Solvency regime in India

By

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Structure of my presentation

- A brief background
- Solvency regime in India
- Prompt corrective framework

A brief background

- With the enactment of "Insurance Regulatory and Development Authority Act, 1999" private participation in the Indian insurance market was allowed, though foreign equity in any insurance company being restricted to 26%.

Growth of Insurance Companies

	2000-01	2003-04	2008-09
Life Companies	1	14	22
Public	1	1	1
Private	0	13	21
Non-Life Companies	6	15	22
Public	6	7	7
Private	0	8	15

Size of Life Insurance Premiums

$Billion

Details of premiums	**2006-07**	**2007-08**
FIRST YEAR	15	19
Growth (year on year) during the year	95%	24%
RENEWAL	16	22
Growth (year on year) during the year	20%	34%
TOTAL	31	40
Growth (year on year) during the year	47%	29%

Exchange rate used - 1USD = 50INR

Size of Non-life Insurance Premiums

$Billion

Premium underwritten within India during	**2007-08**	**2008-09**
TOTAL	5	6
Growth (year on year) during the year	22%	8.86%

Excluding specialized insurers and reinsurer

Exchange rate used - 1USD = 50INR

Insurance penetration
(Premium as a % of GDP)

Year	Total Business	Life	Non-life
2000	2.32	1.77	0.55
2003	3.28	2.60	0.67
2007	4.70	4.00	0.60

Insurance density
(Premium per capita in US dollar)

Year	Total business	Life	Non-life
2000	9.9	7.6	2.3
2003	16.4	12.9	3.5
2007	46.6	40.4	6.2

International Comparison of Business Mix Non-Life Insurance Industry

Country	Motor	Fire	Liability	Others
CANADA	48%	30%	14%	8%
UK	32%	42%	10%	16%
AUSTRALIA	37%	27%	19%	17%
INDIA	48%	14%	1%	37%*
* Includes Health Insurance of nearly 15%				

II. Solvency regime in India

- Minimum solvency requirement of $10 million.
- Simple factor based approach.
- In arriving at the solvecy margin available the assets are to be valued as follows:

  Equities-----at market value

  Debt-------HTM----at book value

  HFT----at market value
- Control level of 1.5 times the minimum requirement is observed.

Solvency regime – Life Insurance

- The solvency margin requirement is based on the liability estimated on actuarial basis, which is a sum of x% (first factor) of Technical / mathematical reserves and y% (second factor) at sum at risk.

Details of solvency factors – Life Insurance

Class of Business	First factor	Second factor
Non-linked Individual Life – Pure Term	3%	0.1%
Non-linked Individual Life – Others	3%	0.3%
Non-linked Individual General Annuity, Pension	3%	0%
Non-linked Group Life	1%	0.1%
Non-linked Group Others	3%	0%
Linked Life – with guarantees	1.8%	0.2%
Linked Life – without guarantees	0.8%	0.2%
Linked General Annuity, Pension – with guarantees	1.8%	0%
Linked General Annuity, Pension – without guarantees	0.8%	0%
Health – Linked – with guarantees	1.8%	0%
Health – Linked – without guarantees	0.8%	0%
Health – Non linked – Individual and Group with term > 1 yr.	3%	0%
Health – Non linked – Group with term < 1 yr.	1%	0%

Solvency regime – Non-life Insurance

- The solvency margin requirement is higher of 20% of net premium income or 30% of net incurred claims for the year under consideration.
- Reinsurance credit allowed in this regard is limited, as detailed in next slide.

Details of reinsurance credit factors – Non-life Insurance

Class of Business	Credit allowed
Fire	50%
Marine – Cargo	60%
Marine – Hull	50%
Miscellaneous (Including motor)	75%
Engineering	50%
Aviation	50%
Liability	75%
Others	70%
Health	75%

Status of Life Insurance Industry

$ Billions

Description	2007-08
Total policyholders' Investments	159
Available Solvency Margin	10
Solvency Ratio	159%

Status of Non-Life Insurance Industry

$ Billions

Description	2007-08
Total Investments	16
Available Solvency Margin	6
Solvency Ratio	298%

Solvency ratios of insurers

Solvency Ratio	Life Insurers	Non-Life Insurers
	31-03-08	**31-03-08**
130% to 150%	0	1
150% to 170%	2	4
170% to 200%	3	4
200% to 230%	1	3
230% to 250%	5	0
> 250%	7	7
Solvency ratio = Available solvency margin **to** Required solvency margin		

III. Prompt Corrective Framework (Early Warning System)

Ratios selected for this work

- Expense ratio
- Lapse ratio
- Yield on assets
- Claim ratio
- Solvency ratio

Finding the weights and determining the EW parameters

- Data for the period 2005-06 to 2007-08 were used.
- A multi variate linear regression using weighted least squares method was used as follows:
- RSM = f (ER, LR, CR and YoA)
- p values of each of the independent variables were found
- Weights were derived using the p values (for deriving lower and upper limits of the EW parameters)
- For each of the independent variables, a histogram was plotted and found 75 % and 95 % of the distribution of each of the independent variables
- The above procedure was used for the first three independent variables and for the YoA we used 25 % and 10 % values

Weights and percentile values for independent variables

Independent variable	75 percentile / 25 percentile for YOA	95 percentile / 10 percentile for YOA
Expense ratio (12.86)	52.75	69.01
Lapse ratio (27.47)	24.87	30.42
Claim ratio (29.87)	0.15415	0.2465
YoA (29.81)	7.01	4.68

EW Parameters

- $EWP_{LL} = \sum (w_i \text{ Lower percentile}_i) + w_4 (1 - \text{Upper percentile}_4)$

$EWP_{Ul} = \sum (w_i \text{ Upper percentile}_i) + w_4 (1 - \text{Lower percentile}_4)$

EWPs

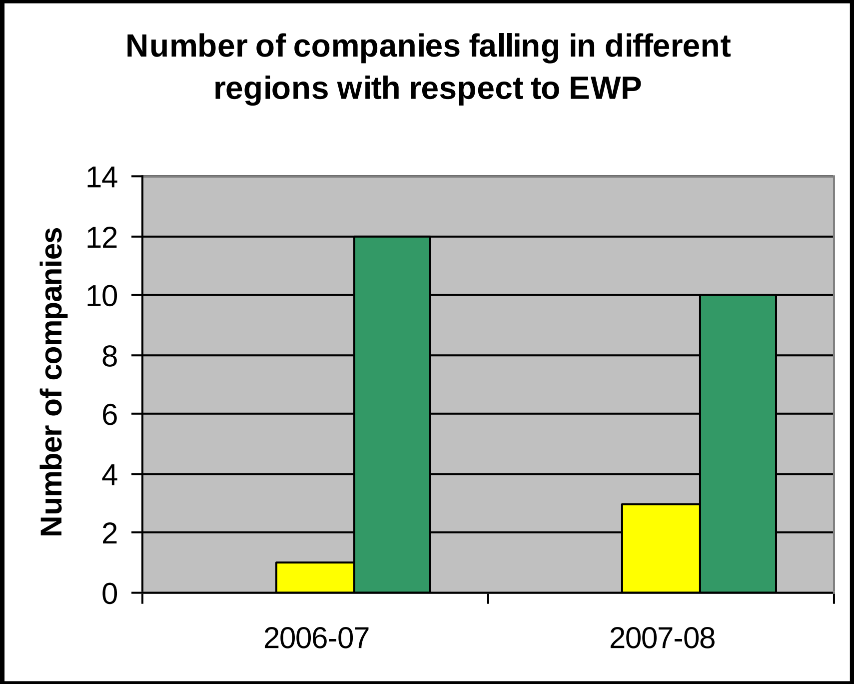
Region	Green	Lower Amber	Upper Amber	Lower Red	Upper Red
Solvency ratio	1.7	1.5	1.3	1	
Expense ratio	52.75		69.02		
Lapse ratio	24.87		29.84		
Yield on assets	7.1		4.7		
Claims ratio	1.54 per 1000 no.of policies		2.465		

Industry

Solvency ratio

Frequency table

	High Red	Red	Amber	Green
Year	SR<=1.3	1.3<SR<=1.5	1.5<SR<=1.7	SR>1.7
2005-06	1	0	2	10
2006-07	0	1	3	9
2007-08	0	0	3	10


Number of companies falling in different regions with respect to EWP
Number of companies
14
12
10
8
6
4
2
0
2006-07
2007-08

Mandatory and Discretionary policy actions

Policy actions	Lower Amber (1.5 ≤ SR < 1.7)	Upper amber (1.3≤SR <1.5)	Lower red (1.3≤ SR < 1.0)	Upper red (< 1.0)
Mandatory/ Discretionary	**(All discretionary actions and no mandatory actions)** 1. Review premium adequacy and in particular review group business 2. Put a limit on new branch expansion expenses 3. Increase government securities proportion and review the	**(a combination of discretionary and mandatory actions)** • Review of item 6 of previous column • The insurer is put on a monthly monitoring process • Put limit on new business	**(all mandatory actions)** • 1. Same as in the previous column and 2 Plan for recapitalization 3. Ban on shareholders' transfers	1. Section 64VA—Clause 1 begins to operate 2. Some more clarity is needed 3. Absolutely no new business and all assets are ring fenced and cash flow movements are

Mandatory and Discretionary policy actions

Policy actions	Lower Amber (1.5 ≤ SR < 1.7)	Upper amber (1.3≤SR <1.5)	Lower red (1.3≤ SR < 1.0)	Upper red (< 1.0)
Mandatory/ Discretionary	4. Action plan to reduce lapsation 5. Review the target markets for principal products 6. Discussion with the Board on their plan of corrective action and ask the Board to monitor and report to the Regulator	4. Review the guaranteed products and limit the sales 5. Review the investment strategy 6. Review the commission structure and move towards	4. Bring in new management 5. Cap expenses including marketing, salaries etc., 6. Ring-fence assets and all investments in Govt. securities	4. New shareholders are identified and all provision regarding PHs' interest protection are strictly observed

Mandatory and Discretionary policy actions

Policy actions	Lower Amber (1.5 ≤ SR < 1.7)	Upper amber (1.3≤SR <1.5)	Lower red (1.3≤ SR < 1.0)	Upper red (< 1.0)
Mandatory/ Discretionary		7. Review the claim experience and withdraw loss making products 8. Take steps to reduce laps rates 9. Review reinsurance strategy	7. Regular interaction with the Board. 8. Discuss the continuation of the ownership 9. Appoint Regulator's nominee in the Board 10. Explore	

THANK YOU