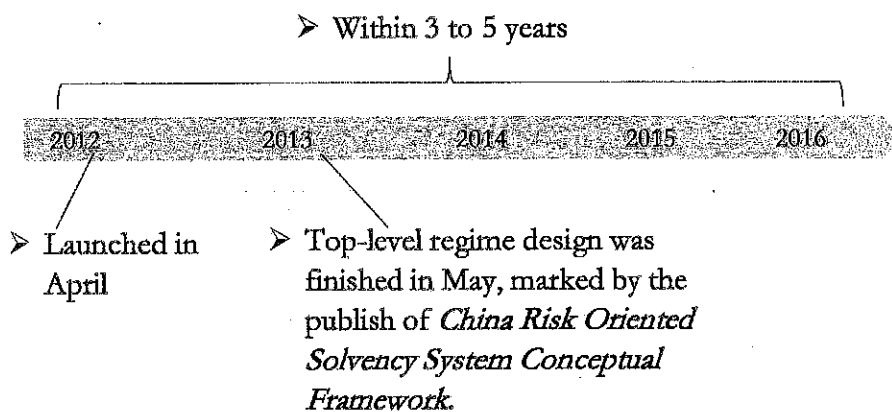
### IV. Closer exchange and cooperation among emerging markets – a proposal



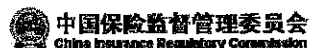
### III. What is C-ROSS? - an introduction



#### a. timetable



### III. What is C-ROSS? - an introduction



#### b. The name

- Chinese name: 中国风险导向的偿付能力体系
- Abbreviation: 偿二代
  
- English name: China Risk Oriented Solvency System
- Abbreviation: C-ROSS



### III. What is C-ROSS? – an introduction



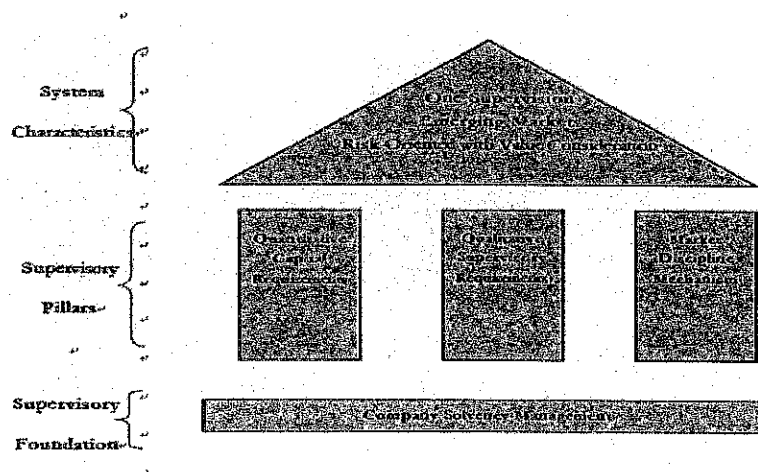
#### c. Overall objectives

- To measure the risks of insurance undertakings, scientifically and comprehensively capital requirements are more risk-related.
- To determine appropriate capital requirements to strengthen the competitiveness of China's insurance industry; to establish an effective incentive mechanism to encourage insurance undertakings to improve the management and control of risks.
- To actively explore an appropriate model for solvency supervision in emerging markets and offer our experiences to the development of international solvency supervision.

### III. What is C-ROSS? – an introduction



#### d. Components of the conceptual framework





### III. What is C-ROSS? – an introduction



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#### Institutional characteristics

One supervision	One supervisor, one policy
Emerging markets	Greater attention to <ul style="list-style-type: none"> <li>&gt; cost of capital, capital efficiency</li> <li>&gt; qualitative supervisory approaches</li> <li>&gt; adaptability to market changes</li> </ul>
Risk-oriented with value consideration	<ul style="list-style-type: none"> <li>&gt; enforceability and authority</li> <li>&gt; practicality and effectiveness</li> <li>&gt; no systemic risk, no regional risk</li> <li>&gt; capital efficiency and effectiveness</li> </ul>

### III. What is C-ROSS? – an introduction



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#### Supervisory elements

##### Pillar 1 Quantitative Capital Requirements



Quantitative Capital Requirements	Valuation standards for Available Capital	Capital classification	Dynamic solvency testing	Supervisory measures
<ul style="list-style-type: none"> <li>insurance risk</li> <li>market risk</li> <li>credit risk</li> <li>macro-prudential capital requirements</li> <li>supervisory capital requirement adjustments</li> </ul>	<ul style="list-style-type: none"> <li>valuation/admissibility standards of assets</li> <li>valuation/admissibility standards of liabilities</li> </ul>	<ul style="list-style-type: none"> <li>standards for different tiers of Available Capital</li> </ul>	<ul style="list-style-type: none"> <li>testing on insurers' solvency position under base scenario and various adverse scenarios</li> </ul>	<ul style="list-style-type: none"> <li>supervisory intervention actions for insurers cannot meet the quantitative supervisory requirements</li> </ul>



### III. What is C-ROSS? - an introduction



#### Pillar 2 Qualitative Supervisory Requirements

Integrated Risk Rating	Insurers' risk management requirements and assessment framework	Supervisory inspection /analysis	Supervisory measures
<ul style="list-style-type: none"><li>• quantitative evaluation of the risks under Pillar 1</li><li>• qualitative evaluation of the risks that are hard to quantify under Pillar 2<ul style="list-style-type: none"><li>✓ operational risk</li><li>✓ strategic risk</li><li>✓ reputation risk</li><li>✓ liquidity risk</li></ul></li></ul>	<ul style="list-style-type: none"><li>• supervisory requirements</li><li>• risk management assessment</li></ul>	<ul style="list-style-type: none"><li>• on-site inspections</li><li>• off-site analysis</li></ul>	<ul style="list-style-type: none"><li>• supervisory intervention actions for insurers cannot meet the qualitative supervisory requirements</li></ul>

### III. What is C-ROSS? - an introduction



#### Pillar 3 Market Discipline Mechanism

1. Information public disclosures
2. Education and guidance on market power



### III. What is C-ROSS? – an introduction



#### Supervisory Foundation

As part of the enterprise's internal management, insurers' own solvency management plays an important role in solvency supervision

- Internal solvency management is a prerequisite and the foundation of solvency supervision
- Internal solvency management is both the "immune system" and the "response system" of insurers

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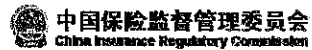
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IV. Closer exchange and cooperation among emerging markets – a proposal



IV. Closer exchange and cooperation  
among emerging markets – a proposal



- a. Reinforce communication and sharing to improve the solvency supervisory system jointly
- Learning from experiences of other markets
  - Sharing our practice and thoughts in designing the C-ROSS and looking forward to suggestions and advices
  - Welcoming overseas institutions/organizations/experts participating the C-ROSS
  - Establishing long-acting solvency supervisory exchanges & cooperation mechanism

IV. Closer exchange and cooperation  
among emerging markets – a proposal



- b. Improve supervisory exchanges and coordinating mechanism
- CIRC believes both cross-border risk transmission defense and solvency supervision requires international and regional supervisory cooperation
  - CIRC is willing to strengthen solvency information exchanges with all regulators in emerging markets
  - CIRC suggests the improvement of the solvency supervision collaboration mechanism among emerging markets



IV. Closer exchange and cooperation  
among emerging markets – a proposal



c. Increase resource inputs to take a active part in international solvency supervision rulemaking

➤ CIRC suggests the international supervisory rules presenting more characteristics of emerging markets

➤ CIRC suggests appealing common interests and benefits with all other emerging markets on the basis of full consultation

IV. Closer exchange and cooperation  
among emerging markets – a proposal



d. Explore and motivate solvency supervisory equivalence recognition gradually among emerging markets

➤ Equivalence recognition is a effective way to advance substantial international solvency supervision convergence

➤ CIRC would like to invite other emerging markets co-working on bilateral solvency supervisory equivalence recognition mechanism



## Hong Kong Regulatory Reform: Development of a Risk-based Capital Framework in Hong Kong

**Ms Annie Choi**  
**Commissioner of Insurance**  
**5 July 2013**



Office of the Commissioner of Insurance  
The Government of the Hong Kong Special Administrative Region

## Hong Kong Insurance Market

- Authorized insurers : 154
  - 91 – general i.e. non-life
  - 44 – long term i.e. life
  - 19 – composite i.e. life + non-life
- Insurance intermediaries (agents + brokers)
  - 3,027 – corporate
  - 73,945 – individuals



## Hong Kong Insurance Market Performance (1992-2012)

- Total gross premium (in US\$)
  - 1992: \$ 3.5 billion
  - 1997: \$ 6.7 billion
  - 2002: \$11.4 billion
  - 2007: \$25.3 billion
  - 2009: \$23.7 billion
  - 2011: \$30.0 billion
  - 2012: \$32.7 billion
- Insurance density : US\$4,046
  - 2<sup>nd</sup> in Asia ; 11<sup>th</sup> in World
- Insurance penetration : 11.85%
  - 2<sup>nd</sup> in Asia ; 4<sup>th</sup> in World



## General Insurance Business

- Premium (in US\$)
  - 1992: \$1.8 billion
  - 1997: \$2.5 billion
  - 2002: \$3.0 billion
  - 2007: \$3.1 billion
  - 2009: \$3.7 billion
  - 2011: \$4.5 billion
  - 2012: \$5.0 billion
- Average growth rate of 5.2% each year
- Account for 15% of total insurance business





## Long Term Insurance Business

- Premium (in US\$)
  - 1992: \$ 1.7 billion
  - 1997: \$ 4.2 billion
  - 2002: \$ 8.4 billion
  - 2007: \$22.2 billion
  - 2009: \$20.0 billion
  - 2011: \$25.5 billion
  - 2012: \$27.7 billion
- Average growth rate of 15.1% each year
- Account for 85% of total insurance business
- Over 10 million in-force policies (i.e. 1.48 policies per capita or 3 policies per working capita)



## Risk-based Capital Regime

- Existing Insurance Regulatory Regime
  - Rule-based capital adequacy framework –
    - (a) Life: based on policy reserve and sum insured
    - (b) Non-life: based on premiums and claims
  - Has been used since 1980s





## Risk-based Capital Regime

- Considerations
  - Insurance Core Principles endorsed by IAIS in Oct 2011
  - Experience of overseas jurisdictions
  - Hong Kong unique market situation e.g. diverse profile of players

HONG KONG  
INSURANCE  
AUTHORITY

## Risk-based Capital Regime

- Considerations
  - Incentives to introduce enhanced risk management
  - Ease of use and ability to compute new capital requirements for such a diverse market
  - Maintain a level-playing field for all insurers in the market
  - Avoid regulatory arbitrage

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## Risk-based Capital Regime

- Quantitative considerations
  1. Structure of regulatory capital requirements
    - a. Total balance sheet approach mandated by ICP to ensure consistent valuation of assets and liabilities
    - a. Solvency control levels:
      - Prescribed Capital Requirement: a commonly used target criterion by overseas jurisdictions, comparable to a minimum investment grade level, calculated using 99.5% Value at Risk over a one year period
      - Minimum Capital Requirement: target criteria pending further quantitative impact study in order to have a fully informed decision



## Risk-based Capital Regime

- Quantitative considerations
  2. Determination of regulatory capital requirements

Standardized approach

vs.

Internal model approach





## Risk-based Capital Regime

- Quantitative considerations

- Standardized approach

Pros	Cons
More flexibility to improve the model as sophistication can be added over time	Does not fully reflect the risk profile of any individual company
Insurers are measured on a consistent basis → greater comparability of insurers, and transparency to policyholders	
Easier for smaller insurers to implement	

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## Risk-based Capital Regime

- Quantitative considerations

- Internal Model approach

Pros	Cons
Reflects more accurately an insurer's exposure to risk	Implementation is challenging
Incentivizes insurers to focus on risk exposure and drivers	Too costly for small players

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## Risk-based Capital Regime

- Quantitative considerations

2. Determination of regulatory capital requirements

Given the diverse size of insurers in Hong Kong, using a standardized model appears to be easier for initial implementation



## Risk-based Capital Regime

- Quantitative considerations

2. Under Standardized Approach, choice of:

- a. Risk Factor Approach

- i. Regulator defines risk drivers: underwriting risk, credit risk, market risk, operational risk and liquidity risk

- ii. Offers insurers opportunity to learn risk management

OR

- b. Stress Test Based Approach

- i. Regulator defines standardized stress tests

- ii. More advanced approach requiring modeling capabilities





## Risk-based Capital Regime

- Quantitative considerations
  3. Valuation of assets and liabilities

Two approaches to economic valuation:

Market consistent valuation  
vs.  
Amortized cost valuation

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## Risk-based Capital Regime

- Quantitative considerations

Market Consistent Valuation

- a. Technically Challenging : most insurance policies, i.e. liabilities, are not traded in a deep and liquid market
- b. Relatively more volatile as it is highly dependent on the market position on a single valuation day, especially during abnormal market situations

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## Risk-based Capital Regime

- Quantitative considerations

- Amortized Cost Valuation

- a. Challenge : setting of an appropriate discount rate for liabilities
  - b. Most insurers currently use amortized cost valuation



## Risk-based Capital Regime

- Quantitative considerations

- 3. Valuation of assets and liabilities

- Market consistent valuation

- or

- Amortized cost valuation

- or

- A combination of both ?

- Also, forthcoming IFRS 4 Phase II proposal





## Risk-based Capital Regime

- Quantitative considerations

4. Investment

- a. Rules-based or principles-based ?
- a. Asset Liability Matching: prudent person principle; matching in cash flows, currency, duration, etc...
- a. Requirements or restrictions on complex investments, e.g. off-balance sheet structures, derivatives, structured credit products



## Risk-based Capital Regime

- Qualitative considerations

1. Corporate governance and board responsibilities
2. Risk management and other designated functions
  - a. Enterprise Risk Management (ERM)
  - a. Own Risk and Solvency Assessment (ORSA)





## Risk-based Capital Regime

- Other considerations
  1. Capital requirements on overseas branches in HK?
  2. Solo capital requirements vs. Group capital requirements?
  3. Reporting and Disclosure
    - a. Greater levels of transparency
    - b. Right balance between qualitative and quantitative information

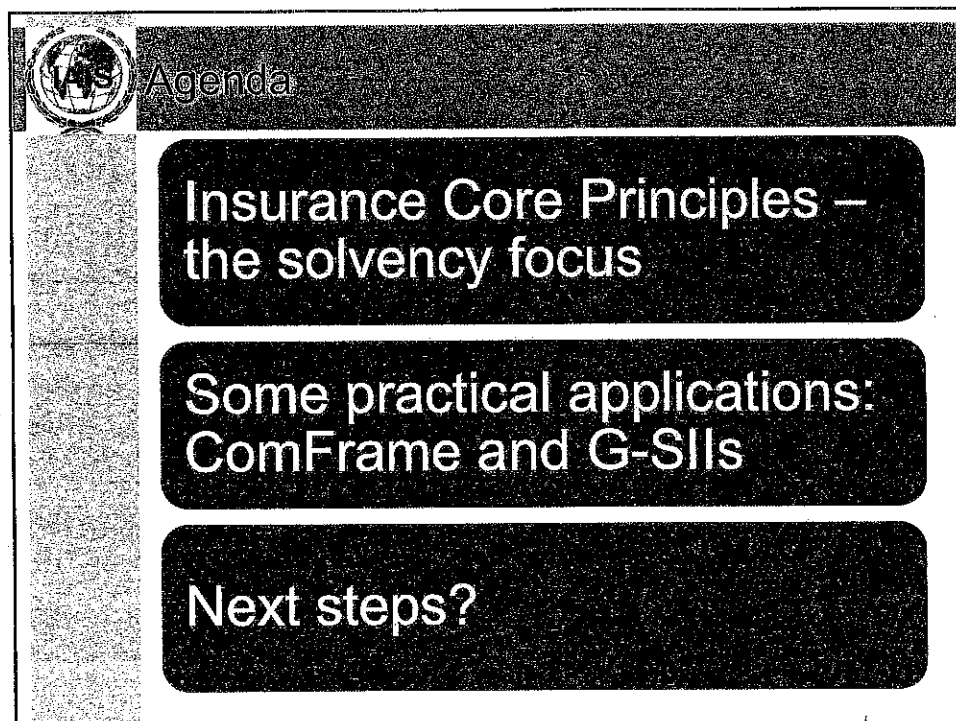


## Risk-based Capital Regime

- Timeframe
  - Q3 of 2013 : Industry consultation
  - 2014-15: Prepare draft detailed rules and perform deep-dive market data testing



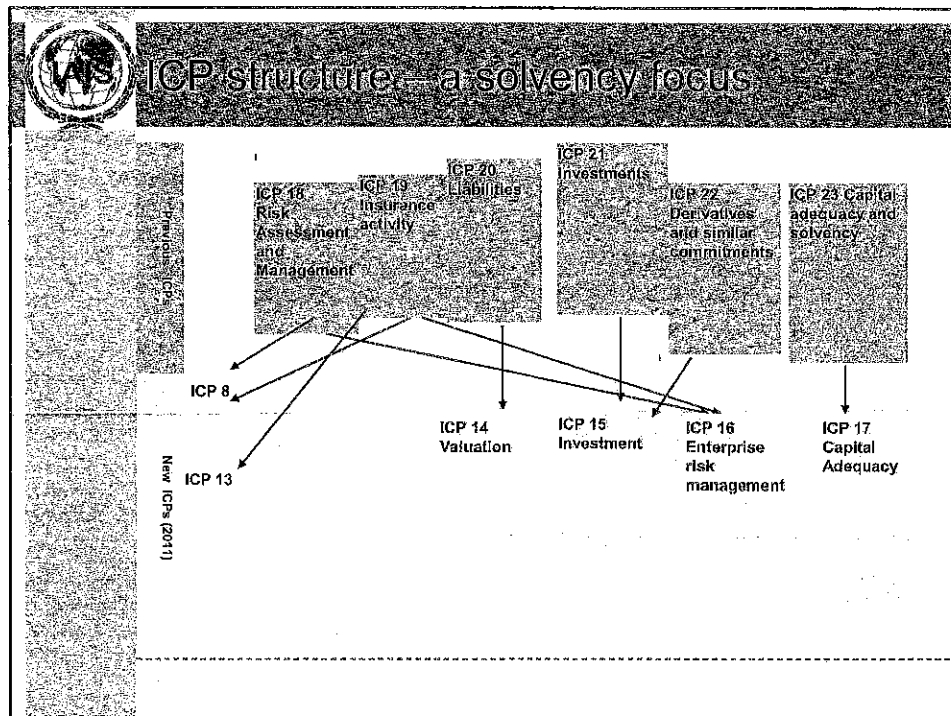












**Valuation core principle**

**ICP 14: *The supervisor establishes requirements for the valuation of assets and liabilities for solvency purposes***

- "Desirable" for as many parallels with general purpose financial reporting requirements as possible.
- **Movement towards convergence:**
- Economic valuation that is reliable, decision-useful and transparent and reflects risk-adjusted present values of projected cash flows for assets and liabilities. Excludes allowance for own credit standing of insurer. Includes appropriate margins (MOCE, or Margin Over Current Estimate)
- **Potential obstacles to convergence**
- Further delays in IFRS4 (and FASB withdrawal). "Economic", but not necessarily market-determined





## Investment core principle

**ICP 15:** *The supervisor establishes requirements for solvency purposes on the investment activities of insurers in order to address the risks faced by insurers*

- Applies to insurance entities *and* risks posed by non-insurance entities within the group
- **Movement towards convergence**
- Asset/liability management with an underlying "Prudent Person Principle"? Security, liquidity and diversification as key requirements
- **But**
- Interpretation can vary



## ERM (for solvency purposes) core principle

- **ICP16:** *"The supervisor establishes enterprise risk management requirements for solvency purposes that require insurers to address all relevant and material risks"*
- Applies to insurance legal entities and any risks posed by non-insurance entities on insurance groups
- **Movement towards convergence:**
- Active risk management strategy that is well-documented and responsive. Consistent approach to risk at senior level in companies. Own risk and solvency assessment (ORSA). Active supervision.
- **Still: Significant scope for determining the best way to supervise**



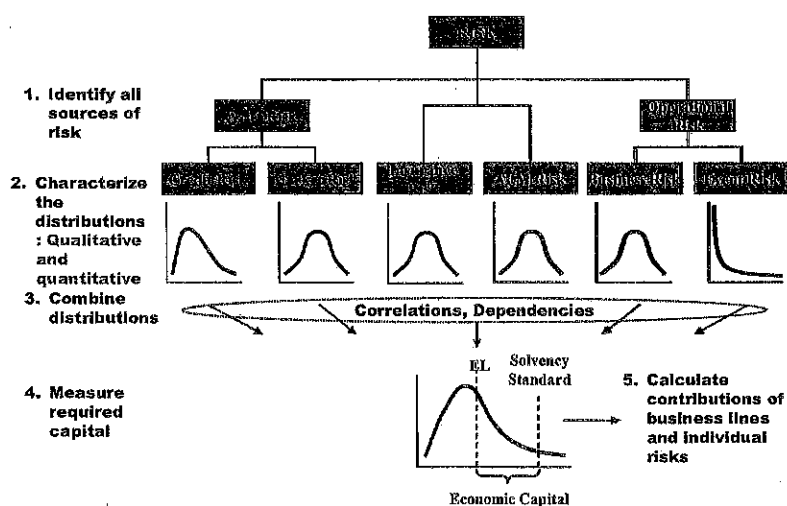


## Capital Adequacy core principle

- ICP 17: *"The supervisor establishes capital adequacy requirements for solvency purposes so that insurers can absorb significant unforeseen losses and to provide for degrees of supervisory intervention"*
- Applies to insurance legal entities and any risks posed by non-insurance entities on insurance groups
- **Movement towards convergence:**
- Total balance sheet approach. Establishment of risk-based regulatory capital requirements control levels and triggers for intervention (SCR/PCR, MCR). Consistency in criteria for quality of capital criteria and capital instruments. Stress and scenario testing.
- **However...**
- Scope for disagreement on risks to be measured and the way to measure them



## Risk Measurement







## Architecture of IAIS international supervisory requirements

Type of entity	Legal Entity	Group	Internationally Active Insurance Group (IAIG)	Global Systemically Important Insurer (G-SII)
Supervisory requirements and actions				
First tier ICPs	ICPs that apply only to legal entities	ICPs that apply to legal entities and groups		
Second tier ComFrame				ComFrame
Third tier G-SII package				G-SII package



## ComFrame: The solvency foundations

### Module 2: Group Structure and Strategy

Element 1: IAIG's legal and management structures

#### Group Governance

Element 2: Governance

#### Group ERM and ERM policies

Element 3: Enterprise Risk Management (ERM)

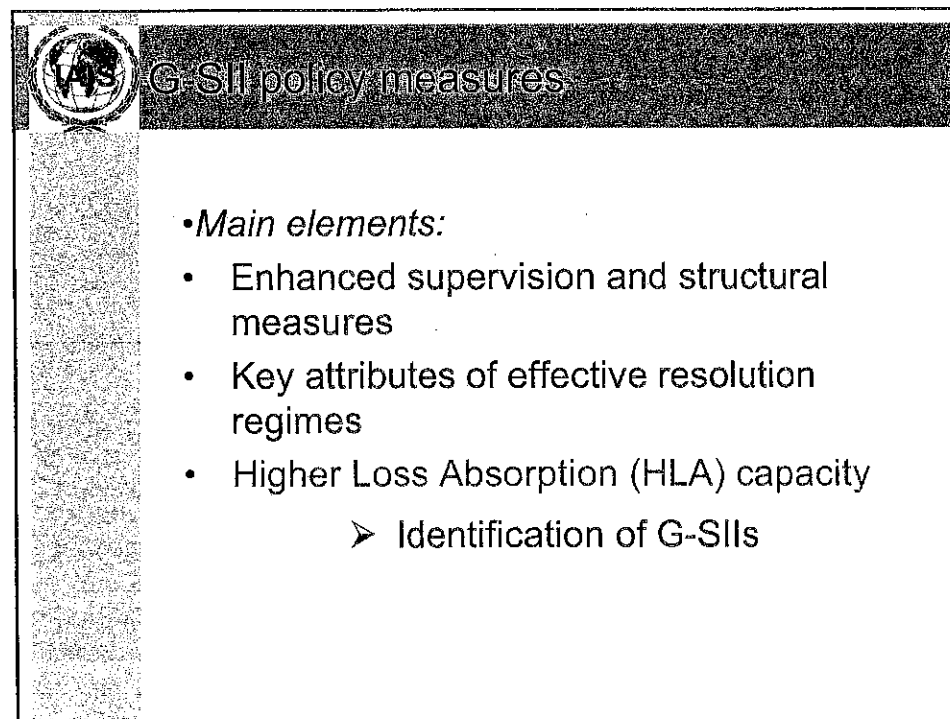
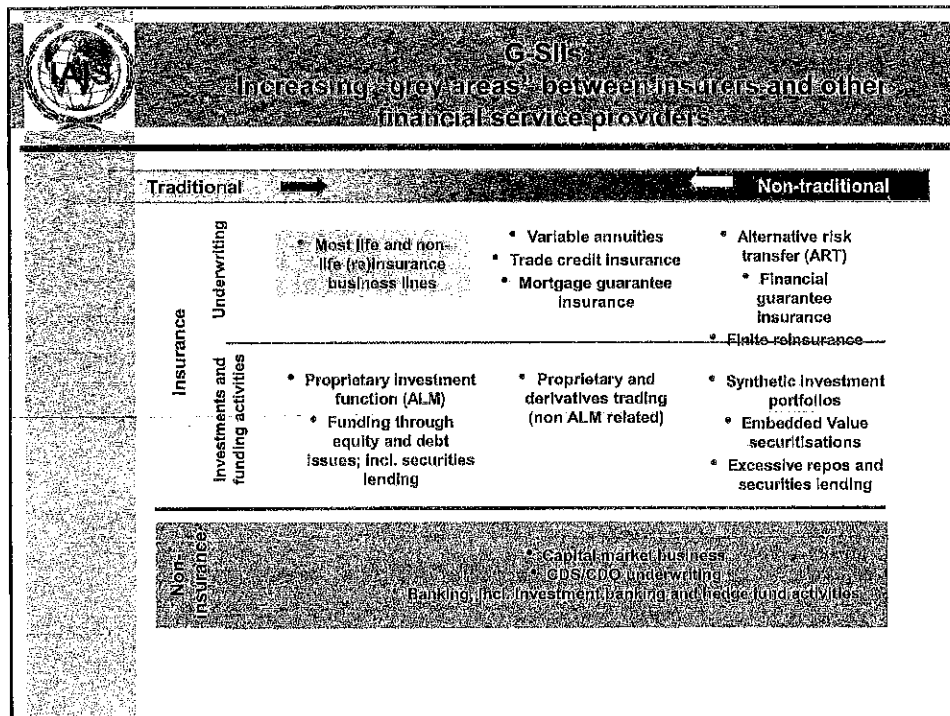
Element 4: Group Financial Condition

Element 5: Group Capital Adequacy Assessment

#### Public Disclosure and Group Reporting

Element 6: Public Disclosure and Group Reporting









## Next steps

- “Natural Selection” Option :
  - “Natural selection” – gradual emergence of best practice from implementation of ICPs
  - May not fit with FSB agenda?
- Earlier Recognition Option:
  - Identify aspects of solvency regulation and supervision that will benefit from earlier convergence: e.g.
    - Education
    - Application to global organisations
    - Application across other financial services





# A Global Capital Standard for Insurance?

## International Seminar on Solvency Regulation Reforms and Cooperation

Presented by: Jonathan Dixon  
Financial Services Board  
South Africa

5 July 2013



## Agenda

- IAIS Principles & Standards
- Solvency Reform in practice
- Beyond Principles & Standards?
- Financial Stability considerations



## IAIS Principles & Standards



- ICPs provide principles-based standards that all solvency frameworks should meet
  - Risk-based, total balance sheet approach, etc.
- Potential for a good deal of variation in solvency frameworks in practice
  - Risks to be measured
  - How to measure them
- ComFrame will contain a “partially harmonised” capital component of solvency assessment for IAIGs

## Solvency Reform in Practice



- A number of jurisdictions around the globe are looking to modernise their solvency frameworks, including emerging markets
- In the absence of specific guidance from the IAIS, many jurisdictions are basing their solvency reforms on existing models, notably Solvency II
- There is a risk that the IAIS objective of global convergence will not be efficiently achieved, as the result may be multiple variations of Solvency II and other risk-based models





## Beyond Principles & Standards?

- In January 2013, the IAIS established a Global Capital Standard Task Force to look at:
  - The arguments/reasons for and against the IAIS developing a global capital standard
  - The main elements of a potential global capital standard
  - The process to be followed to develop a global capital standard
- This work envisaged as independent from the work on ComFrame



## Beyond Principles & Standards?

- Options under consideration:
  - **A global capital standard:** detailed, quantifiable, common supervisory requirements
  - **A global capital accord:** as above, but in the form of an accord to which jurisdictions could elect to be a signatory (such as Basel III)
  - **Global capital application material:** Detailed, quantifiable application material that would enable jurisdictions to implement the solvency ICPs and would provide a global benchmark for developing capital requirements



## Beyond Principles & Standards?



- In addition to the theoretical pros and cons of a global capital standard, the Task Force agreed to recommend:
  - A stock-take of differences and commonalities between the major existing solvency regimes, as well as best practices used by emerging markets
  - Considerable room for cooperation and sharing of lessons among emerging markets

## Financial Stability considerations



- G-SII policy measures are likely to involve higher loss absorbency (HLA) requirements
  - This will be difficult to apply without loss absorbency (LA) standards as a foundation
  - Consideration in short-term of straightforward, backstop capital requirements to apply to all group activities, including non-insurance subsidiaries, for G-SIIs
- A sound capital and supervisory framework for the insurance sector more broadly is essential for supporting financial stability
  - IAIS may need to develop a comprehensive, group-wide supervisory and regulatory framework for IAIGs, including a quantitative capital standard



# Solvency Assessment and Management (SAM)



## International Seminar on Solvency Regulation Reforms and Cooperation

Presented by: Ian Marshall  
Financial Services Board  
South Africa

5 July 2013

## Agenda



- SAM Framework Development
- SAM differences to Solvency II



# Solvency Assessment and Management



## SAM Framework Development

### SAM Framework



#### Risk Based Supervisory Process

##### Pillar 1

Market Consistent  
Assets and Liabilities

Risk based MCR  
& SCR

Own Funds

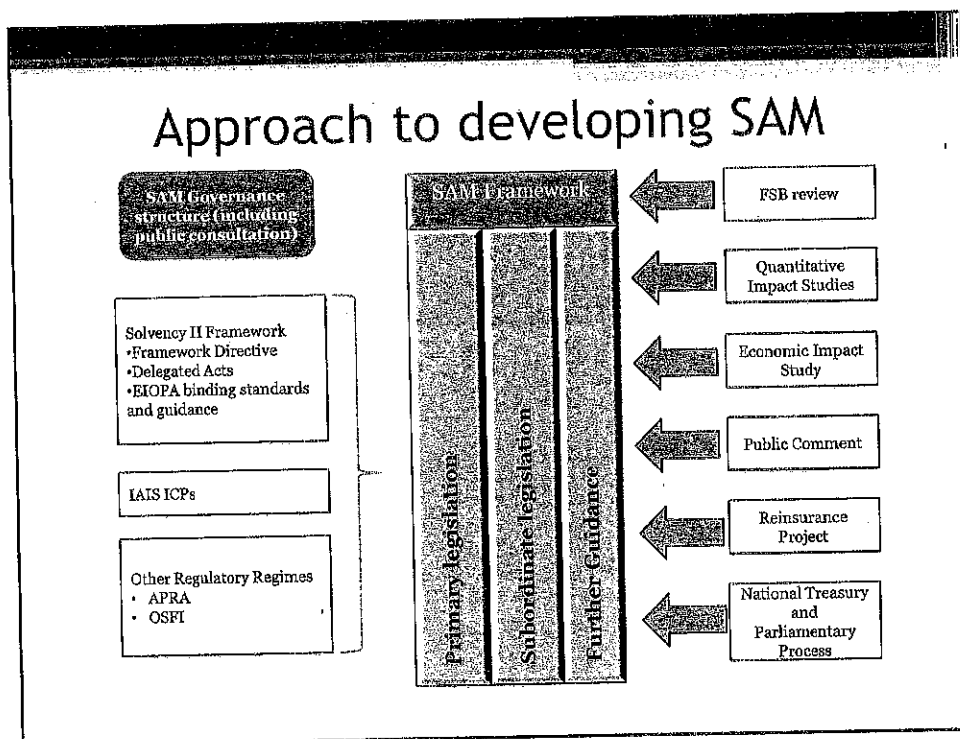
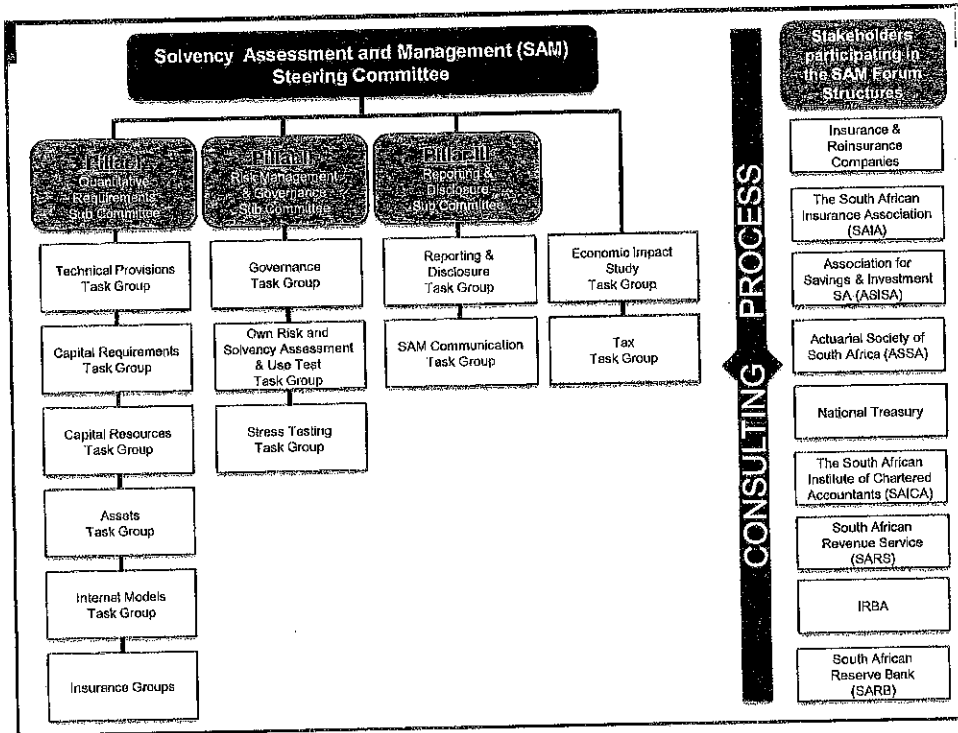
##### Pillar 2

Governance  
Framework  
Control Functions  
Risk Management  
System  
ORSA  
Stress testing

##### Pillar 3

Private Reporting  
Public Disclosure  
Qualitative reporting  
Quantitative  
reporting







## Timelines

	2011	2012	2013	2014	2015	2016
Implementation		Interim measures for NL Insurers		Interim measures for P2 and Groups		Full Implementation
Parallel Run				Light parallel run	Comprehensive parallel run	
QIS	QIS 1	QIS 2	QIS 3			

## Quantitative Impact Studies

	Time for completion	Participation	Comments
QIS 1	Q2 - Q3 2011	95 Insurers 90% of premium	Largely based on Solvency II QIS 5
QIS 2	Q2 - Q3 2012	121 Insurers 98.5% of premium 26 groups	Testing of various options to inform framework development
QIS 3	Q4 2013 - Q1 2014	Compulsory	Based on expectations of final framework





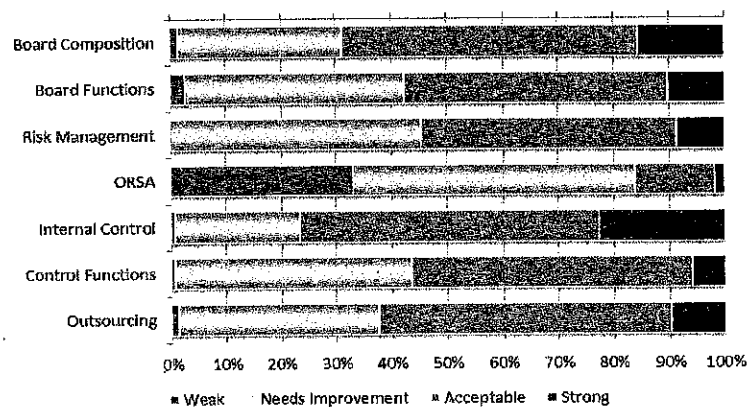
## Internal Model Approval Process

- 6 Insurers where we are considering an internal model from inception of SAM in 2016:
  - 2 are actively engaged
  - 3 are on hold, subject to further information
  - 1 withdrawn
- Further opportunity for insurers to join process at a later point in time



## Pillar II Readiness Review

- Exercise conducted to get an understanding of how insurers are preparing themselves for Pillar II
  - Compulsory survey of all insurers
  - Follow-up interviews with 25 insurers





## Economic Impact Study



- In addition to the Quantitative Impact Studies
- Study will consider
  - Direct impacts
  - Behavioural impacts
  - Broader economic impacts
- Results of study can be used to inform
  - Any changes required to framework
  - Need for transitional measures

## Solvency Assessment and Management



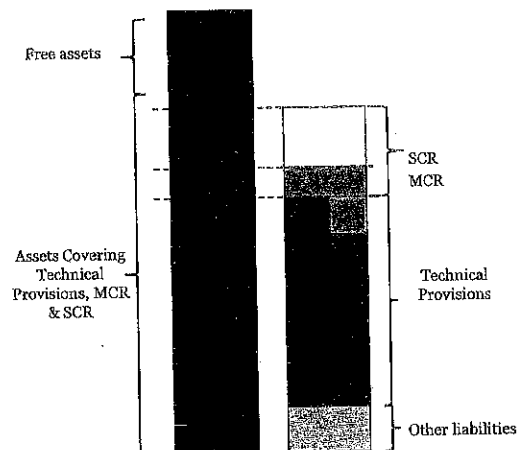
SAM differences to Solvency II



## SAM Balance Sheet



- Basic SAM balance sheet is similar to that of Solvency II



## Technical Provisions



- Risk Free Rate
  - Choice between swap rate and government bond yields
  - Use of matching or illiquidity premium
- Contract Boundaries
- Features specific to SA
  - Cash back bonus on Non-Life products
  - Management of discretionary participation life business

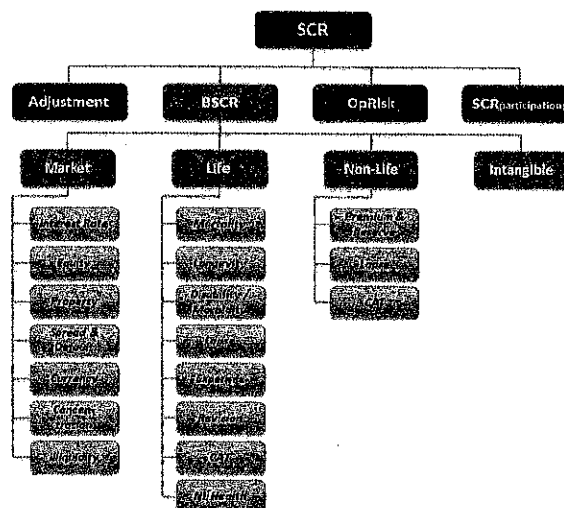


## SCR Structure



- Although the SCR structure for SAM is largely the same as that for Solvency II, where appropriate, changes have been made in the

- Methodology
- Calibration



## Non-Life Underwriting risk



- Use of spreadsheet based model to capture
  - Exposure to premium & reserve risk
  - Exposure to man-made and natural catastrophe risk
  - Insurer specific reinsurance structures
- Calibration exercise
  - Compulsory data requests sent to all insurers
  - Data availability is an issue for South African insurers





## Life Underwriting & Market Risk

- **Greater focus on life lapse risk**
  - Economic valuation of technical provisions make lapses more onerous
- **Credit default**
  - Lack of credit rating data makes calibration difficult
- **Discretionary participation business**
  - Inclusion allowance for change in volatility, not only a change in level



## Group Solvency calculation

- **Different methods of determining group solvency position**
  - Deduction & Aggregation
  - Accounting Consolidation
- **Inclusion of insurance subsidiaries outside South Africa**
  - Included using SAM valuation
  - Included using local regulatory rules
  - Excluded from group solvency calculation
- **Allowance for insurance participations**
  - Lower allowance for diversification due to nature of SA insurance market

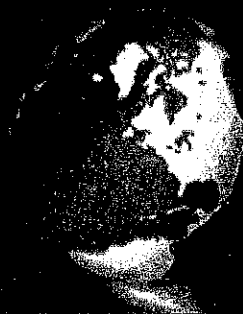




Monetary Authority of Singapore

# Solvency Regulatory Reform in Singapore: RBC 2 and ORSA

Date  
5 July 2013



## Agenda

- Part I: Background
- Part II: Proposed Elements of RBC 2
- Part III: ERM and ORSA

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## Part I

- Part I: Background
  - Current RBC Framework
  - International Developments
  - Drivers Behind RBC 2

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## Current RBC Framework: RBC vs Pre-RBC

- RBC framework for insurers in Singapore introduced in 2005

	Pre-RBC rules	RBC rules
Valuation of insurance contracts	• Prescriptive assumptions, relying on hidden margins with crude approximations	• Best estimate assumptions and market consistent interest rates
Valuation of assets	• Lower of book and market value	• Market/net fair value
Capital Adequacy Requirements	• Prescribed % of liability, ignoring asset and risk matching risks	• Explicit charges for liability, asset mismatching and concentration risk • Clearer definition of forms of capital, alignment with Basel
• More transparent valuation and risk sensitive capital requirement, reflecting true financial conditions, enable early intervention • Greater incentive for active financial risk management, greater discipline in product pricing • More complex valuation tools needed, greater reliance on actuaries & auditors		

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Slide 4 of 21





## Current RBC Framework: Valuation and Solvency

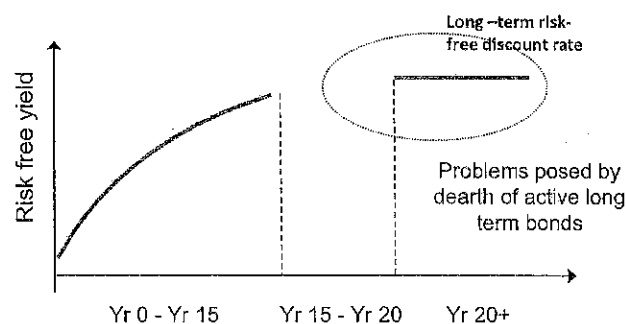
Valuation	Required Capital (Risk Requirements)	Available Capital (Financial Resources)
<ul style="list-style-type: none"> <li>Assets – market value</li> <li>Liabilities – Best estimate value, plus risk margins</li> <li>Risk Discount Rate – Best estimate investment rate (for par business), others risk-free rate (see next slide)</li> </ul>	<ul style="list-style-type: none"> <li>C1 – Liability risk charges</li> <li>C2 – Asset and Mismatching risk charges</li> <li>C3 – Asset Concentration risk charge</li> </ul>	<ul style="list-style-type: none"> <li>Tier 1 with <u>deductions</u> for reinsurance and others, e.g. loans to related company, charged assets</li> <li>Tier 2</li> <li>Limits on certain Tier 1 and 2</li> <li>Up to 50% of future non-guaranteed benefits</li> </ul>

Financial Resources/ Total Risk Requirements  $\geq 100\%$  for each insurance fund;  
At company level, FR/TRR  $\geq 100\%$  or \$5m, whichever is higher (120% is early warning level)

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## Current RBC Framework: Discount Rate for Valuation



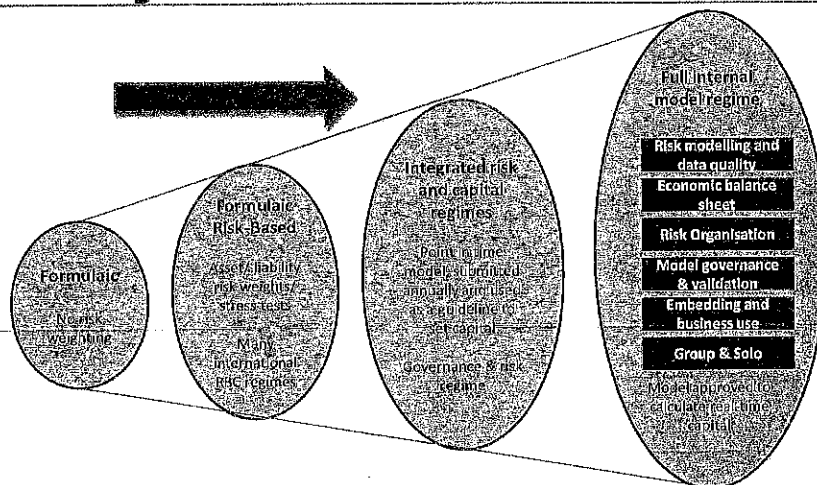
This slide shows how the risk free discount rates are being determined

- Durations 0 to year 15: use prevailing yields of Singapore government bonds
- Durations year 20 and above: weighted average (90/10) between historical average yields (**since inception**) and latest 6-month average yield of 20 year government bonds
- Durations 15 to 20: interpolated yields





## International Developments - Evolution of RBC Regimes

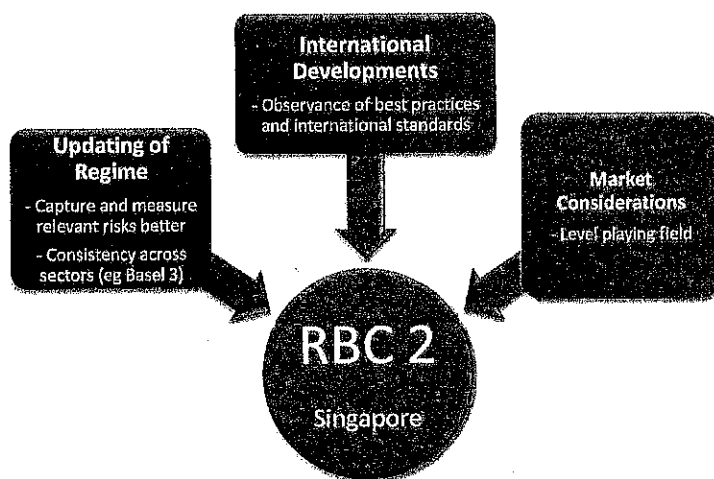


RBC regimes can take many different forms – from formula based solvency calculations to full risk-based supervision and internal models.

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## Drivers Behind RBC 2



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## Part II

- Part II: Elements of RBC 2
  - Key Proposals for RBC 2
  - Timeline for Implementation

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## Key Proposals for RBC 2

*MAS will engage the industry in calibrating and finalising RBC 2*

To have an explicit target capital requirement

- To be determined using the Value at Risk ("VaR") measure of 99.5% level

Target capital requirements to be split into:

- Prescribed Capital Requirement (PCR) → based on VaR of 99.5%
  - An insurer which breaches its PCR will need to submit a plan to restore its capital position within 3 months
- Minimum Capital Requirement (MCR) → based on VaR of 90%
  - If an insurer breaches its MCR, MAS may choose to invoke the strongest supervisory action (such as stopping new business, withdrawal of licence etc)

Introduce explicit capital charges for the following risks:

- Operational Risk
- Insurance Catastrophe Risk
- Spread Risk

Incorporate Basel III features on equity conversion/write-down on breach of regulatory capital requirements for Approved Tier 1 resource.

Slide 10 of 21





## **Timeline for Implementation**

- Will target to get most of the components of RBC 2 finalised by end 2013
- Will allow insurers sufficient time to implement
- Will put in the necessary transitional arrangements

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## **Part III**

- Part III: ERM and ORSA
  - What is ERM
  - Elements of Singapore ERM Framework
  - Illustrative ORSA Template for Singapore

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## What is ERM?

Process of identifying, measuring, controlling and mitigating risks of insurer as a whole

Self assessment of foreseeable and material risks and their inter-relationships

Provides link between ongoing management of risk and longer-term business strategy and capital needs

Links into risk and capital management plans within the group



## How ERM Fits into Existing Requirements in Singapore

credit, market, technology, operational, liquidity and fraud risks, internal controls, insurance core activities

Already in Place Before ERM Framework

Addition of ERM Framework

Stress Testing/  
Scenario Analysis

Various Risk Management Guidelines

Capital Management/  
ALM

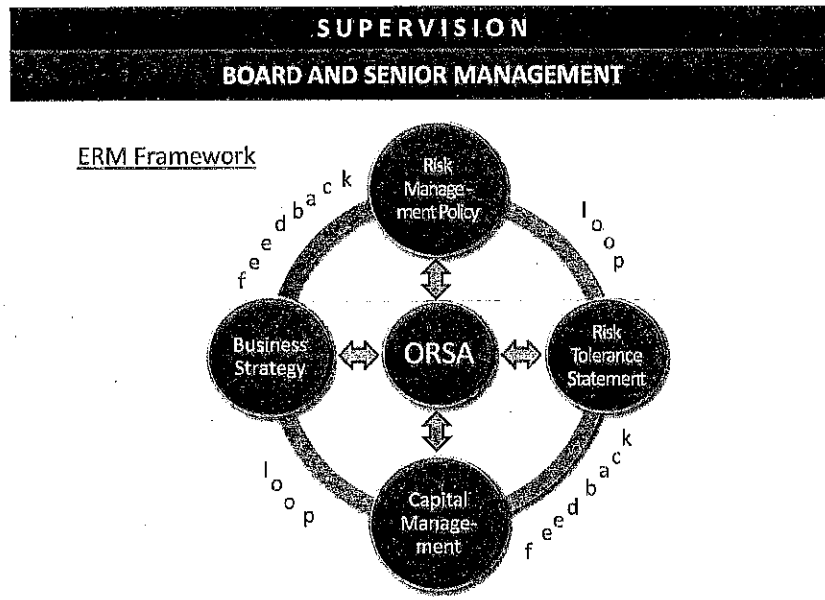
ERM  
Risk Tolerance Statement  
ORSA

feedback loop





## Key Features of ERM in Singapore



## Elements of Singapore ERM Framework: Risk Tolerance Statement

- Sets out its overall quantitative and qualitative risk tolerance limits which takes all material risks and their inter-relationships into account
- Embedded within business strategy and day-to-day operations

For example:

*Solvency will not be placed at undue risk, so that the Group can honour the promises made to customers and fulfil its obligations to other parties such as debt holders.*

*100% of capital requirements are following a 1 in 25 year event.*

*100% Availability at Group level. Adequate to cover economic liabilities with 99.9% confidence over 1 year horizon across the economic cycle.*





### **Elements of Singapore ERM Framework: Risk Management Policy**

- Outlines how material risks are managed, in both the business strategy and day-to-day operations
- Provides for the link between risk management, capital management and business strategy



### **Elements of Singapore ERM Framework: Risk Responsiveness and Feedback Loop**

- Process of assessing changes in risk should result in improvements in risk management policy, tolerance limits and responses to risks
- Allows insurer to monitor and take necessary actions in a timely manner in response to changes in its risk profile
- Ensure that ERM framework remains relevant





## Elements of Singapore ERM Framework: Own Risk and Solvency Assessment (ORSA)

- Responsibility of Board and Senior Management
- Identify relationship between risk management and solvency position
- Considers economic capital, regulatory capital and capital resources
- Assessment of quality and adequacy of capital resources
- Incorporates continuity analysis using tools such as stress testing and scenario analysis



## Illustrative ORSA report template for Insurer

Section		Summary Description
A	Executive Summary	<ul style="list-style-type: none"><li>• Purpose of the report</li><li>• Planning horizon captured in the report</li><li>• Summary of the results of ORSA</li><li>• Key risks that threaten the financial strength of the insurer and the key mitigating actions</li></ul>
B	ORSA Process	<ul style="list-style-type: none"><li>• Summary of the ORSA process</li><li>• Summary of the key risk management policies and comments on the effectiveness of these policies</li><li>• Summary of key changes to the ORSA process and underlying assumptions</li><li>• Details of principal assumptions and interdependencies between key assumptions</li></ul>
C	Strategy and Risk Tolerance	<ul style="list-style-type: none"><li>• Summary of business strategy and risk tolerance</li><li>• Impact of the business strategy on risk profile</li><li>• Relationship between strategy, risk and capital</li></ul>
D	Risk Exposures	<ul style="list-style-type: none"><li>• Risk tolerance statements and assessment of the current risk profile against risk tolerance</li><li>• Assessment of risks which may not be quantified such as group, reputational and emerging risks</li><li>• Assessment of the effectiveness of controls to mitigate key risks</li><li>• Summary of breaches on risk tolerance since last reporting and any impact to risk strategy and capital</li></ul>
E	Business Projection and Stress Testing	<ul style="list-style-type: none"><li>• Brief description of stress scenarios</li><li>• Rationale for scenarios and the description of the assumptions used in scenarios</li><li>• Potential risk, capital and solvency profile under various stressed conditions</li><li>• Qualifications of results (if any)</li></ul>

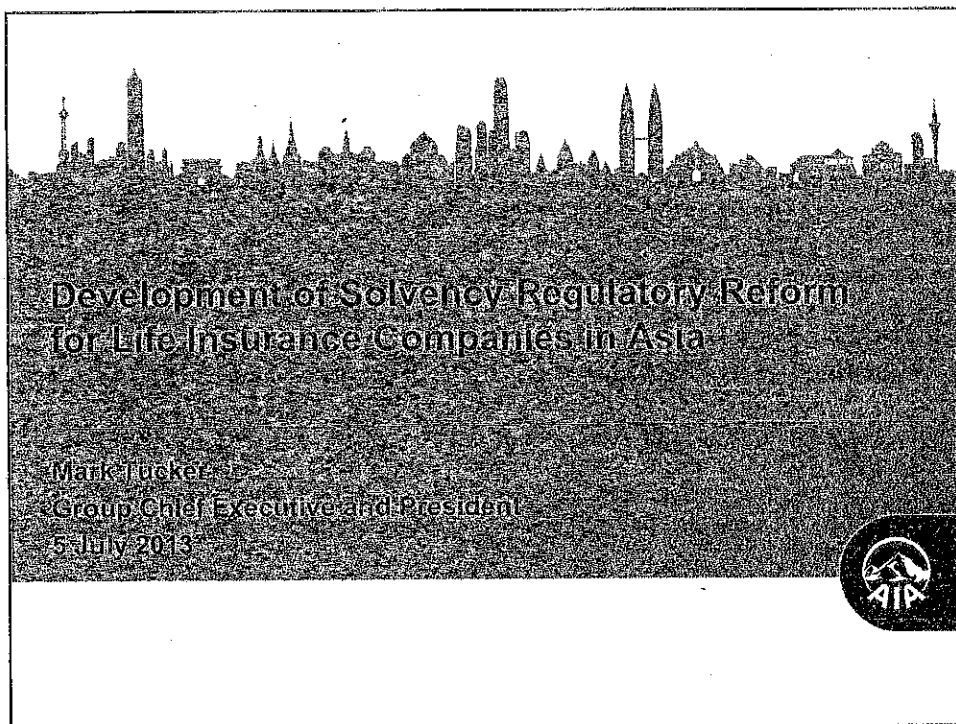




## Illustrative ORSA report template for Insurer

Section		Summary Description
F	Capital Requirement	<ul style="list-style-type: none"><li>• Summary of methodology to determine required capital (regulatory and economic)</li><li>• Assessment of regulatory and economic capital needs</li><li>• Analysis of key drivers of the change in the financial, economic and capital adequacy positions</li></ul>
G	Solvency Assessment	<ul style="list-style-type: none"><li>• Assessment of available funds to meet capital requirements (present and future)</li><li>• Summary of capital management plans</li><li>• Assessment of capital planning and adequacy</li><li>• Capital contingency plans where future funds may be insufficient to meet capital needs, and the timeframe for implementing these measures</li><li>• Assessment of contingent capital or access to additional funds (e.g. from parent company or Head office)</li><li>• Assessment of fungibility of capital</li></ul>
H	Assurances	<ul style="list-style-type: none"><li>• Comparison of actual experience (including the Capital Adequacy Requirement) vis-à-vis projection from the prior year</li><li>• Comment on the suitability of projection assumptions in light of past experience</li><li>• Comment on the management actions taken in the previous period in response to the recommendations stated in the previous ORSA Report</li><li>• Summary outcome of independent review of ORSA (if any)</li><li>• Limitations and reliance</li></ul>
I	Appendices and References	<ul style="list-style-type: none"><li>• Detailed projection of the stress testing</li></ul>





## Four Interdependent Aspects of Life Insurance



1. The role of insurance in social and economic development.
2. The impact of regulatory requirements on insurance and financial markets.
3. The evolving solvency framework in Asia.
4. The role of effective risk management.



## Guidelines for Regulatory Solvency Reform in Asia



- Understand the intended objectives but also the potential unintended consequences of any changes to a regime.
- Maintain **flexibility** to deal with changing circumstances.
- Regulations need to be **simple and practical** for ease of understanding, implementation, comparability and predictability.
- Recognise '**one size does not fit all**' – either within Asia or globally.

## Role of insurance in Social & Economic Development



- **Sustained and stable** economic growth requires the backing of a successful life insurance industry.
- Life insurers **promote regular savings** and invest those savings to provide economic growth.
- Asian state-funded **social security levels are limited**, increasing the importance of private provision for social-economic development.
- **Long-term guarantees are important** for consumer confidence and encourage long-term savings.
- "**Protection gap**" is enormous and a source of concern that life insurers are uniquely placed to address.



## Potential Impact of Regulatory Requirements



- The life insurance industry is a **channel for the conversion** of personal savings into **capital for long-term investment**.
- Long-term investments provide **positive net flows, depth and stability** to capital markets.
- Asset valuation regulations should reflect the insurer's intention and ability to **hold assets to maturity** and the **limited need for immediate liquidity**.
- Valuations of liabilities should reflect the **long-term** and **illiquid** nature of the business written for consistency with assets.
- Regulatory regimes can have a **direct impact on financial markets**.

## Evolving Solvency Framework in Asia



- **Realistic Risk Based Capital (RBC)** regimes have developed in Asia and have proven to be **effective and pragmatic**.
- Regulatory regimes across Asia have demonstrated a **high degree of flexibility** and stability while retaining simplicity, transparency and ease of calculation.



## Features of a Prudent Solvency Framework



1. Avoid imposing **excessive capital charges** and **compounding already prudent margins** in technical provisions.
2. Focus on the company's **long-term capabilities** and intentions; **do not penalise** prudently written products with long-term guarantees.
3. **Simple and straight-forward** basis of calculation; avoid highly technical models.
4. Valuations of liabilities should reflect the **long-term** and **illiquid** nature of the policies written for consistency with assets.
5. **Stable** and **change gradually** over time and should not be distorted by **short term market fluctuations**.
6. Risk factors should be **explicit and robust** with recognition of risk mitigation.
7. **Scenario testing** to identify **pressure points** of unquantifiable risk.
8. **Avoid pro-cyclicality** and allow flexibility for counter-cyclical actions by regulators where prudent.

## Risk Management Structure and Processes



- **Culture and Commitment** – the most important feature.
- Risk controls and limits need to be **embedded** in the key business processes.
- Capital is only one aspect of risk management Risk management should also be incorporated throughout **all business activities**.
- Risk must be assessed by **looking at different scenarios**, both financial and operational, with and without management actions.



## Key Messages



- Regulators should have a goal to promote the healthy expansion of the life insurance industry for the good of the economy
- Need to understand not only the **intended objectives** but also the potential for near and long-term **unintended consequences**
- Maintain flexibility to deal with changing circumstances and individual companies' needs
- Regulatory solvency framework should be simple and practical
- Recognise 'one size does not fit all' -- either within Asia or globally

Thank you