

# Towards a Risk Based Capital framework

11<sup>TH</sup> SEMINAR ON CURRENT ISSUES IN LIFE INSURANCE

KAILASH MITTAL & KUNJ BEHARI MAHESHWARI NOVEMBER 24, 2015



Introduction and background

Possible Models

**Key Considerations** 

Transition roadmap

## LIAG Industry Opinion: RBC Questionnaire

- A questionnaire was circulated by LIAG to solicit industry views on the various aspects of RBC in November 2015. Throughout this presentation, we present the relevant summary of the feedback received.
- We received responses from the Appointed Actuaries of 15 life insurance companies in India:

Aegon Religare Life	DHFL Pramerica Life	HDFC Life	Kotak Life	Reliance Life
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Bharti AXA Life Exide Life IndiaFirst Life Max Life SBI Life

Birla SunLife Future Generali Life ICICI Prudential Life PNB MetLife Shriram Life



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# Introduction Solvency standard in India: the Journey so far



# Extant regulation: ALSM Regulations, 2000

INSURANCE REGULATORY AND DEVELOPMENT AUTHORITY
NOTIFICATION
New Delhi, the 14th July, 2000

Insurance Regulatory and Development Authority (Assets, Liabilities, and Solvency Margin of Insurers, Regulations, 2000.

ENo. IRDA/Reg/7/2000 .-

In exercise of the powers conferred by clauser (s), (2) and (2a) of sub-section (2) of section 1144 of the Insurance Act, 1935, (4 of 1930, rest with section 26 of the Insurance Regulatory and Development Authority Act, 1999 (4) of 1999, the Lathorit. in contribution with the Insurance Advisory Committee, breely makes the following regulations: another-

1.Short title and commencement.—(1) These regulations may be called the Insurance Regulatory and Development Authority (Assets, Liabilities, and Solvency Margin of Insurers) Regulations, 2000.

(2) They shall come into force from the date of their publication in the Official Gazette.

- Definitions.—(1) In these regulations, unless the context otherwise requires —
   (a) "Act" means the Insurance Act, 1938 (4 of 1938);
- "Authority" means the Insurance Regulatory and Development Authority established under sub-section (1) of section 3 of the Insurance Regulatory and Development Authority Act, 1999 (41 of 1999);
- (2) All words and expressions used herein and not defined but defined in the Insurance Act, 1938 (4 of 1938), or in the Insurance Regulatory and Development Authority Act, 1999 (41 of 1999), or in any Rules or Regulations made thereunder, shall have the meanings respectively assigned to them in those Acts or Rules or Regulations.
- Valuation of Assets.—Every insurer shall prepare a statement of the value of assets in Form IRDA- Assets- AA in accordance with Schedule I.

1983G2/2000-

Sets out the framework for existing factor-based solvency standard for life insurers.

June 2009: roadmap for moving towards Economic Capital

Institute of Actuaries of India

Report of the Committee to draw the road map for moving towards Economic Capital and Market Consistent Embedded value for life insurance industry in India

(Chairman: Dr R Kannan)

Mumbai

Introduced EC for life insurers in India, with subsequent circular mandating private submissions of an internally calculated EC to the regulator

April 2014: roadmap for RBC approach in the insurance sector

Report of the Committee on Road Map for Risk Based Solvency Approach in Insurance Sector

P. A. BALASUBRAMANIAN Chairperson

Insurance Regulatory and Development Authority

Hyderabad April 22, 2014

Suggested up to 3 Quantitative Impact Studies starting 31 March 2014, with adoption of a "twin peak" approach to solvency by 31 March 2017

September 2015: review of regulations – life insurance

REVIEW OF REGULATIONS – LIFE INSURANCE
Report of the Committee constituted by IRDAI

Part 1

September 20:

Proposed to keep unchanged the core of the current supervisory structure, with RBC to form another layer so as to supplement the existing solvency structure

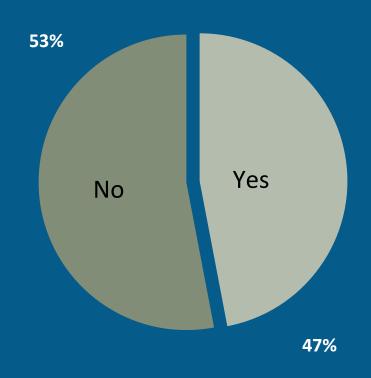


# WHY is revisiting the current solvency framework pertinent?



An effectively defined capital requirement serves several purposes:	Efficacy of the current regime
☐ provides a rainy day fund, so when bad things happen, there is money to cover them	(too conservative?)
☐ motivates a company to avoid undesirable levels of risk (from a policyholder perspective)	MAYBE?
☐ promotes a risk measurement and management culture within a company, to the extent that the capital requirements are a function of actual economic risk	???
☐ provides a tool for supervisors to assume control of a failed or failing company	<b>✓</b>
☐ alerts supervisors to emerging trends in the market	MAYBE?
ensures that the insurance portfolio of a troubled insurer can be transferred to another carrier with high certainty.	<b>✓</b>
Research Report of the Insurer Solvency Assessment Working Party INTERNATIONAL ACTUARIAL ASSOCIATION	

# Are we comfortable with current set of Solvency Regulations on Capital Management?



Industry view: a mixed perception regarding desire to change the current regime.



Both merits and demerits of the current regulation were given due consideration

Merits:

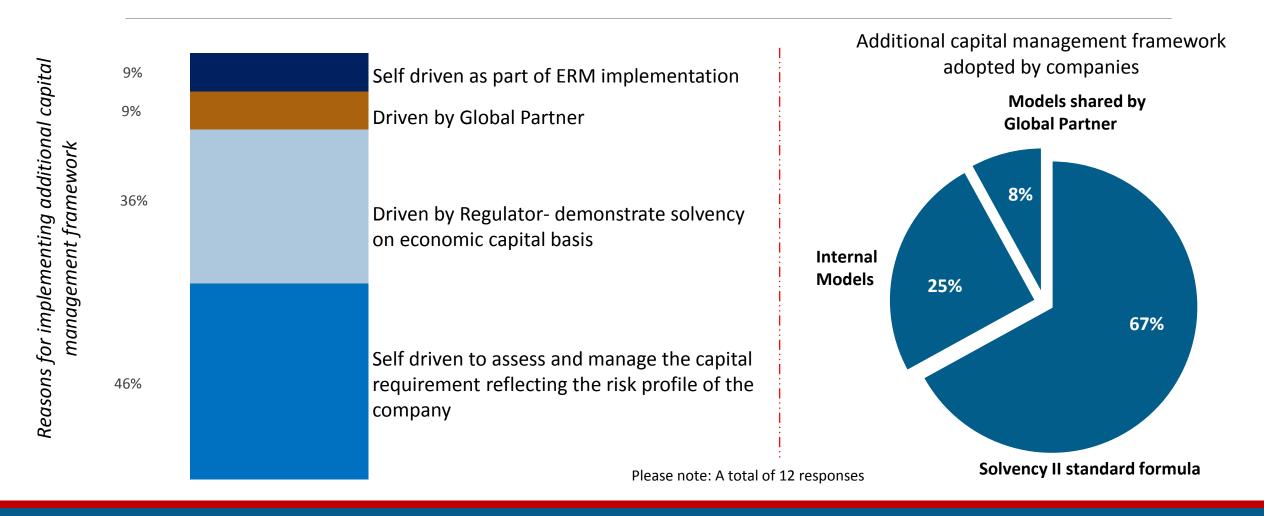
Demerits:

- Easy to understand & implement
- Ensures consistency across companies
- Factors used for different line of business are not based on actual experiences
- Doesn't take into account Risk
   Management practices adopted by
   Insurers
- Qualitative considerations, such as good Corporate Governance, are ignored.
- Riskiness of the investment portfolio is not given due consideration

Please note: A total of 15 responses



Industry view: in two-thirds of the cases, regulatory solvency assessments are being supplemented by internal capital models to provide adequate risk oversight





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# WHAT could a revised solvency framework look like?



Clear global shift towards risk based regimes: are we lagging

**No Solvency Standard** 

**Factor-based solvency** standard

**Risk-based solvency standard** 

Internal model based solvency standard

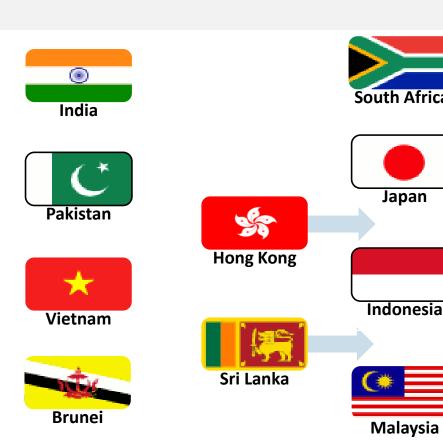
China

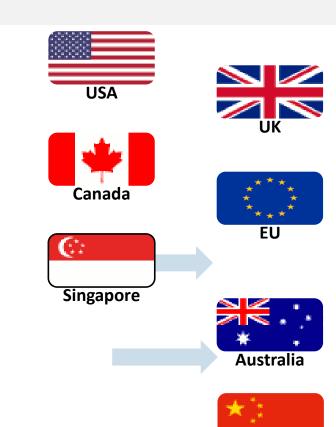
Global points of reference











# WHAT could a revised solvency framework look like?



A clear trade-off between accuracy of risk-measure and model sophistication

							Full Internal Model (Stochastic)		
						Full Internal Model			
						(Deterministic)			
feasure					Partial Model (Stochastic)				
Accuracy of Risk Measure				Partial Model (Deterministic)					
Accuracy			Own Shocks						
		Standard Shocks							
	Simple Factor								
	Model Sophistication								

### **Consider:**

**Regulator** ↔ **Industry engagement** 

### **Calibrations:**

- Who?
- How?

Methodologies and practices well established in many cases: We needn't reinvent the wheel

Importance of "relevance"

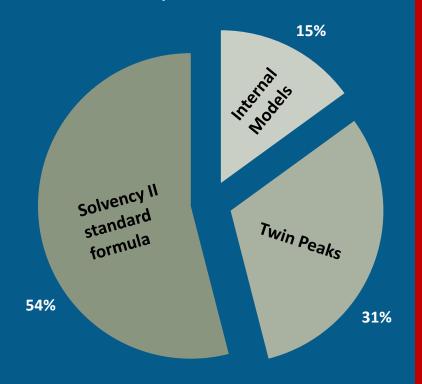


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Possible Models

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# Which RBC framework is suitable for Indian Life Insurance Industry?



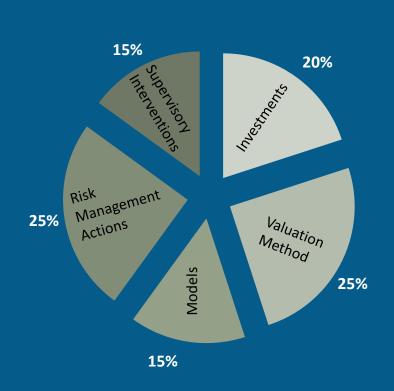
Solvency II standard formula appears to be the preferred choice, with the following modifications proposed:



- Stresses and correlation matrix should be calibrated with reference to the Indian context
- Simplification of the model in light of unavailability of local expertise
- Amendment of disclosure requirements
- Changes in Operational Risk calculation methodology in line with the Indian Market
- Due consideration of Investment opportunities available with Insurers
- Reduce subjectivity in calculation

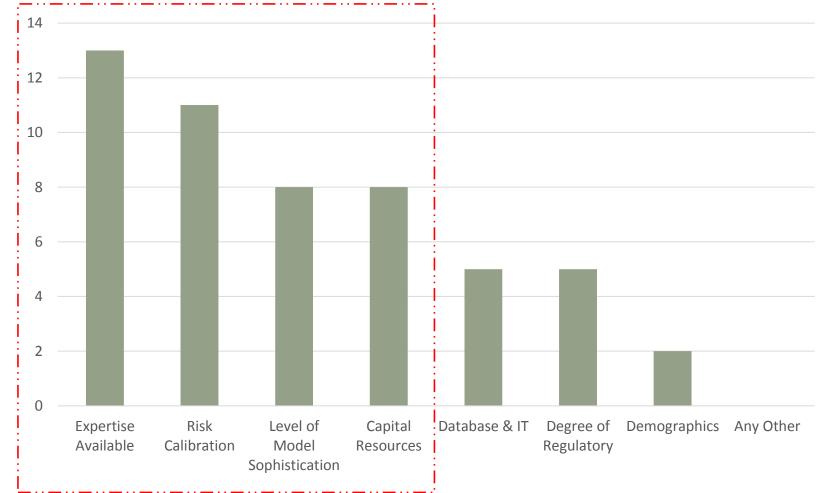
Other frameworks like use of Internal models for economic capital calculation or Twin Peaks approach were also suggested with similar modifications

# Weightage of factors to be considered while framing regulations on Capital requirements



Key challenges in adopting a change in the current solvency framework





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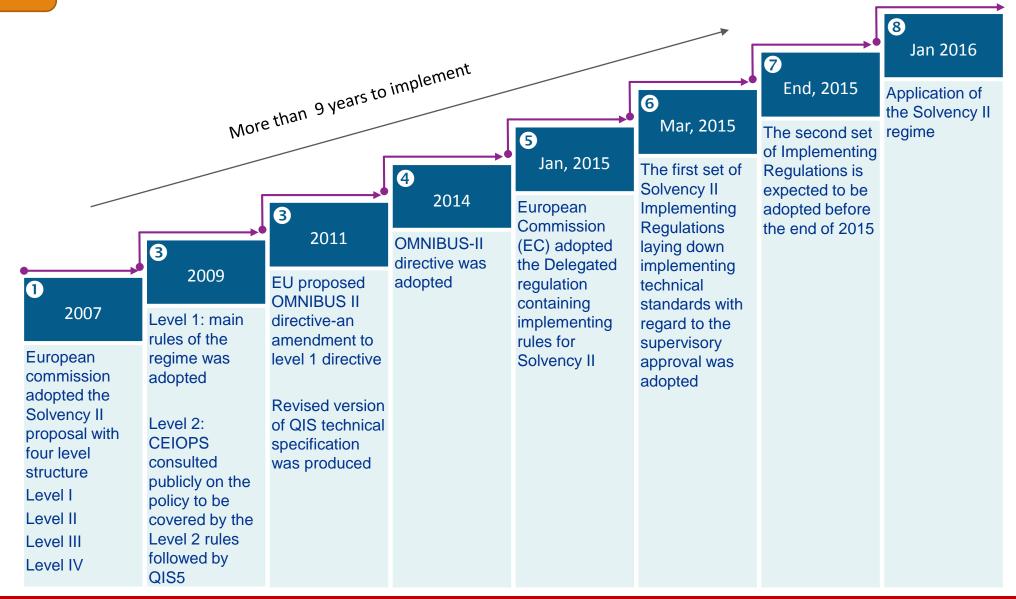
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# How? A possible roadmap: Solvency II





# How? A possible roadmap: C-ROSS?



### **Evolution of Chinese Solvency Regulation**

Full implementation of C-ROSS is targeted in 2016 with a transition period with respect to meeting the capital requirements.

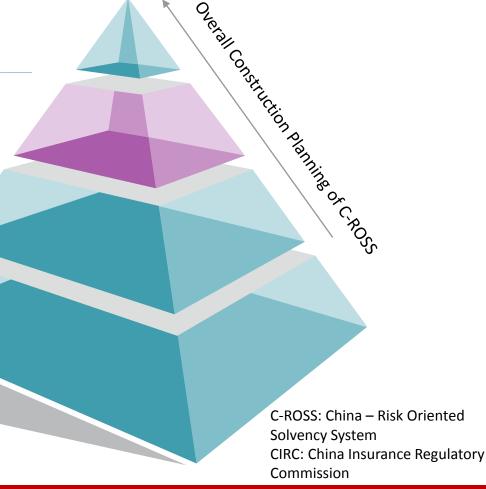
Industry testing started in 2014 with the aim to evaluate the reasonableness and practicability of the C-ROSS formula

In 2012, CIRC researched various solvency standards with a target delivery for a new risk-based solvency formula by the end of 2014

Prior to 2012, minimum capital requirements were set based on the 3 year average of net written premium and 3 year average of net reported losses

Key challenges - balance between specific companies' features as well as a standard approach to fit for all

The implementation went fairly smoothly due to the high authority of the regulator in China



# How? A possible roadmap for India



Twin peaks approach

– running the two
frameworks in parallel for
some time

Quantitative study route

– similar to QIS studies by
EIOPA for Solvency II

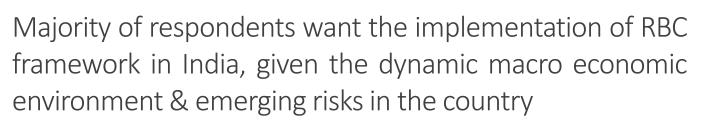
Economic Capital or RBC

– based on internal
models calibrated by the
insurers

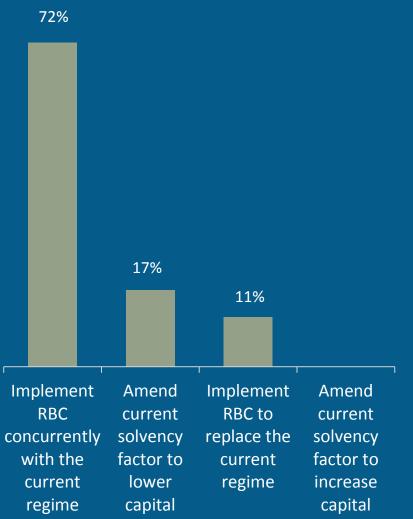
QIS: Quantitative Impact Study

EIOPA: European Insurance and Occupational Pensions Authority

# How do you want the RBC framework to be implemented?







Suggestion were made to implement the RBC framework in a phased manner, concurrently with the current regulatory regime before replacing it so as to prepare better for the change

The respondents voiced over their concern on the high solvency factor currently been used for capital requirement under current regime

# Thank you





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