Growth of Indian Insurance Industry and Determinants of Solvency

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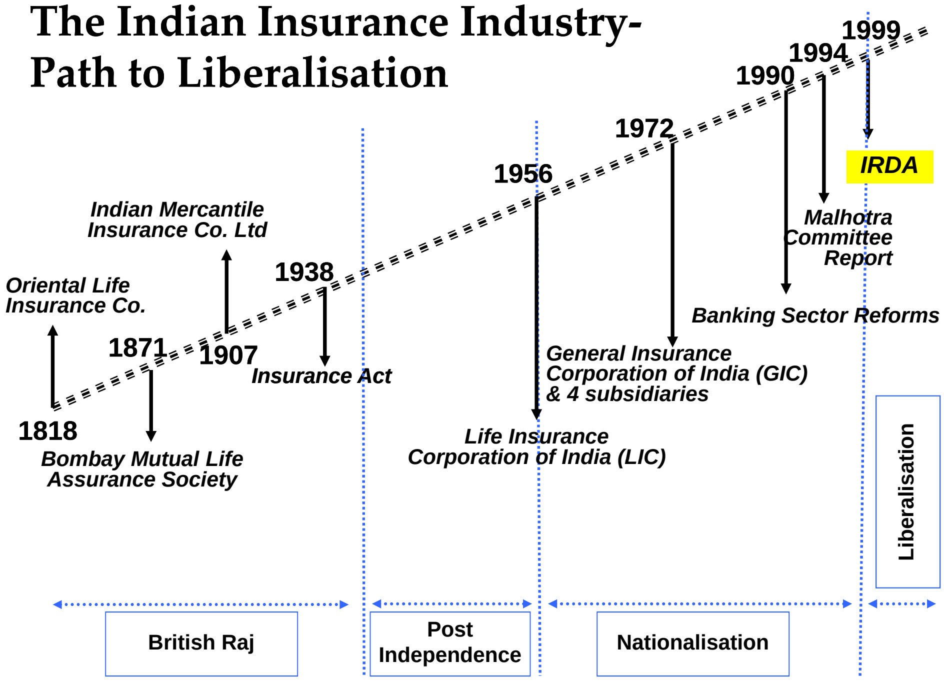
Subir Sen, PhD
subir.sen@teri.res.in
TERI University, India

Outline of Presentation

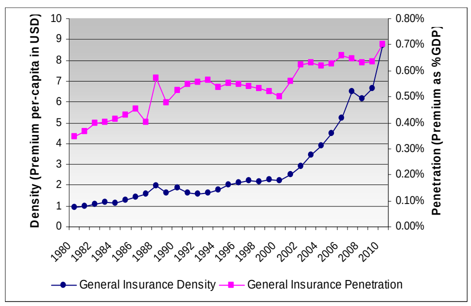
- The Indian insurance industry
- Understanding solvency
- Methodology and Data Issues
- Key Findings
- Conclusions and Policy Implications

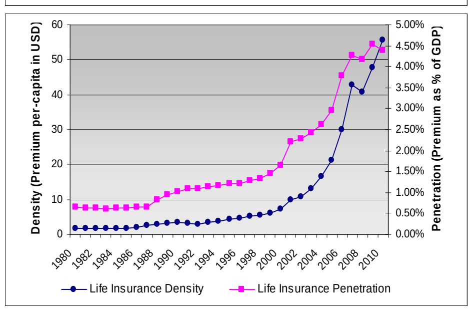
The Indian Insurance Industry- Path to Liberalisation



State of Insurance Industry

- IRDA (1999) leading the industry
- GDP growth (annual %) around 8.56% during 2005-2010 and Gross Savings to GDP ratio around 33.6%
- Fastest growing middle class
- Urban development rate of around 54% and improvements in life expectancy
- In 2010, premium growth slowed to 4.2% & premium share compared to global standards very low
- Operational issues of importance for insurers:
  - Controlling expenses, Improvements in investment yields, claim settlement process, capital requirement, etc.

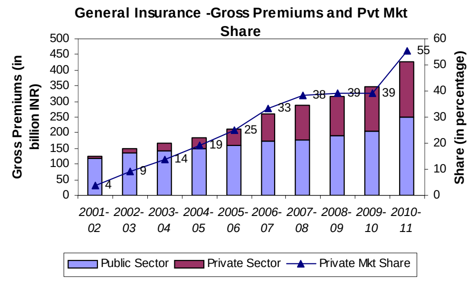


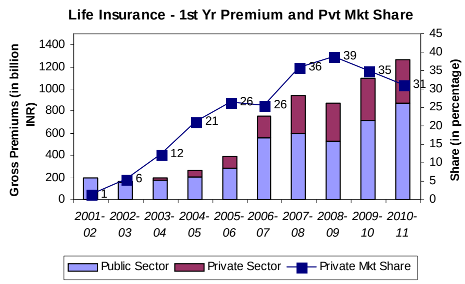


Data from World Bank, World Development Indicators and Swiss Re, Sigma

State of Insurance Industry

- As on March 2011, 24 general insurers were operational
  - 4 public sector insurers
  - 2 specialised insurers
  - 3 stand alone health insurers
  - 1 private insurer fully owned by Indian business house
  - 14 private sector insurers, JV with foreign insurer
- 24 life insurers were operational
  - 1 public sector insurer
  - 2 private insurers fully owned by Indian business house
  - 21 private sector insurers, JV with foreign insurer
- 1 Reinsurer – General Insurance Corporation of India (GIC)
- Oligopolistic Competition in the insurance market and strong growth between 2001-02 to 2010-11

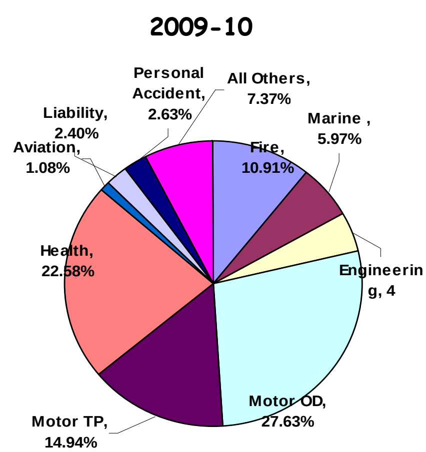




Data from IRDA

Product Mix –General Insurers

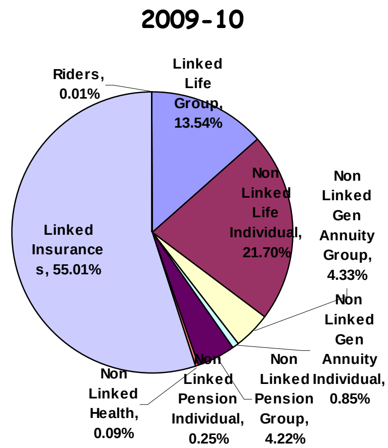
- Retail segment fuelling growth, personal lines are increasing with growing income levels and lifestyle changes
- Motor Insurance continues to dominate
- Changing mix following "detariffication"
- Medicliam policies and role of Third Party Agencies



Data from IRDA

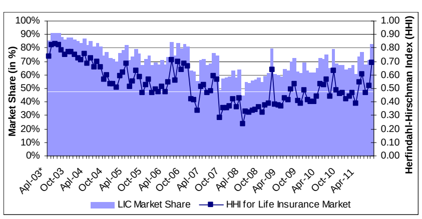
Product Mix –Life Insurers

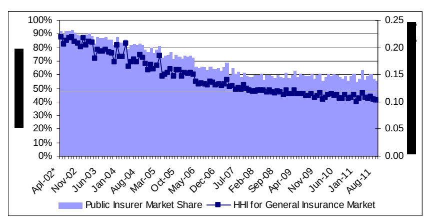
- ULIPs sale dominating even after Sept 2010 regulations
- Traditional life insurance sales improving
- Emphasis on riders
- Group General Annuity dominates over individual general annuity
- Slow pensions sales
- Life insurers allowed to sale life plus health combi insurances
- Microinsurance products and composite package of standard insurance for rural and social sector



Data from IRDA

Financial Trends, Problems and Prospects





Data from IRDA, IRDA Journal (monthly)

- Domination of LIC in life segment. It has lowest paid-up capital, largest number of policies in force, huge network of offices and distributional channel. LIC (amendment) Bill, 2009 pending due to legislative delays.
- General insurance segment is more competitive – combined ratio, retention ratio, etc.

Trends, Problems and Prospects

- Focus on actuarial pricing
- Investment norms
- Claim Settlement
- Issues related to distribution channel especially bancassurance
- Regulatory confusion: IRDA vs SEBI; IRDA vs PFRDA or IRDA vs RBI
- Solvency Regulation and Issues before implementation of Solvency II
- Data transparency – promotion of efficient market functioning

	2001-02		2010-11	
	Life	General	Life	General
Annual Growth Rate	43.00%	13.60%	4.20%	8.10%
Geographical Restriction	None			
Equity Restrictions	Foreign promoter can hold upto 26 % of the equity			
Registration Restrictions	Composite registration not available			
Paid-up Capital				
Private Total	16.64	7.27	236.57	39.56
Industry Total	16.69	11.27	236.63	67. 06
Operating Expenses				
Private Sector	4.19	0.42	159.62	39.32
Industry Total	46.80	79.31	329.42	106.20
Claims/ Benefits Paid				
Private Sector	0.03	1.27	312.51	99.37
Industry Total	174.84	27.19	1425.24	295.36

Figures in billions INR

Data from IRDA

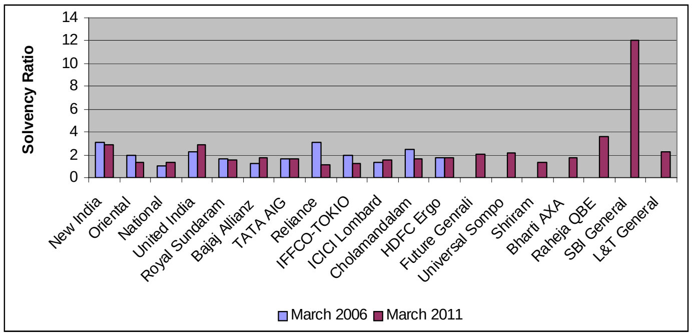
Solvency Margin (SM) and the Available Solvency Margin (ASM)

Questions

- Is it possible to identify factors explaining the financial strength of an insurers?
- Can we use available data to calculate solvency ratio pre-2005-06?
- What are the limitations of available data?

- Solvency Requirement under Section 64V of the Insurance Act 1938
- Guidelines for maintenance of a 'statutory' solvency reserve as per IRDA (Assets, Liabilities, and Solvency Margin of Insurers) Regulations, 2000
- Audited financial statements and of financial performance analysis as per IRDA (Actuarial Report and Abstract) Regulations, 2000
- Solvency Ratios made public from FY 2005-06 onwards

Solvency Trends – General Insurers

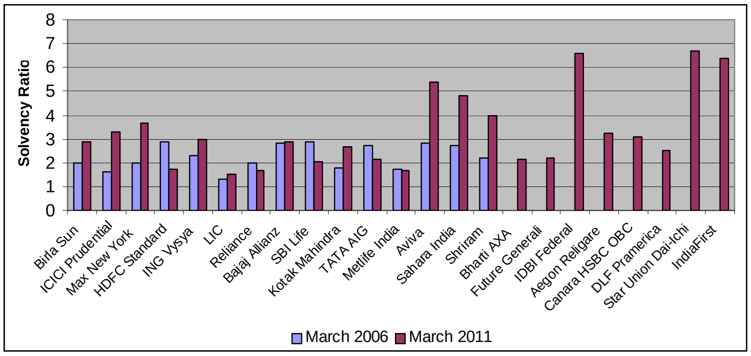


- Ratio of Solvency ratio is set at 1.5 for all insurers
- In 2005-06, National Insurance, ICICI Lombard and Bajaj Allianz fell short of solvency and capital infusion was advised to first two and a deadline was set for the third for correction.
- Except one private general insurer in 2008-09, all general insurers satisfied norms for years 2006-07 and 2007-08
- 2009-10, 3 general insurers failed to comply and IRDA penalised the defaulting insurers

Data for Non Life Insurers - 2009-10

	Solvency Ratio	Net Premiums	Mkt Share	Size	Premium Growth
RAHEJA QBE	3.79	-282	0.00	2.32	
NEW INDIA	3.55	600263	19.82	2.30	9.97
UNITED	3.41	419016	14.63	2.18	22.47
UNIV SOMPO	3.15	14817	0.53	2.18	528.00
BHARTI AXA	2.38	18669	0.87	2.30	990.60
ICICI LOM	2.07	231409	9.20	2.61	-3.14
TATA AIG	1.88	58000	2.38	2.48	3.63
IFFCO TOK	1.76	99083	4.07	2.39	6.10
CHOLA	1.76	51463	2.19	2.43	14.50
SHRIRAM	1.75	22420	1.16	2.02	266.50
RELIANCE	1.70	142872	5.53	2.06	3.38
NATIONAL	1.60	397765	12.97	2.00	8.15
ORIENTAL	1.56	396253	13.55	2.00	19.05
BAJAJ ALL	1.54	197167	6.93	2.04	-5.23
FUTURE GEN	1.54	24647	1.05	2.45	101.95
HDFC ERGO	1.49	58868	2.56	2.62	169.86
ROYAL SUN	1.39	75460	2.55	2.32	13.66

Solvency Trends – Life Insurers



- 2005-06, LIC had the lowest solvency of 1.3
- All life insurers complied with solvency requirement in 2006-07, 2007-08 and 2008-09 with majority showing marginal improvement.
- 2009-10, LIC has lowest solvency ratio with solvency falling for all life insurers but all insurers complied.

Data for Life Insurers - 2009-10

	Solvency Ratio	Net Premiums	Market Share	Size	Premium Growth
SUDI	7.46	53009	0.473	4.398	935.80
IndiaFirst	5.27	20160	0.183	4.301	
Aviva	5.12	236150	0.726	5.276	10.19
Sahara	4.50	25052	0.114	4.365	-6.85
IDBI Fed	4.05	56902	0.364	4.652	26.45
Max NY	3.22	480086	1.683	5.265	0.33
ICICI Pru	2.90	1647896	5.764	5.155	-7.01
OM Kotak	2.79	284985	1.214	4.708	-0.67
Shriram	2.69	61060	0.382	4.097	33.40
All Bajaj	2.68	1139118	4.050	4.178	-0.90
AEGON	2.66	16479	0.137	4.756	381.80
Canara	2.58	83991	0.567	4.699	110.05
Future Gen	2.34	53484	0.442	4.846	224.12
SBI Life	2.17	1008048	6.407	5.000	30.71
BirlaSun	2.11	542537	2.694	5.294	4.93
Tata AIG	2.11	348156	1.203	5.283	15.69
Reliance	1.86	658834	3.568	5.066	11.58
HDFC Std	1.80	695563	2.964	5.294	22.87
ING Vysa	1.79	163856	0.585	5.008	-6.75
Bharti AXA	1.68	66744	0.398	5.054	49.33
DLF P	1.67	3840	0.034	4.345	1009.20
MetLife	1.65	250621	0.966	5.249	-7.24
LIC	1.54	18598239	65.083	2.699	34.49

Determinants of Solvency

Studies in this area by Dambolena and Khoury, 1980; Staking and Babbel, 1991; Ambrose and Caroll, 1994; BarNiv and Hersbarger, 1990; Browne and Hoyt, 1995; Kim et al., 1995; Cummins et. al., 1995; Grace et al., 1998; Kramer 1996; Chen and Woong 2004; etc. identified few factors

FACTORS	Variable	Observations
FIRM *Size*	Smaller the size of the firm, more vulnerable it is to insolvency	Directly and positively affecting insurer insolvency
INVESTMENT *Performance*	Important for financial solidity of an insurer and discloses efficiency in investment decisions	Positive correlation expected but insurers are found to have negative relationship for both life and non-life Insurers
UNDER-WRITING *Results*	2 key components: investment income and underwriting income. Expected to have a negative correlation	Few studies shows a positive correlation but some failed to empirically prove the same
OPERATING *Margin*	More revenues desirable and existence of positive relationship	The studies have concluded in line with expected positive relationship
PREMIUM *Growth*	Rate of market penetration, higher growth prospect affect "risk selection"	Positively related with insolvency determinant
MARKET/ ECONOMIC *Factors*	No. of insurers to assess competition, positive relation between underwriting cycle and inflation and interest rate having negative relationship.	Studies have supported expected relationship
LIQUIDITY *Ratio*	Ability to pay liabilities inclusive of operative expenses and payment for losses and benefits	Studies show a positive relationship

Methodology

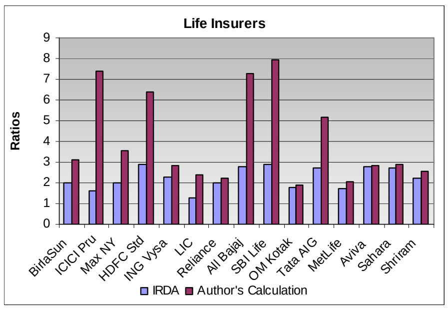
DATA:

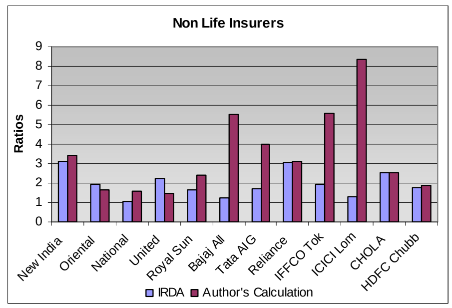
- Major Sources:
  - IRDA and RBI
- Important Disclosures - Company Level:
  - ~~Revenue A/C Statement~~ → Policyholders' A/C } Since 2005-06
  - ~~P/L A/C Statement~~ → Shareholders' A/C } Since 2005-06
  - Balance Sheet
  - Underwriting Experience for non-life insurers
  - Investment Details
  - Grievances, Quarter Public Disclosure, etc.
  - 2007-08 state level business figures
- Two periods: 2001-02 to 2005-06 and 2005-06 to 2009-10
- Dependent variables: ASM to MSM and Solvency Ratio for two periods respectively

Calculation of ASM to MSM:

- IRDA guidelines
  - "*Required solvency margin*" A non-life insurer's RSM can be based on either net premiums (RSM-NP) or on net incurred claims (RSM-IC) and the RSM will be the higher of the amounts of RSM-NP and RSM-IC. Data not shared.
  - "*Available solvency margin*" (ASM) is the figure which reflects the actual reserves or assets pertaining to various policies in force.
  - Minimum solvency margin of Rs. 50 crore used as a benchmark.

Comparing ASM/MSM with Reported Solvency Ratio for 2005-06:





Independent Variable - Selected Determinants

- Financial ratios calculated based on Gart et al. (1994), NAIC guidelines and IRDA
- Inflation and interest rate from RBI

Independent Variable	Description	
SIZE	Total Assets to earned Premiums	Life / Non-Life Insurers
INVPER	Investment Income to Earned Premiums	Life / Non-Life Insurers
IY	Investment Income to Total Investment Investment Income to Total Investible Assets	For Non-Life Insurers For Life Insurers
LR	Total Investment to Total Reserves	Life / Non-Life Insurers
FDI	Log of equity share capital	Life / Non-Life Insurers
OPM	Total Income to Total Outgo	Life / Non-Life Insurers
UNR	Combined ratio using financial basis	Non-Life Insurers
PGR	Year on year change in premium	Life / Non-Life Insurers
NUMBER	Total number of insurers	Life / Non-Life Insurers
INFLATION	Log difference of CPI	Life / Non-Life Insurers
INTEREST RATE	Average of deposit interest rates	Life / Non-Life Insurers

Observations

Insolvency Predictors	Life / General	Expected Relationship	2001-02 - 2005-06		2005-06 - 2009-10#	
			Life	Non-Life	Life	Non-Life
		Dependent variable ->	ASM to MSM		Solvency Ratio	
Firm Size	Life / Non-Life	+	+	+*	+	+
Investment Performance	Life / Non-Life	+	+*	+*	+*	+*
Operating Margin	Life / Non-Life	+	-	-	+*	+
Premium Growth	Life / Non-Life	-	-	-	-	-
Liquidity Ratio	Life / Non-Life	+	-	+	-	+
Underwriting Results	Non-Life	-		+*		+*
Number of Insurers	Life / Non-Life	-	-	+*	-	+*
Interest Rate Changes	Life / Non-Life	-	+*	-*	+*	-*
Absolute level of interest rate	Life / Non-Life	+	-	+		
Inflation rate	Life / Non-Life	-	+*	+	-	+
FDI	Life/ Non-Life	?			+*	+*

* Indicates that the effect/relationships are significant. # Initial Estimates

Conclusion and Policy Implications

- Solvency of a life insurer is heavily dependent on the returns received from total investible funds and the interest rate
- The need for efficient investment decision and strictness from the part of the regulator with the insurers' investment guidelines
- The non-life insurers' solvency is affected by the interest rate ... Are they more into short term investments?
- One of the investment performance predictor, investment yield have the expected sign and strongly suggests that returns available from total investments or investment decisions contributes to overall non-life insurer solvency status

Conclusion and Policy Implications contd. …

- Size of firms is significant and it contributes to higher income and hence contribute towards solvency for non-life insurers
- Increase in the number of non-life insurers may help spreading of risks.
- Combined ratio were significant but have unexpected relationship may be due to the fact that most of the insurers are spending (or investing) more compared to additions to total assets, generating less income and underwriting profits
- FDI increase may strengthen solvency. Increase in FDI from proposed 26 percent to 49 percent will strengthen insurers
- More data, especially as per product line, required before solvency II can be implemented

Thank you …

Suggestions and Comments are Welcome