Independent University **Bangladesh (IUB)**

IUB Academic Repository

Independent Business Review Volume: 07, No: 1, January-2014

2014-01-01

On The Determinants of Stakeholders' Protection in Indian Life Insurance Industry – An Empirical Study

Charumathi, B.

School of Business, Independent University,Bangladesh

http://ar.iub.edu.bd/handle/11348/326

Downloaded from IUB Academic Repository

On the Determinants of Stakeholders' Protection in Indian Life Insurance Industry - An Empirical Study

Dr. B. Charumathi
School of Management, Pondicherry University

K. Nithya
School of Management, Pondicherry University

ABSTRACT

The entire cycle of insurance activity comprises marketing of insurance products by insurance intermediaries, underwriting of policies to prospects and servicing of policies to policyholders. The insurance regulatory and supervisory infrastructure in India is relatively well developed. The apex body, Insurance Regulatory Development Authority (IRDA) has a clear mandate and is a leader among emerging markets. The regulator undertakes framing and implementation of regulations covering the entire gamut of life insurer's operations. Further, it supervises the compliance of these regulations aimed at protecting different stakeholders', viz., intermediaries and policyholders. The regulation provides the standard of service and the remedial action in the event of any deficiency in the service of an insurer and/or intermediary. Insurance business the world over has the dubious distinction of facing a large number of deficiencies in services. Intangibility of the service on offer, lack of clarity on the "give-and-take" and the complexity of the wording in the insurance contracts are some of the causes contributing to this scenario worldwide. The Indian insurance domain is also subjected to this phenomenon. In this context, an empirical study on the level of regulatory compliance for stakeholders' protection undertaken by the Indian life insurers is significant. Further, studying the factors that determine the level of regulatory compliance for stakeholders' protection is the need of the hour. Hence, Stakeholders' Protection Index (SPI) was constructed to measure the level of regulatory compliance for stakeholders' protection and a multiple linear regression model was used to model its determinants. It was found that the Indian life insurers have not complied with the IRDA regulations regarding stakeholders' protection during the study period. Level of regulatory compliance for stakeholders' protection is positively and significantly determined by Total Admitted Assets (Size), Capital Position and Return on Assets; and negatively and significantly determined by Liquidity and Lapsation.

Keywords: Indian Life Insurance Industry, Regulatory Compliance, Stakeholders' Protection Index, SPI, IRDA Regulations

JEL Classification: G22

\

INTRODUCTION

The entire cycle of insurance activity consists of marketing of insurance products by insurance intermediaries, underwriting of policies to prospects and servicing of policies to policyholders. The IRDA (Insurance Regulatory and Development Authority) provides a regulatory framework. It is targeted at framing, implementation and overseeing the extent of regulatory compliance aimed at protecting different stakeholders, viz., policyholders and shareholders. The regulation provides the standard of service and in the event of any deficiency of service of an insurance company and/or any intermediary provides remedial action.[i] Insurance business the world over has the dubious distinction of facing a large number of deficiencies in services. Intangibility of the service on offer, lack of clarity on the "give-and-take" and complexity of the wording in the insurance contracts are some of the causes contributing to this scenario worldwide. The Indian insurance domain is also subjected to this phenomenon. Mis-selling of insurance products due to lack of objectivity in understanding the product terms continues to be significant factor affecting stakeholders' protection. In this current scenario, the apex body, Insurance Regulatory and Development Authority (IRDA) attaches a lot of importance to the protection of stakeholders'. IRDA's mission statement ensures speedy settlement of genuine claims, preventing insurance frauds and other malpractices and to put in place effective grievance redressal machinery.

INSURANCE MARKET - GLOBAL AND INDIAN SCENARIO

Regulators, policy makers and the industry undertake regulatory initiatives that actively contribute to the development of global life insurers. The International Association of Insurance Supervisors (IAIS) supports the various insurance supervisors in meeting their regulatory objectives and contributes to the international regulatory agenda by setting out a series of Insurance Core Principles (ICP) that provides high level frameworks to guide the development of solvency regimes. In the United States, the National Association of Insurance

Commissioners (NAIC), the standard setting and regulatory support organization created and governed by the chief insurance regulators from the states,[ii] is following Solvency Modernization Initiative (SMI). The Dodd-Frank Act was enacted in 2010 to reduce the risk of another financial crisis and places additional regulation of the financial services sector in the hands of the federal government.[iii] The European Union's (EU) Solvency II Directive is a new regulatory framework for the European insurance industry that adopts a more dynamic risk-based approach and implements a non-zero failure regime, i.e., there is a 0.5 percent probability of failure.[iv] On 2nd October 2013, the European Commission proposed a second Quick Fix Directive postponing the application date of the Solvency II Directive to 1st January 2016.[v]

In the backdrop of the new industrial policy and consistent with reforms undertaken in other segments of the financial sector, the Government of India set up in 1993 a committee headed by Mr. R. N. Malhotra to examine the insurance industry. Reforms in the insurance sector were undertaken in 1999 and accordingly the Insurance Act 1938 was reviewed and revised. With the passage of Insurance Regulatory and Development Authority Act in 1999, the Government's monopoly in the insurance sector ended. The Insurance Regulatory and Development Authority (IRDA) was constituted as an autonomous body to regulate and develop the insurance industry. The IRDA opened up the market in August 2000 with the invitation for application for registrations including foreign companies up to an ownership of 26%.[vi] There are twenty-four life insurers including the public insurer, LICI, operating in India as on September 2013. Several Indian private players apart from the LICI have completed ten years of existence. Indian life insurance penetration had consistently gone up from 2.15 per cent in 2001 to 3.17 per cent in 2012. The life insurance density in India has gone up from USD 9.1 in 2001 to USD 42.7 in 2012. In the life insurance business, India ranks 10th among the 88 countries according to Swiss Re.[vii]

STAKEHOLDERS' PROTECTION UNDERTAKEN BY INDIAN LIFE INSURERS

Insurance is a complicated business in which promises are made and fulfilled by the insurer and the insured. When there is an omission or commission not consistent with the expected or defined service levels there is a deficiency in service. The establishment of the apex body IRDA in 1999paved way for the opening up of the Indian insurance sector to private players. The Indian insurance industry has been developing over the years in terms of the entry of a number of

players offering a variety of products with a view to bring the large uninsured population into the insurance fold. As the insurance industry is oriented to the long term, efforts should be made to build deeper relationships with all the stakeholders'.[viii] In this current scenario of growing customer base, the insurers need to protect the interest of and secure fair treatment to stakeholders'. Long standing relationships are achieved by treating customers fairly, their grievances being redressed in an efficient/faster manner and by providing a qualitative grievances redressal experience across the country. IRDA adopts a proactive approach by analysing the cause/source of the complaints to identify system deficiencies and procedural slackness. The IRDA ensures the regulatory compliance of life insurers by calling for periodical information from the players, undertaking inspection, conducting enquiries and investigations including audit of the insurers. The regulator has undertaken periodical inspections and has overseen the functioning of life insurers through their periodical reporting. With the powers vested upon the authority, IRDA identified the cases of non-compliance/deviations, issued warnings and levied penalties to the defaulting life insurers. There arises the need for the regulatory apparatus to move forward in order to oversee compliance of these regulations.[ix] As 12 years have passed since the introduction of IRDA regulations and there are cases of non-compliance, the present study entitled "ON THE DETERMINANTS OF STAKEHOLDERS' PROTECTION IN INDIAN LIFE INSURANCE INDUTSRY" has been taken.

REVIEW OF LITERATURE

There are studies available in the area of stakeholders' protection undertaken by insurers. Few relevant studies are presented in the following section. Outreville (1990)[x] tested the emergency fund hypothesis with regard to the lapse rates of life insurance contracts in the U.S. and Canada. The emergency fund hypothesis stated that lapses should increase during recessions due to policyholders' inability to pay premiums for insurance coverage. It was found that the early lapse of ordinary life insurance policies was not related to interest rates fluctuations but rather to changes in the expected personal income. Mauer & Holden (2006)[xi] determined the factors influencing the lapse rates on ordinary life insurance products of 139 U.S. life insurers. The multiple regression model was found to be the most representative when applied to ordinary life insurers in the higher financial stress category in comparison with companies characterized by low and mid-range financial stress.

Khanna (2002)[xii] analysed the provisions of IRDA (Protection of Policyholders' Interest) Regulations, 2002 relating to the grievance redressal mechanism advocated therein. The grievance redressal regulation spelt out the manner and the time frame within which the norm has to be complied with but remained toothless in the absence of an in-built mechanism to ensure compliance and in respect of non-compliance on the part of the life insurers. In the context of growing competition, employees of life insurers should have customer service as a key parameter in measuring their productivity. KNK (2003)[xiii] outlined the circumstances and the need for the passing of IRDA (Protection of Policyholders' Interests) Regulations, 2002. Customer protection being the most important objective of IRDA and servicing of customers by the insurers not being satisfactory, the apex body played the legitimate role of striking a healthy balance between the regulated and the customers of the regulated in the larger interest of the society. The scope of the regulations extended from the point of sale at which an insurance contract is entered into till the settlement of claims including proper understanding of the policy terms and conditions, benefits to be received under the policy, efficient grievance redressal, time frames for policy servicing and claims settlement.

Ramesh (2006)[xiv] impressed upon fair claims management as there was a risk of claimants losing faith in the life insurance system. Fair and quick claims settlement can be achieved by establishing the best operational practices that include a prudent claims management policy; ensuring the expertise of the personnel involved in claims operations; monitoring the outsourced activities with reference to claims settlement; and effective communication etc. On the part of the regulator's role the Insurance Core Principle 25 prescribed by the IAIS requires the supervisory authority to set the minimum requirements to insurers and intermediaries while dealing with the consumers apart from emphasizing on treating consumers fairly through a good claims resolution process. In this context, the IRDA (Protection of Policyholders' interest) Regulations, 2002 stipulates the time lag for expeditious claim settlements and also requires the life insurers to pay interest on delayed claims payments.

Vaidyanathan (2007)[xv] examined the circumstances causing consumer grievances which include mis-selling of products with unclear policy terms and conditions, wrong repudiation of claims and failure of timely claims settlement. The solution to these problems lied on the part of the insurer and the insured, both requiring understanding of the policy terms and entering into a need based contract. Also, consumer grievances can be better solved by dealing the errant employees strictly and also equally penalizing the wrongful claimant a practice prevalent in the advanced markets. Jawaharlal (2008)[xvi] reviewed the reasons leading to claims repudiation often caused by information asymmetry, with the policyholders not

comprehending the contract terms either due to lack of awareness or the insurer failing to explain the terms in detail. The proposal form should be more exhaustive, simple and meaningful to ensure that the proposer is explained the terms in detail before obtaining his/her signature so that the asymmetry is reduced to a great extent. The insurers should also highlight the policyholders about the option of free-look period to take an informed decision and the importance of utmost good faith in insurance.

Kannan, Sarma, Rao & Sarma (2008)[xvii] analysed the lapsation of individual life policies prevalent in the Indian life insurance industry during 2002-2007. It was found that the industry lapse rate both by number of policies and by premium increased initially and then decreased during the later part of the study period. Age at entry, mode of premium payment, duration elapsed since policy inception, policy type and type of underwriting were found to be the most significant factors affecting the lapse rates.

Rajagopalan (2008)[xviii] discussed the causes of lapsation in the Indian life insurance industry which included external macroeconomic factors like changes in tax laws, availability and emergence of alternate investment options and customer specific features. Internal factors leading to lapsation were product design and choices with the quarterly and monthly modes of premium payment having higher lapse ratios, marketing and distribution strategies adopted incentive framework, supervision and control of the insurer. Sonig (2008)[xix] viewed that insurers should concentrate on long term retention of the existing policyholders as chasing fresh prospects would be expensive causing financial losses and affects their reputation. Insurers should take efforts towards revival of lapsed policies which creates a feeling of loyalty and belongingness in the minds of the policyholders ultimately leading to growth of new business and promotion of goodwill. Changes in the legal provisions with respect to commission rates of lapsed policies on revival should be undertaken by the apex body, IRDA. Insurers may consider appointing retention managers or outsourcing job to revive lapsed policies to private establishments with the help of insurance agents.

Krishnamurthy, Narayan, Rai & Rakesh (2009)[xx] examined IRDA's regulatory measures on mandatory disclosures by insurers relating to solvency margin, claim settlement records and loss ratios on a quarterly basis to provide greater transparency and enabling policyholders to take more informed decisions. The data on claim settlement gives an idea about the number of claims settled by the insurers indicating the strength of the company the policyholder is dealing with. It also signifies insurer's underwriting capacity. Policyholders need to intimate claims to the insurer within a specified time period to undertake post-claim activities like investigation, loss assessment, provisioning and claim settlement. However, insurers cannot deny any claims on the ground of delayed filing and intimation of

documents, particularly if the delay was due to unavoidable circumstances. This was reiterated by the IRDA. Also, the insurers should reject claims on the basis of sound logic and valid grounds and treat claims on merit and good spirit of the clause with utmost care and caution and without compromising on bad claims. Rejection of claims merely on technical grounds and mechanical fashion will result in policyholders losing confidence in the insurance industry giving rise to excessive litigation.[xxi]

Bharadwaj (2011)[xxii] opined that consumer grievances stems from the mismatch between their expectations or their understanding of the product terms at the time of entering into the insurance contracts and what the policy ultimately delivers. This underlines that the customer is also expected to keep his knowledge abreast about the product invested in terms of its contractual obligations, complexity and the risks associated with it particularly important for unit linked insurance products whose returns are solely dependent on the performance of the securities market. Bharat (2011)[xxiii] analysed the grievance redressal mechanism adopted by the Indian insurance industry by outlining the features of the Integrated Grievance Management System (IGMS). The IGMS, being an initiative of the IRDA aimed to bring in efficiency and effectiveness to the whole process of policyholders' grievance redressal. An effective grievance handling mechanism is a prerequisite for treating customers' grievances meticulously and fairly.

Studies carried out empirically analysed the lapsation of life insurers. None of the research studies had been undertaken to empirically measure the claims settlement and grievance redressal behaviour of life insurers. Further, there was a dearth of studies analysing the determinants of level of stakeholders' protection in Indian life insurance industry. Thus, the present study closes this research gap.

OBJECTIVES OF THE STUDY

This study has the following objectives:

- To design and develop an appropriate original index, viz., Stakeholders' Protection Index (SPI) to empirically measure the level of stakeholders' protection in Indian life insurance industry.
- To study the determinants of level of stakeholders' protection in Indian life insurance industry.

RESEARCH METHODOLOGY

This is an empirical research study. This study used secondary data. The secondary data required to include the IRDA regulations and compliance status of these regulations by the life insurers. The same were drawn from the Insurance Act 1938, Insurance Rules 1939, IRDA Act 1999, and IRDA Regulations, Guidelines, Circulars, IRDA Annual reports, IRDA database and Public Disclosures of the respective Indian life insurers. For other required information, Life Insurance Council reports, various committees' special reports, research papers, financial dailies, websites, etc. were used. The Indian insurance industry consists of one regulator (IRDA), players (life and general insurers) and one reinsurer (GICI). Insurers can be either be public or private (either fully domestic or with foreign collaboration). This study has selected all the Indian life insurers in operation as on 31-3-2011 as shown in Table I. There was 1 public life insurer, the LICI, throughout the study period. The names of Indian Life Insurers and the abbreviations used are given in Appendix.

Table - I

Sample Size – Number of Indian Life Insurers

Year	Public	Private	Total
2005-06	1	14	15
2006-07	1	15	16
2007-08	1	17	18
2008-09	1	21	22
2009-10	1	22	23
2010-11	1	22	23

VARIABLES OF THE STUDY

Variables for constructing Stakeholders' Protection Index (SPI)

The variables considered for constructing the Stakeholders' Protection Index (SPI) were drawn extensively from the IRDA regulatory framework. Stakeholders' protection consists of twelve variables, viz., insurance advertisements and disclosure, processing of proposal forms, free look period cancellation, manner of receipt of premium, prohibition of rebates, claims settlement (consisting of death, maturity, survival, pension/annuity, surrender & other claims), grievance disposal, non-lapsation, individual agents, corporate agents, brokers and referral partners. An original Stakeholders' Protection Index (SPI) was constructed based on these variables as shown in Table II.

Table – II: Stakeholders' Protection Index (SPI)

S. No	Variables	Score	Score %
	Compliance of regulations regarding		
1.	Insurance Advertisements and Disclosure	1	100
2.	Processing of Proposal Forms	1	100
3.	Free Look Period Cancellation	1	100
4.	Manner of Receipt of Premium	1	100
5.	Prohibition of Rebates	1	100
6.	Claims Settlement*	1	100
7.	Grievance Disposal	1	100
8.	Non-Lapsation	1	100
9.	Individual Agents	1	100
10.	Corporate Agents	1	100
11.	Brokers	1	100
12.	Referral Partners	1	100
Stakeholder Protection Index (SPI)		12	100

*Note: Constructed by researchers based on IRDA regulatory framework; *Claims Settlement is the average of death, maturity, survival, pension &annuity, surrender & other claims settled*

Variables for studying the determinants of level of stakeholders' protection

The variables used for studying the determinants of level of stakeholders' protection in Indian life insurance industry are shown in Table III. These variables have been chosen after a number of iterations.

Table – III: Variables for Determinants of Stakeholders' Protection

Determinants	Formulae
Total Admitted Assets (LnTAA) – Size	Natural Logarithm of Total Admitted Assets (LnTAA)
Liquidity (LIQ)	Outstanding Claims/ Cash and Bank Balance
Capital Position (CAP)	(Capital +Reserves & Surplus)/ Total Mathematical Reserves
Lapsation ratio (LAP)	Individual Non-Linked Lapses /Arithmetic mean of the business in force at the beginning and at the end of the year
Return on Assets (ROA)	Net income before taxes/ Total Admitted Assets
Asset Quality Linked (AQL)	Equities/ Total Linked Investments
Reinsurance & Actuarial Issues (REAI)	Net Premium/ Gross Premium
Linked Investment Performance (IPL)	Linked Investment income/ Linked Investment assets

Note: Compiled by the researchers based on earlier literature. The variables are chosen after various iterations of multiple regression models

Methodology for Construction of Stakeholders' Protection Index (SPI)

To assess the level of stakeholders' protection in Indian life insurance industry, this study tried to identify an appropriate proxy/variable. As there was no single proxy/variable available, this study has constructed an original, comprehensive, unweighted (equal weighted) Stakeholders' Protection Index (SPI) consisting of twelve variables. The variables of the index were arrived after a thorough and rigorous study of the existing regulatory framework available for life insurers in India. The regulatory framework of the IRDA draws heavily from the Insurance Act 1938 and the IRDA Act 1999, with the provisions being laid down in the form of regulations, guidelines and circulars amended appropriately to suit the contemporary needs and challenges faced by the life insurance sector.

Each variable has been verified for its level of compliance based on the norm/rule given in the regulations. An equal score of 1 was given to each variable. Variables governed by norm/rule have dichotomous status, viz., yes or no. For these dichotomous variables, based on the compliance information, the insurers were given a score of 1 for compliance or 0 for non-compliance or partial compliance; and later the scores were converted into percentages. However, there are certain other variables which are non-dichotomous in nature such as claims settlement, grievance disposal and non-lapsation. For these variables, the actual level of compliance is measured using the exact ratios and the ratios are converted into points in terms of 1.

The scores of stakeholders' protection index were arrived by totaling the points secured by the various variables and converted into percentage terms to ensure equal weightage. However, the total scores of some insurers were reduced accordingly due to the reasons such as being a new entrant and non-applicability of certain variables (non-lapsation data for the second year of operation). Thus, an insurer will get total score of 12 or less based on the variables for which it is assessed.

Methodology for studying the determinants of level of stakeholders' protection in Indian life insurance industry

To model the determinants of level of stakeholders' protection in Indian life insurance industry, select firm-level characteristics including control variable were regressed against the dependent variable, viz., the level of stakeholders' protection (using SPI). The independent variables including size indicators as control variables for the model were chosen after many iterations through robustness test. The variables chosen are given in Table III. The multiple linear regression model developed for this study is as follows:

$$SPI = \beta_0 + \beta_1 LnTAA + \beta_2 LIQ + \beta_3 CAP + \beta_4 LAP + \beta_5 ROA + \beta_6 AQL + \beta_7 REAI + \beta_8 IPL + \varepsilon_i$$

Data Collection Method

This study used content analysis as a technique to collect the data required. The type of content analysis used in this study is manual in nature. The compliance information for each of the variable is obtained by studying the contents of relevant documents such as periodical public disclosures by life insurers and IRDA annual reports. The variables for the determinants of level of stakeholders' protection were compiled from IRDA Annual Reports, IRDA Database and Public Disclosure of Indian life insurers.

Period of the Study

This study covers a period of 6 years, viz., from 2005-06 to 2010-11 for measuring the level of stakeholders' protection undertaken by Indian life insurers and its determinants. The reason for choosing this period is that the IRDA released the database and made public disclosures by life insurers mandatory during 2010. IRDA database gives financial details of all the life insurers from 2000 and it is being updated every year. Public disclosures (which contains information relating to the company profile, investment profile, liability valuation, risk concentration, solvency and business statistics), were made mandatory to life insurers from 2010 and the annual data were made available in 2010 for the period of 5 years, starting from 2005-06 to 2009-10. It is also being updated every year. From 2010-11 only, life insurers are also mandated to make quarterly public disclosure. Due to non-availability of compliance data (which is taken from public disclosures) from 2000-01 to 2004-05 (as public disclosures were made available only in 2010), this study confined its period from 2005-06 to 2010-11.

Statistical Tools & Software Used

The study used statistical tools such as Chi Square, ANOVA and Multiple Linear Regression. To measure the level of stakeholders' protection undertaken by life insurers, chi square test is used. To find the company-wise, year-wise, variable-wise and ownership-wise differences in the level of stakeholders' protection, analysis of variance is used. To study the determinants of level of stakeholders' protection, multiple linear regression model is used. The software packages such as MS Excel and SPSS 17.0 are used for analysing the data.

HYPOTHESES

For achieving the objectives of this study, the following null hypotheses were tested:

I. To measure the level of stakeholders' protection in Indian life insurance industry

H_{01}: During the study period, the Indian life insurers have not complied with all the IRDA regulations regarding stakeholders' protection (using SPI).

H_{02}: During the study period, there is no significant
H_{02a}:company-wise difference
H_{02b}:year-wise difference
H_{02c}: variable-wise difference
H_{02d}:ownership-wise difference in Stakeholders' Protection Index (SPI) among the Indian life insurers.

II. To study the determinants of level of stakeholders' protection in Indian life insurance industry

H_{03}: There is no significant relationship between the level of stakeholders' protection (using SPI) and
H_{03a}: Total Admitted Assets (LnTAA) - Size indicator
H_{03b}: Liquidity (LIQ)
H_{03c}: Capital Position (CAP)
H_{03d}: Lapsation ratio (LAP)
H_{03e}: Return on Assets (ROA)
H_{03f}: Asset Quality Linked (AQL)
H_{03g}: Reinsurance & Actuarial Issues (REAI)
H_{03h}: Linked Investment Performance (IPL).

RESULTS AND DISCUSSION

I. To measure the level of stakeholders' protection in Indian life insurance industry

H_{01}: During the study period, the Indian life insurers have not complied with all the IRDA regulations regarding stakeholders' protection (using SPI).

Table – IV: Level of Regulatory Compliance for Stakeholders' Protection (Using SPI) during 2005-06 to 2010-11 (%)

S. No	Company	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
1	Aviva	92	94	91	85	97	95
2	Bajaj	97	97	98	99	89	98
3	Birla	99	98	98	90	95	92
4	HDFC	97	99	99	99	98	97
5	ICICI	97	98	96	86	92	95
6	ING	95	97	96	79	97	97
7	Max	94	91	79	97	97	89
8	Met	95	87	96	97	98	89
9	Kotak	90	95	86	96	98	97
10	Rel	96	95	96	95	80	98
11	Saha	95	95	95	96	85	69
12	SBI	98	97	98	98	98	98
13	Shri	100	89	86	90	75	98
14	TATA	97	97	96	97	96	97
15	LICI	99	98	98	99	99	99
16	Bharti	NE	100	90	92	87	95
17	Future	NE	NE	100	92	92	61
18	IDBI	NE	NE	100	95	94	95
19	Aegon	NE	NE	NE	89	93	95
20	Canara	NE	NE	NE	93	93	95
21	DLF	NE	NE	NE	98	88	94
22	Star	NE	NE	NE	100	97	97
23	India	NE	NE	NE	NE	96	91
N		15	16	18	22	23	23
Minimum		90	87	79	79	75	61
Maximum		100	100	100	99.9	98.51	99.43
Mean		96.09	95.38	94.39	93.63	92.69	92.64
Std. Deviation		2.68	3.56	5.67	5.47	6.18	9.18
Chi-Square		.000	.000	.889	.000	.000	.000
df		14	15	16	21	22	22
Asymp. Sig.		1.000	1.000	1.000	1.000	1.000	1.000

Note: 1) Scores calculated using disclosure on SPI. 2) Results computed using SPSS. 3) NE-Not in Existence.

Table *IV* shows scores obtained by Indian life insurers for Stakeholders' Protection Index (SPI). It ranges from a minimum of 61% (Future Generali India Life Insurance Company) to a maximum of 100% (Shriram Life Insurance Company, Bharti AXA Life Insurance Company, Future Generali India Life Insurance Company, IDBI Federal Life Insurance Company and Star Union Dai-ichi Life Insurance Company). The highest mean value of 96.09 is found in 2005-06 and SD of 9.18 in 2010-11.

Chi Square Test is applied to check the scores of each life insurer with its benchmark score. The mean score in each year is considered as benchmark score. As the p-value 1.000 is greater than 0.05 in all the years, the *Null Hypothesis, **H_{01}**, is accepted for all the years.* Thus, during the study period, the Indian life insurers have not complied with all the IRDA regulations regarding stakeholders' protection (using SPI).

H_{02}: During the study period, there is no significant
H_{02a}:company-wise difference
H_{02b}:year-wise difference
H_{02c}: variable-wise difference
H_{02d}:ownership-wise difference in Stakeholders' Protection Index (SPI) among the Indian life insurers.

Table – V:Analysis of Variance for Stakeholders' Protection Index (SPI)

Source of Variation	SS	df	MS	F	p-value
Company-wise					
Between Companies	1041.119	22	47.324	1.346	.164
Within Companies	3303.714	94	35.146		
Total	4344.832	116			
Year-wise					
Between Years	183.453	5	36.691	.979	.434
Within Years	4161.379	111	37.490		
Total	4344.832	116			
Variable-wise					
Between Variables	128642.821	11	11694.802	34.172	.000
Within Variables	476393.602	1392	342.237		
Total	605036.424	1403			
Ownership-wise					
Between Groups	140.694	1	140.694	3.849	.052
Within Groups	4204.138	115	36.558		
Total	4344.832	116			

Note: Results computed using SPSS 17.0

Table *V* gives the results of ANOVA test for Stakeholders' Protection Index (SPI). As the p-value is less than 0.05, *the Null Hypothesis, **H_{02c}**, is rejected at 1% level of significance.* Thus, during the study period, there is a significant variable-wise difference in Stakeholders' Protection Index (SPI) among the Indian life insurers. As the p-values are more *than 0.05, the Null Hypotheses, **H_{02a}**, **H_{02b}** and **H_{02d}**, are accepted.* Hence, during the study period, there are no significant company-wise, year-wise and ownership-wise differences in Stakeholders' Protection Index (SPI) among the Indian life insurers.

II. To study the determinants of level of stakeholders' protection in Indian life insurance industry

H_{03}: There is no significant relationship between the level of stakeholders' protection (using SPI) and
H_{03a}: Total Admitted Assets (LnTAA) - Size indicator
H_{03b}: Liquidity (LIQ)
H_{03c}: Capital Position (CAP)
H_{03d}: Lapsation ratio (LAP)
H_{03e}: Return on Assets (ROA)
H_{03f}: Asset Quality Linked (AQL)
H_{03g}: Reinsurance & Actuarial Issues (REAI)
H_{03h}: Linked Investment Performance (IPL).

Table – VI(a) : Descriptive Statistics – Variables of Analysis

Variables	N	Minimum	Maximum	Mean	Std. Deviation
SPI	117	.613077	1.000000	.93921853	.061199258
LnTAA	117	7.247793	1.857688E1	1.28252150E1	2.176329751
LIQ	117	.000000	.609975	.10632998	.134433185
CAP	115	.001026	3.478518E2	6.04402252E0	3.877233339E1
LAP	116	.000000	.810000	.21836207	.179874081
ROA	117	-1.261922E0	.509649	-8.92710677E-2	.212983594
AQL	114	.000000	3.742783	.50560119	.369682249
REAI	117	.227506	1.010559	.98803574	.071151703
IPL	114	-.319443	.495727	.06049860	.131303011
Valid N	110				

Results obtained by using SPSS 17.0.

Table *VI(a)* portrays the descriptive statistics for the variables used in this study. The level of stakeholders' protection measured by SPI averaged 0.939 and ranged from 0.613 to 1. The insurance company size as measured by the total admitted assets (both policyholders' and shareholders') had an average of 1.28 and

ranged from 7.247 to 1.857.Liquidity (Outstanding Claims/Cash and bank Balance) had an average of 0.134 and ranged from 0 to 0.609.Capital Position (Capital + Reserves & Surplus/Total Mathematical Reserves) had an average of 6.044 and ranged from a minimum of 0.001 to a maximum of 3.478.

Lapsation ratio averaged 0.218 and ranged from 0% to a maximum of 81%.The ratio of Return on Assets (Net income before taxes/Total Admitted Assets) had an average of -8.927 and ranged from -1.261 to 0.509. Asset Quality Linked ratio (Equities/Total Linked Investments) had an average of 0.505 and ranged from 0 to 3.742. Reinsurance & Actuarial Issues (Net Premium/Gross Premium) averaged 0.988 and ranged from 0.227 to 1.01. Linked Investment Performance (Linked Investment income/Linked Investment assets) ratio has an average of 0.06 and ranged from a minimum of -0.319 to a maximum of 0.495.

Table – VI(b):Regression Results - Determinants of Level of Regulatory Compliance for Stakeholders' Protection (using SPI)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.539[a]	.291	.234	.053160434	1.912

Analysis of Variance

Model		SS	df	Mean Square	F	Sig.
1	Regression	.117	8	.015	5.169	.000[a]
	Residual	.285	101	.003		
	Total	.402	109			

Regression Coefficient

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
(Constant)	1.540	.903		1.704	.091		
LnTAA	**.008**	**.003**	**.275**	**2.706**	**.008***	.682	1.466
LIQ	**-.114**	**.041**	**-.248**	**-2.796**	**.006***	.890	1.124
CAP	**.005**	**.002**	**.222**	**2.318**	**.022****	.765	1.307
LAP	**-.072**	**.030**	**-.215**	**-2.412**	**.018****	.880	1.136
ROA	**.061**	**.028**	**.221**	**2.169**	**.032****	.677	1.478
AQL	.010	.014	.061	.710	.479	.961	1.040
REAI	-.683	.912	-.066	-.749	.455	.903	1.107
IPL	.015	.039	.034	.397	.692	.980	1.020