

## Growth and productivity of select public sector GICs in India: A comparative study

<sup>1</sup> R Srinivasulu, <sup>2</sup> Dr. AV Ramana

<sup>1</sup> Ph.D. Research Scholar, Dept. of Commerce, S.K. University, Anantapuramu, Andhra Pradesh, India.

<sup>2</sup> Professor & Chair person, Board of Studies, Department of Commerce, Sri Krishnadevaraya, University, Andhra Pradesh, India.

### Abstract

Innovations in products and services have been paving the avenues for a qualitative transformation in almost all the domains of business including insurance industry. In a competitive business environment, as of today, the service industries like insurance, banking, transportation, tourism, communication, education, electricity etc., are productive if their policies and strategies are attractive, innovative and customer-centric.

The insurance is a cooperative device to accumulate funds to meet uncertain losses. It protects the value of an asset as every asset has a value of its own and also expected lifetime. Insurance business is classified into life insurance and general insurance. The Life Insurance Companies deal with the risk against the life of a person, whereas the General Insurance Companies (GIC) deal with business other than the life insurance business like Fire, Marine and Miscellaneous businesses. The GICs have been playing a key role in the financial system for the development of economy. In the process of rapid expansion of General Insurance Sector, the expansion, often pulling down because of its decrease in productivity level, changes in market share and the quality of the system as a whole etc. In order to sustain in the market, players opt various policies at affordable premiums, strategies in the product design, marketing techniques in claim settlement practices and enhanced services to withhold the existing policy-holders and to attract new ones. Against this backdrop, the present paper aims to assess the growth and productivity on selected variables of GICs in public sector in India, and suggests measures for ensuring higher growth and productivity.

**Keywords:** Insurance, General Insurance, Growth and Productivity

### Introduction

The rapid expansion of general insurance sector has given rise to many problems such as, decrease in productivity level, changes in market share and above all, the quality of the system. In order to sustain in the ever changing competitive market, players opt various policies at affordable premiums, strategies in the product design, marketing techniques in claim settlement practices and enhanced services to withhold their existing policy-holders and to attract new ones. This may have an impact on the company's productivity. This, indeed, tempted the researcher to evaluate how these companies are performing in India in terms of growth and productivity.

### Objective

The objectives of the present study is to analyse the growth of the select public sector General Insurance Companies in India and also to compare the productivity levels among the select GICs in public sector for a decade period i.e. 2004-05 to 2013-14.

### Data Source and Method of Data of Collection

#### • Sources of Data

The study is mainly based on the secondary data which have been collected from the annual reports of the IRDA and GICs, journals related to insurance, and websites.

#### • Scope

The present study is an attempt to assess the GICs growth and productivity for the last ten years i.e. from 2004-05 to 2013-14.

#### • Sample Design

Among the twenty one General Insurance Companies in India, only four public sector general insurance companies have been selected by adopting purposive sampling method these include National Insurance Company Limited (NICL), New India Assurance Company Limited (NIACL), United India Insurance Company Limited (UIICL) and Oriental Insurance Company Limited (OICL).

#### • Statistical tools used for analysis of data

- The collected data have been analyzed using statistical tools like (i) Mean (ii) Standard Deviation (iii) Co-variance (iv) Compound Annual Growth Rate (v) Partial Productivity of branches and employees.
- (i) **Mean:** Arithmetic Mean is used to find out the average liquidity and solvency ratios of general insurance companies between the select years. Mean refers to the sum of a list of numbers divided by the size of the list
- (ii) **Standard Deviation:** Standard Deviation is a numerical value used to measure the absolute dispersion between the liquidity and solvency ratios of general insurance companies. The greater the standard deviation, the greater will be the magnitude of the deviations of the values from their mean. A small standard of deviation means a high degree of uniformity of the observation as well as homogeneity of a series.
- (iii) **Co-variance:** Variance Analysis is used to find out the co-variance relationship between mean and standard deviation of liquidity and solvency ratios of select general insurance companies and also between the years during the study period.

- (iv) **Compound Annual Growth Rate (CAGR):** the year-over-year growth rate of an investment over a specified period of time can be described as CAGR. The compound annual growth rate is calculated by taking the nth root of the total percentage growth rate, where n is the number of years in the period being considered.
- (v) **Partial Productivity:** Partial productivity is the ratio of output to one class of input. For example, labour productivity (the ratio of output to labour input), capital productivity (the ratio of output to capital input), Branches' Productivity (the ratio of output to branches input) are the examples of partial productivity. In the study, the concept of partial factor productivity is used to analyse productivity. Increase in any of the partial productivity like labour, capital and branches would mean that there is saving in the use of that particular factor.

### Variables selected for the study

The growth and productivity of public sector GICs is measured in terms of their 1) physical growth 2) income components 3) expenses incurred, and 4) profitability.

Table 1 incorporates the details of branches of public sector GICs in India. It can be understood from the table that, the branches in the NIACL found decreased from 614 branches in the year 2004-05 to 583 branches in the year 2013-14 with an annual growth rate of -0.57 per cent, and its mean is registered at 593.10 branches. The branches of the NICL have been found continuously decreasing from 563 branches in the year 2004-05 to 526 branches in 2013-14. The annual growth rate has been recorded as -0.85 per cent with the mean of 548.33 branches. It is witnessed that the branches in the UIICL have also decreased from 705 in the year 2004-05 to 679 branches in 2013-14. And the company identified its annual growth rate of -0.42 per cent with the mean of 680.50 branches. The data table also reveals that the branches of the OICL in the early years 2014-15 has registered as 581 branches but later decreased to 494 branches at the end of the year 2012-2013. The annual growth rate is registered with -3.19 per cent and its mean has been found 528.50 branches.

Finally, it can be concluded that all the expansion of branches of public sector GICs in India has been decreased constantly. The UIICL is found with low growth rate whereas the growth rate of the OICL is noticed with high compared to other GICs. The details of gross premium of policy-holders are shown in table 2. It is found that during 2004-05, the gross premium collected by the NIACL is registered with Rs. 4210.81 crore that rose to Rs. 11540.06 crore by 2013-14 with an annual growth rate of 11.85 per cent for the decade and its Mean is noticed with Rs. 6806.58 crore. The NICL registered its gross premium of Rs. 3799.91 crore in the year 2004-05 and it has a growth of Rs. 3154.78 crore in the next year and constantly increased to Rs. 10222.88 crore at the end of the year 2013-14 by registering a growth rate of 11.62 per cent for the decade and its Mean has been found Rs. 5745.03 crore. Further, the gross premium of the UIICL is found a significant increase from Rs. 2944.46 crore in the year 2004-05 to Rs. 9708.93 crore in the year 2013-14 with a growth rate of 14.18 per cent and its Mean is witnessed Rs. 5638.53 crore. From the table, the gross premium of the OICL collected from its policy-holders is seen a constant increase in the decade from Rs. 3017.78 crore in the year 2004-05 to Rs. 7127.84 crore in the

year 2013-14, signifying a growth rate of 10.02 per cent and its Mean is registered as Rs. 4816.80 crore.

Therefore, the gross premium of policy-holders collected by select GICs in India has a constant growth. Of all, the UIICL is registered with highest growth rate i.e. 14.18 per cent and in case of the OICL, the growth rate is found at 10.02 per cent.

Table 3 incorporates the data incurred by the select GICs in public sector in India. It can be understood from the table that the NIACL found a significant increase in the claims paid to the policy-holders from Rs. 2904.98 crore in the year 2004-05 to Rs. 9380.95 crore in the year 2013-14, with an annual growth rate of 13.91 per cent and its mean is registered with Rs. 5529.88 crore. The NICL has registered its claims incurred with Rs. 2263.51 crore in the beginning year 2004-05 and that rose to Rs. 7048.61 crore in the year 2013-14 and a growth rate of 13.45 per cent is registered by the company and its mean is identified as Rs. 4034.24 crore. The claims incurred by the UIICL in the beginning year 2004-05 has been found Rs. 1998.53 crore which rose to Rs. 6277.38 crore at the end of the year 2013-14. The growth rate of 13.56 per cent is identified for the decade and its mean has been found Rs. 3671.88 crore. From the table, the claims incurred by the OICL found constant increase from Rs. 1908.38 crore in the year 2004-05 to Rs. 5111.02 crore at the end of the year 2013-14 with a growth rate of 11.57 per cent and its mean is witnessed Rs. 3327.43 crore. In brief, it is found from the study that the growth rate of claims incurred by select GICs in public sector has increased during the study period i.e. from 2004-05 to 2013-14. Among the GICs, the claims incurred by the OICL are registered with a low growth rate whereas the NIACL has been found high compared to other two GICs.

Year-wise net profit or loss of select GICs in public sector in India over the study period 2004-05 to 2013-14 is depicted in table 4. From the table, it is found that, the net profit of the NIACL found instability over the study period. In the beginning year 2004-05 the company registered its net profit with Rs. 402.22 crore and being some ups and downs in the middle of the period that rose to Rs. 1088.96 crore at the end of the year 2013-14. The growth rate of 11.70 per cent is registered by the company and its covariance of 93.53 per cent is recorded. The net profit of the NICL is recorded as Rs. 131.18 crore in the beginning year 2004-05, unfortunately the company registered net loss of Rs. 114.64 crore in the year 2005-06. But in the year 2006-07, the company showed a positive value of Rs. 418.07 crore showing some ups and downs in the middle of the study period. However, the net profit of the company increased to Rs. 822.88 crore at the end of the year 2013-14. From the table, the net profit of the UIICL found instability due to the heavy competition in the study period. The net profit of the company is increased from Rs. 307.71 crore during 2004-05 to Rs. 527.60 crore by 2013-14 with an annual growth rate of 6.17 per cent and its covariance is recorded with 35.34 per cent. Further, the OICL registered its net profit of Rs. 330.52 crore in the beginning year 2004-05 and that rose to Rs. 460.29 crore in the year 2013-14. The growth rate of 3.75 per cent is identified in the company and its covariance of 97.63 per cent is registered.

Based on the above analysis, it can be concluded that the net profit of the select GICs in public sector in India is found in stable during the study period. Among the GICs, the growth rate of the NICL witnessed a high growth rate whereas, the OICL is noticed a low growth rate.

## Comparative Statement

The growth rate of select public sector GICs in India is shown in table 5. The growth analysis is based on some important components such as branches, gross premium, claims and net profit. From the study, it is observed that the growth rate of branches of the UIICL is found -0.42 per cent, whereas the OICL is registered with the highest negative growth rate of -3.19 per cent. The growth rate of gross premium of the UIICL is noticed high whereas the OICL is noticed low growth rate. From a penetrating look into the table, it can be inferred that the growth rate of claims incurred by the OICL is registered as 11.57 per cent, which is low, whereas the NIACL is registered highest growth rate of 13.91 per cent. However, the detail data analysis of the study revealed that the growth rate in the case of net profit of the NICL it is found high whereas the OICL is found low.

The healthier competition has been intensified by the select GICs in public sector in India. From the above analysis, it can be understood that, the UIICL is found a leading trend in the growth of branches, gross premium and net profit. Whereas, the OICL is lagging behind in the growth rate and the other two companies, the NIACL and the NICL are found a parallel growth.

Table 6 depicts a comparative analysis in terms of gross premium productivity of employees, gross premium productivity of branches, gross premium productivity of capital and the capital productivity of employees of GICs in public

sector during the study period. The gross premium underwriting by the employees of the OICL is registered the highest percentage i.e. 15.81 per cent whereas the NICL is witnessed the lowest percentage i.e. 12.72 per cent and in case of other two GICs the percentage of the UIICL is found better, than the percentage of NIACL. The OICL gross premium productivity of branches is registered the highest per cent whereas the NIACL is found lowest. Regarding the productivity of the UIICL, it has been identified as good than to that of the NICL. From the table, the gross premium productivity of capital of the NICL found high whereas, the OICL in this regard registered with low. The capital productivity of employees' percentage has been found bad in all the select GICs, but, among them, the NICL contribution has found better and the OICL is registered with very poor productivity.

On the whole, the study reveals that the gross premium productivity of employees and branches of the OICL it is found as good and very poor performance in terms of gross premium productivity of capital and capital productivity of employees. In case of the NICL it is found that there is a poor in terms of gross premium productivity of employees, but it has registered good productivity in the gross premium productivity of capital and capital productivity of employees. In the case of other two GICs the productivity has been found better in all the components.

**Table 1:** Year-wise Branches of Public Sector GICs in India

(In numbers)

YEAR	NIACL		NICL		UIICL		OICL	
	No. of Branches	INDEX	No. of Branches	INDEX	No. of Branches	INDEX	No. of Branches	INDEX
2004-2005	614	100	563	100	705	100	581	100
2005-2006	607	99	563	100	684	97	NA	-
2006-2007	601	98	NA	-	683	97	546	94
2007-2008	598	97	561	100	683	97	NA	-
2008-2009	594	97	559	99	685	97	532	92
2009-2010	591	96	556	99	676	96	511	88
2010-2011	588	96	549	98	672	95	507	87
2011-2012	580	94	531	94	669	95	NA	-
2012-2013	575	94	527	94	669	95	494	85
2013-2014	583	95	526	93	679	96	NA	-
MEAN	593.10		548.33		680.50		528.50	
S.D	12.24		15.88		10.56		31.73	
CO.VAR	2.06		2.90		1.55		6.00	
CAGR	-0.57%		-0.85%		-0.42%		-3.19%	

Source: Annual reports of select general insurance companies of public sector during 2004-2014

**Table 2:** Year-wise Gross Premium of Public Sector GICs in India

(In crore)

YEAR	NIACL		NICL		UIICL		OICL	
	Rs.	INDEX	Rs.	INDEX	Rs.	INDEX	Rs.	INDEX
2004-2005	4210.81	100	3799.91	100	2944.46	100	3017.78	100
2005-2006	4791.50	114	3523.67	93	3154.78	107	3527.11	117
2006-2007	5017.20	119	3814.42	100	3498.77	119	3928.52	130
2007-2008	5276.92	125	4007.23	105	3739.56	127	3808.14	126
2008-2009	5508.83	131	4279.90	113	4277.77	145	3964.25	131
2009-2010	6042.51	143	4625.18	122	5239.05	178	4736.71	157
2010-2011	7097.14	169	6220.70	164	6376.66	217	5457.33	181
2011-2012	8542.87	203	7790.69	205	8179.29	278	6047.89	200
2012-2013	10037.95	238	9165.73	241	9266.04	315	6552.40	217
2013-2014	11540.06	274	10222.88	269	9708.93	330	7127.84	236
MEAN	6806.58		5745.03		5638.53		4816.80	
S.D	2462.04		2472.72		2589.51		1403.11	
CO.VAR	36.17		43.04		45.93		29.13	
CAGR	11.85%		11.62%		14.18%		10.02%	

Source: Annual reports of select general insurance companies of public sector during 2004-2014

**Table 3: Year-wise Claims Incurred of Public Sector GICs in India**

(In crore)

YEAR	NIACL		NICTL		UIICL		OIICL	
	Rs.	INDEX	Rs.	INDEX	Rs.	INDEX	Rs.	INDEX
2004-2005	2904.98	100	2263.51	100	1998.53	100	1908.38	100
2005-2006	3632.01	125	2830.33	125	2042.77	102	2064.74	108
2006-2007	3643.61	125	2394.22	106	2142.06	107	2358.86	124
2007-2008	4177.48	144	2838.84	125	2506.28	125	2602.22	136
2008-2009	4671.87	161	3393.67	150	2515.05	126	3057.19	160
2009-2010	5132.45	177	3245.36	143	3329.24	167	3260.18	171
2010-2011	6524.87	225	4623.28	204	4385.64	219	4065.36	213
2011-2012	7087.53	244	5314.07	235	5386.94	270	4453.53	233
2012-2013	8143.07	280	6390.53	282	6134.92	307	4392.85	230
2013-2014	9380.95	323	7048.61	311	6277.38	314	5111.02	268
MEAN	5529.88		4034.24		3671.88		3327.43	
S.D	2156.36		1711.39		1729.32		1119.46	
CO.VAR	38.99		42.42		47.10		33.64	
CAGR	13.91%		13.45%		13.56%		11.57%	

Source: Annual reports of select general insurance companies of public sector during 2004-2014

**Table 4: Year-wise Net Profit or Loss of Public Sector GICs in India**

(In crore)

YEAR	NIACL		NICTL		UIICL		OIICL	
	Rs.	INDEX	Rs.	INDEX	Rs.	INDEX	Rs.	INDEX
2004-2005	402.22	100	131.18	100	307.71	100	330.52	100
2005-2006	716.38	178	-114.64	-87	425.23	138	283.91	86
2006-2007	1459.94	363	418.07	319	528.86	172	492.27	149
2007-2008	1401.15	348	163.31	124	631.62	205	9.3	3
2008-2009	224.14	56	-138.68	-106	476.05	155	-52.66	-16
2009-2010	404.69	101	224.86	171	707.79	230	-44.25	-13
2010-2011	-421.56	-105	74.89	57	130.54	42	54.62	17
2011-2012	179.31	45	325.21	248	386.79	126	253.39	77
2012-2013	843.66	210	697.85	532	527.33	171	533.89	162
2013-2014	1088.96	271	822.88	627	527.60	171	460.29	139
MEAN	629.89		260.49		464.95		232.13	
S.D	589.11		315.97		164.32		226.63	
CO.VAR	93.53		121.30		35.34		97.63	
CAGR	11.70%		22.63%		6.17%		3.75%	

Source: Annual reports of select general insurance companies of public sector during 2004-2014

**Table 5: Company-wise Comparative Statement of Growth of Public Sector GICs in India**

(In per centage)

LIST OF GICs	GROWTH OF PUBLIC SECTOR GICs (CAGR)			
	No. of Branches	Gross Premium	Claims Incurred	Net Profit
New India Assurance Company Limited	-0.57%	11.85%	13.91%	11.70%
National Insurance Company Limited	-0.85%	11.62%	13.45%	22.63%
United India Insurance Company Limited	-0.42%	14.18%	13.56%	6.17%
Oriental Insurance Company Limited	-3.19%	10.02%	11.57%	3.75%

Source: Computed from base data

**Table 6: Company-wise Comparative Statement of Productivity of Public Sector GICs in India**

(In per centage)

LIST OF GICs	PRODUCTIVITY OF PUBLIC SECTOR GICs (CAGR)			
	Gross Premium Productivity of Employees	Gross Premium Productivity of Branches	Gross Premium Productivity of Capital	Capital Productivity of Employees
NIACL	13.11%	12.50%	8.33%	-4.22%
NICTL	12.72%	14.13%	11.62%	-0.98%
UIICL	15.20%	14.65%	9.15%	-5.25%
OIICL	15.81%	20.62%	5.17%	-8.15%

Source: Computed from base data

**Conclusion**

In brief, it can be concluded that the components taken for the analysis of select GICs in public sector in India include, branches, gross premium, claims incurred and net profit or loss

for the study period of ten years from 2004-05 to 2013-14. As per the comparative statement of growth rate of branches, gross premium, the United India found good, but, the company has found poor growth rate in the claims incurred and net profit.

Whereas, the growth rate of claims, the Oriental Insurance is noticed good but, it is identified very poor growth in other components such as branches, gross premium and net profit. Finally, the growth rate in the profitability, the National Insurance found leading, but the average growth rate is noticed in the branches, income and expenses components. Further, the New India Insurance is witnessed average growth rate in all the components.

The productivity in GICs is measured in terms of gross premium productivity of employees, branches, capital and capital productivity of employees. As per the comparative statement of productivity of gross premium productivity of employees and branches, the Oriental Insurance is recorded a higher productivity, but poor in the gross premium productivity of capital and capital productivity of employees. Whereas, the gross premium productivity of capital and capital productivity of employees of the National Insurance has been found good, but very poor productivity is witnessed in the gross premium productivity of employees and gross premium productivity of branches.

On the whole, the study concludes that the United India is witnessed a high growth rate in terms of its physical growth, income components, and expenses incurred whereas the growth rate in the said parameters of Oriental Insurance and National Insurance is showing a leading trend during the study period i.e. 2004-05 to 2013-14 in terms of productivity.

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