Indian Management Studies Journal 20 (2016) 117-135

Indian Management Studies Journal

Comparing and Analyzing the Performance of Different Segments of a Reinsurance Company

Sumninder Kaur Bawa* and Neha Verma**

** University Business School, Guru Nanak Dev University, Amritsar*

*** University Business School, Guru Nanak Dev University, Amritsar*

Abstract

GIC Re i.e. General Insurance Corporation of India is the sole domestic reinsurer of India. It is under the control of Indian Government and has a prominent position in the Indian insurance industry. Insurance company transfers risks that it cannot handle to the reinsurance company. There are four major segments contributing to the business of GIC Re-Fire Reinsurance, Miscellaneous Reinsurance, Motor Reinsurance and Life Reinsurance. Through the article, an endeavor has been made to compare and analyze the performance of these segments for a period of ten years from 2004-05 to 2013-14. The comprehensive analysis has been done using Mean, Standard Deviation (S.D), Coefficient of Variation (C.V) and Compound Annual Growth Rate.Key ratios have also been used to assess the performance of each segment. The study would help to ascertain the contribution and role of each segment in GIC Re and would aid in formulating effective strategies for future course.

Key Words

GIC Re, Reinsurance, Non-Life Reinsurance, Life Reinsurance.

INTRODUCTION

Insurance companies transfer the risk that they cannot handle to the reinsurance companies. Reinsurance is among the most important risk and capital management tools in the hands of the insurers. It is often referred to as insurers' insurance. If we consider insurance sector as a human body, there is no exaggeration to say that reinsurance is its immune system.

Whenever an insurer passes its risk to the reinsurer, it trims down its underwriting risk. Insurance companies choose reinsurers that are sound enough to pay the claims to them in the hour of need. Reinsurance companies have emerged as a blessing for the primary insurers. Through reinsurance, insurers can add value to the services given by them as it helps them to protect, secure and serve primary policy holders more efficiently. Primary insurers cannot do so if they are covering huge risks alone. There is generally a presumption of professional and technical expertise and abundant capital in case of reinsurers.Reinsurers have a broad underwriting experience which helps to develop integrated risk management whereby they effectively undertake even complicated mix of risks.

Chen, Hamwi & Hudson (2001) stated that the proper use of reinsurance can have positive impact on the financial stability of the primary insurers. The horrifying natural disasters and the heart rending terrorist attacks have given an impetus to the need of reinsurance for the insurance sector. The ever widening umbrella of risks is challenging insurers' capacity, and thereby burgeoning their dependence on reinsurers. The rising financial conglomerates and the inter-connectivity among the different financial segments of the financial sector is increasing the importance of reinsurance. It has been observed that the countries that do not have strong domestic reinsurance arrangements make their direct insurers depend upon foreign reinsurers. This takes away huge amount of foreign exchange from the country and weakens the contribution of the insurance industry to the economy of the home country (Woldegebriel, 2010).

GIC Re is an Indian Reinsurance Company. It is a lifeline for the Indian insurers and also has a well established reputation as a global reinsurer in the international market. Its well-being is of primary concern.In India, both specialized reinsurance companies and direct insurers provide reinsurance. The only domestic specialized reinsurer in India is GIC Re. It takes the credit of market of aboutRs. 100000 Million in India.Indian Reinsurance industry is showing an approximate annual growth of about 10%. Alone GIC Re is capturing 65 per cent share of the market which speaks volumes about the prominent status of the company in the realm of Indian reinsurance. Subject to certain limits, GIC Re has the right to obtain statutory cession of minimum 5 per cent on general insurance policies w.e.f. 1 April 2013. Even mandatory cession for life reinsurers is under discussion.It cannot serve insurance companies in a good way if it is itself in a dwindling position. Considering the importance of the company in the Indian insurance sector it has been chosen.

It is important to measure performance regularly so that necessary changes could be made whenever and wherever required. It helps in the achievement of final targets and goals. While evaluating the performance of the company one can separately assess the contribution of each segment of the company to ascertain which segment has been particularly profitable for the company while which segment is contributing to its losses and thereby effective strategies could be formulated by the company for its future course.

The four major segments contributing to the business of the company are :

- Fire Reinsurance
- Miscellaneous Reinsurance
- Motor Reinsurance and
- Life Reinsurance.

LITERATURE REVIEW

Naik (2004) stated that the growth of different segments of insurance was a signal that it was important to increase the capacity of the insurance sector. He was of the opinion that a strong reinsurance sector could significantly help insurers to enhance their capacity. Watson (2004) held that while life reinsurance was heavily resorted in the markets of US and UK., the picture had been different altogether for the Asian markets. It was believed that developed markets resorted to more life reinsurance as they tend to outsource mortality. Despite tremendous growth in life insurance premium in India very less growth was observed for life reinsurance premium. Holzheuand Lechner (2005)discovered that there was a huge difference in the global cession rates for non-life and life insurance. It was approximately 13% for non-life direct premiums and 1.9% for life. Life reinsurance was also not that prominent due to inherent nature of saving predominant in this line of insurance. Hrechaniuk *et al.* (2007) evaluated the financial performance of insurance companies in Spain, Lithuania and Ukraine. It was found that the financial performance of insurers was strongly correlated with the growth of the insurance premium written. Bhattacharya and Gandhi (2009) analyzed the developing Indian reinsurance business and evaluated the performance of GIC Re-The sole reinsurer of India using variables like gross premium, net earned premium, net commission, operating expenses etc. from the year 2002-03 to 2007-08. Singh and Kumar (2009) attempted to study the recent trends in growth and financial performance of the general insurance industry of India from 2002 to 2007 using ratios. In order to evaluate the performance of two topmost public sector and three private sector companies ratios namely, expenses of management ratio, claims incurred ratio, combined ratio, underwriting result ratio, net earnings ratio, and net worth ratio were calculated. Sugrue and Kulkarni (2011) conducted a study for a period of five years from 2006-2010 and analyzed some of the largest reinsurers of North America, U.K and Europe. It was found that the inclination towards short-tailed lines was primarily responsible for high capital levels and strong operating performance. Das (2012) held that while retaining business by insurance companies or by different classes of insurance, due consideration must be given to their size, portfolio composition and their risk mitigating strategies.Nema and Jain (2012) evaluated the progress of Indian reinsurance. The business performance of GIC Re from 2005 to 2010 was evaluated. Indicators like earned premiums, incurred claims and profit after tax were examined and noticeable growth was observed in the reinsurance sector of India. Rao (2012) stated that post deregulation of the Indian Insurance market in 2007; noticeable growth was seen in Motor and Health. Burca & Batrinca (2014) opined that the financial performance of the insurance industry was significantly determined by the growth of the gross written premiums, underwriting risk, risk retention ratio and solvency margin.

CARAMELS Model which has been widely used in the financial assessment of the insurance companies encompasses the ratios used in the study namely, Net Retention Ratio, Management Soundness Ratio, Combined Ratio and Operating Profit Ratio.Some of the important studies that put this model to use were Simpson & Damaoh (2009), Darzi, T. A. (2011) in his doctoral dissertation, Dragana Ikonic *et al.* (2011), Sinha (2013), Ghimire & Kumar (2014) etc.

NEED OF THE STUDY

GIC Re is the face of the Indian reinsurance business, being the only company in India that indulges in reinsurance exclusively. It is important to appraise the performance of the company. The company is serving the insurance sector of India and is doing business globally as well. So, it needs to be financially healthy. For the progress of any economy the efficient performance of different sectors of the economy is crucial. And there is no exaggeration to say that GIC Re is the king of Indian reinsurance sector. Undeniably, consumer is the king of the market today. Insurers can ultimately provide better services to them if they are aided well by the reinsurance mechanism. Also, international reinsurers are now permitted to open branches in India we need to see where our own reinsurer is heading.

In order to improve the performance of the company, a study separately assessing the performance of different segments can be conducted. This would help to ascertain the role of each segment in the overall working of the company and formulate better strategies.

There is dearth of research papers that separately assess the contribution of each segment of specialist reinsurance companies.Keeping the importance of reinsurance companies in mind and the scarcity of research on these companies the study is being conducted.

OBJECTIVE OF THE STUDY

The objective of the study is to appraise the performance of different segments of GIC Re.The study would ascertain the contribution of each segment to the business and profits of the company. This would help to make better decisions for the company.

RESEARCH METHODOLOGY

Secondary data have been collected from the Annual Reports of GIC Re for the purpose of the study.The study covers a period of 10 years that is from 2004-05 to 2013-2014. Mean, Standard Deviation (S.D) Coefficient of Variation (C.V) and Compound Annual Growth Rate have been computed using key variables chosen for the purpose of the study.

In order to examine the Average and Variation over the period under study the Arithmetic Mean and the Co-efficient of Variation were calculated by using the following formulas.

$(\bar{X})$

Arithmetic Mean = ΣX / N

Co-efficient of Variation (C.V.) (in percent) = S.D. / * 100

Where, = Mean, S.D. = Standard Deviation

In order to examine the trend and growth the semi log trend equation

Log Y = a + bt............. (3.3) is used

Where

Y = Value of the variable

t = Time variable

and a and b are the parameters to be estimated.

The method of least squares has been applied to estimate the semi-log trend equations.

CAGR is calculated using the formula

CAGR (percent) = (Antilog b – 1) × 100.

Relevant Tables and Diagrams have been used for a clear analysis wherever necessary.

Table 1

Details of Gross Premium, Incurred Claims and Operating Profit/Loss of Different Segments of GIC Re from 2004-05 to 2013-14 (in Crores)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gross Premium										
Fire	1595.5	1640.5	2186	2363	2293.3	3219.5	3467.4	4200.7	4070	4998.5
Miscellaneous	3125.9	2903.2	4694	6146.8	4921.2	5653.7	7095	8070.6	9692.4	8470.4
Marine	398.7	335.7	522.2	788.4	834.9	849.6	1084.3	1296.8	1228	1085.5
Life	1.26	1.3	1.7	17.3	11.7	14	34.5	49.8	95.5	125.7
Incurred Claims										
Fire	812.7	927.7	1052	1644	1669	1636	2200	5230	3006	3736
Miscellaneous	2586	3326	2225	3827	3856	4748	5864	7474	7281	7709
Marine	301.5	318.7	344.9	538.7	688.7	464.9	543.7	1264.3	607.3	562.1
Life	0.6	0.5	0.7	1.7	3.9	6.8	17.9	18	47.9	100.2
Operating Profits										
Fire	241.4	140.3	60.4	-230.3	-39.7	327.7	246.9	-2405	381.6	23.9
Miscellaneous	56.6	-344.7	1174	777.6	1023.6	82.4	-193.6	-701	855	1140.3
Marine	-18	39.3	-81.3	-191.9	-70.7	263.1	175.3	-470	595.8	510.2
Life	2.4	0.4	0.9	4.5	9.3	4.8	4	23	2.2	7

Source : Compiled from the Annual Reports of GIC Re, 2004-2005 to 2013-2014

RESULTS AND DISCUSSION

The major source of income and expenses i.e. gross premium and claims incurred respectively have been scrutinized along with the operating profits of each segment.

Gross Premium : Reinsurance company receives premium from the primary insurance company as a payment for providing reinsurance protection to them. This is indeed the most important source of revenue for a reinsurance company. Gross Premium sums up the direct premium written with the premium that is likely to be received for the period of the contract under consideration without subtracting the associated expenses and premium on reinsurance ceded. Gross Premium gives clues about the overall business of the company.

Incurred Claims : Incurred Claims include the outstanding liabilities for a specific policy over a particular valuation period. It comprises not only all paid claims but also fair estimate of liabilities standing unpaid.

Operating Profits : These are the profits earned through day to day operations of the company. Operating profits of the company are calculated by subtracting the sum of Claims Incurred, Commission Paid and Operating Expenses related to insurance business and Investments from the sum of Premiums Earned, Profit on Sale of Investment and Exchange Fluctuation and Interest, Dividend and Rent Received.Operating Profits constitute the sum of underwriting profits and income from investment.

Diagram 1 : Gross Premium of Different Segments of GIC Refrom 2004-05 to 2013-14.

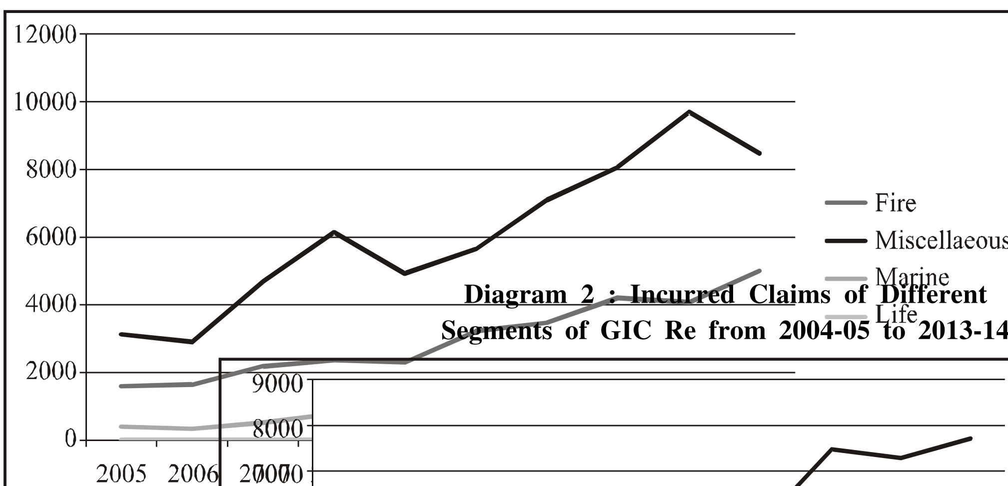


Diagram 2 : Incurred Claims of Different Segments of GIC Re from 2004-05 to 2013-14

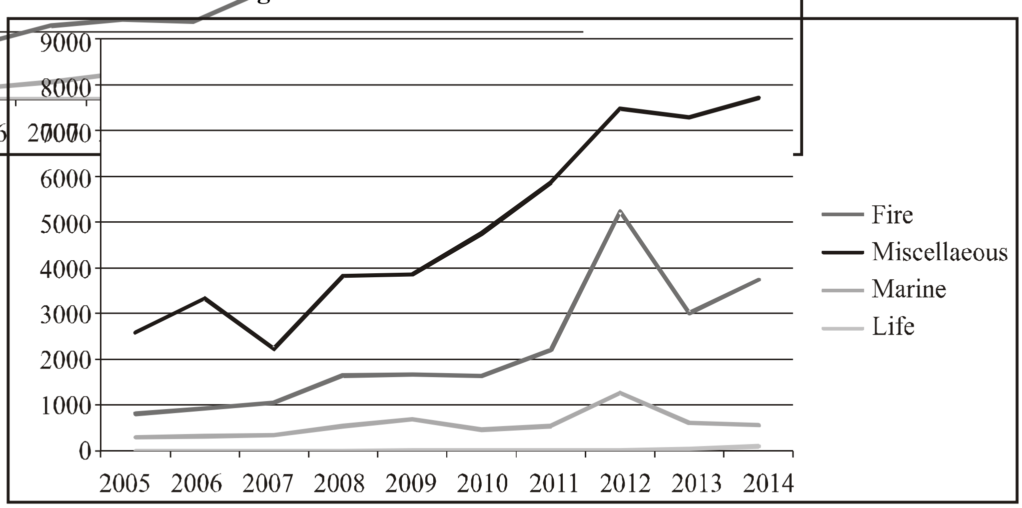
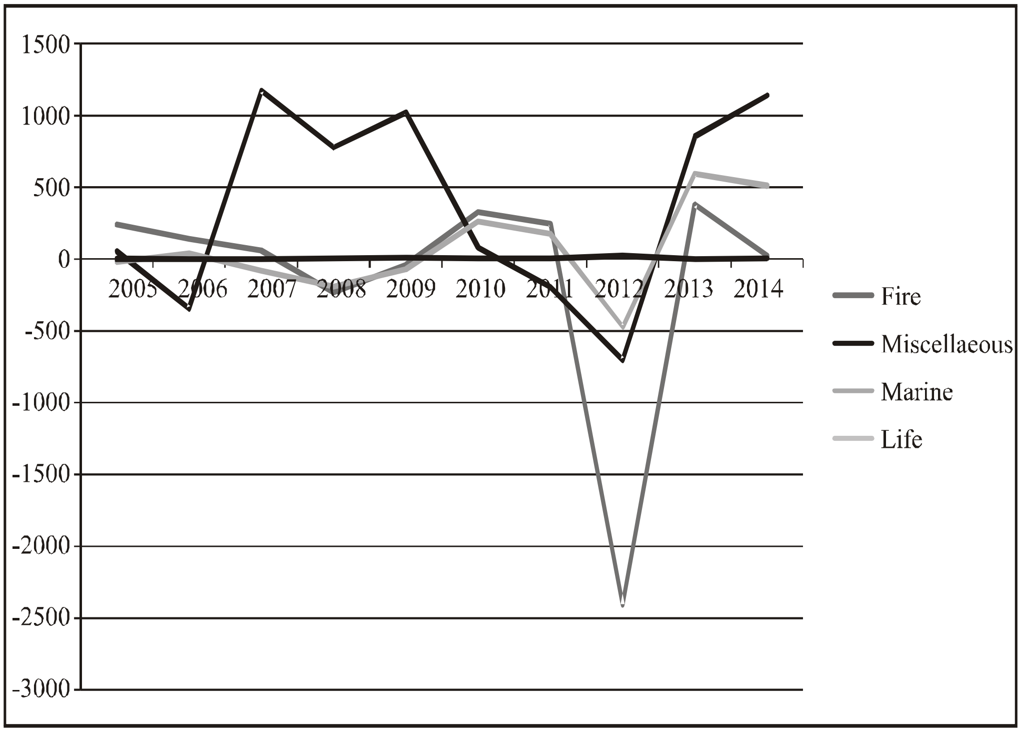


Diagram 3 : Operating Profits of Different Segments of GIC Re from 2004-05 to 2013-14.



From Table 1 and Diagram 1 it can be clearly observed that the miscellaneous class takes the credit of bagging highest gross premium in the period of study. Fire reinsurance bags the second position followed by marine segment, while least premiums have been generated by life reinsurance segment. (Table 1 & Diagram 1, 2, 3). Life reinsurance segment contributed least to the business as reinsurance has predominantly been associated with non-life insurance. Reinsurance of life by GIC Re commenced quite late, to be specific in April 2003. The increase in the life insurance business in the country boosted the growth in life reinsurance. A historical five year cooperation agreement was entered into by GIC Re with Hannover Life Re (Germany), which is among the worlds' largest life reinsurers' on 19th June 2008. Post this, considerable increase was noticed in life reinsurance.Year 2008-09 accounted for decline in the business of fire, miscellaneous and life reinsurance segment.Reduction in obligatory cessions from 15% to 10%, global recession and detarrification of insurance in India in 2007 contributed to this decline. Prior to 2008-09, motor, other miscellaneous, aviation and engineering were contributing to the total business of miscellaneous segment, motor being the most dominating contributor but afterwards, along with the previous sub-segments of miscellaneous, sub-segments like liability, health, workmen compensation, personal accident & financial credit also entered into the realm of miscellaneous contributors. Non-life sector started underwriting these short tail lines of business as they have tendency to bring more profits to the business.

It has been observed that the business in all the segments, except marine has shown a rising trend post 2008-09.The reason for the same was rigorous marketing, widening of geographical horizon of GIC Re, the contributing role of the newly opened branches in Dubai and London in 2007 and 2008 respectively and the practice of retrocession followed by it. Business has been reported to increase not only in the domestic but also in the foreign market. The business was largely obtained from China, South Korea, USA, Sudan, Israel, Paraguay, Slovenia, Sweden, Russian Federation & Romania besides the domestic business of the company.

Table 1 and Diagram 2 reveal that the maximum amount of claims during the period of study are incurred by miscellaneous segment, followed by Fire, Marine and Life respectively. The claims incurred have been in tune with the business generated by each class. Table 1 shows that the claims incurred by Fire segment of GIC Re were Rs.812.7 crore in 2004-05 and rose to Rs.3736 crore in a period of ten years in 2013-14. Miscellaneous segment, the topmost contributor, incurred claims of Rs.2586 crore in 2004-05 while the amount incurred for claims increased to Rs.7709 crore in 2013-14. GIC Re's Marine segment incurred claims worth Rs.301.5 crore in 2004-05 while the claims incurred in 2013-14 amounted to Rs.562.1 crore. Life Reinsurance segment incurred least amount in claims which was just Rs. 0.6 crore in 2004-05 and increased to 100.2 crore in 2013-14. The increase in the claims could be attributed to the increase in the business undertaken by the company.

Operating Profits are an important part of any enterprise and an endeavor should always be made to increase them. Table 1 and Diagram 3 show that the operating profits of the company have been highly fluctuating for the non-life segments of reinsurance while the situation has been stable for the life segment. The years in which major catastrophic events have been reported have increased the claims manifolds thereby increasing the operating losses in all the segments. However operating profits have improved in the years where no major disasters have been reported. From Table 3 it can be seen that Fire Segment reported operating profits amounting to Rs. 241.4 crore, Rs. 140.3 crore, Rs. 60.4 crore, Rs. 327.7 crore, Rs. 246.9 crore, Rs. 381.6 crore and Rs. 23.9 crore in 2004-05, 2005-06, 2006-07, 2009-10, 2010-11, 2012-13 and 2013-14 respectively. While operating losses were reported in other years. Year 2012-13 takes the credit of highest operating profits of Rs. 327.7 crore for the segment. Maximum operating losses were experienced in the year 2011-12 amounting to Rs. 2405 crore. Miscellaneous segment earned operating profits of Rs.566 crore, Rs.1174 crore, Rs.777.6 crore, Rs.1023.6 crore, Rs.82.4 crore, Rs.855 crore and Rs.1140.3 crore in 2004-05, 2006-07, 2007-08, 2008-09, 2009-10, 2012-13 and 2013-14 respectively. Maximum operating profits of Rs.1174 were earned in 2006-07 while maximum operating losses of Rs.1193 crore were reported for the segment in 2011 -12. Marine Reinsurance segment earned operating profits of Rs.39.3 crore, Rs.263.1 crore, Rs.175.3 crore, Rs.595.8 crore and Rs.510.2 crore in 2005-06, 2009-10, 2010-11, 2012-13 and 2013-14 respectively. Year 2012-13 brought maximum operating profits of Rs.595 crore for Marine Reinsurance segment of GIC Re while maximum losses amounting to Rs.470 crore were seen in 2011-12. Life Reinsurance segment experienced no operating losses throughout the period of study. Marginal operating profits were observed in all the years with highest operating profits of Rs.23 crore made in 2011-12 and lowest being Rs. 0.4 crore made in 2005-06.

We can notice from Table 2 that the highest average gross premium has been earned by miscellaneous reinsurance segment followed by fire, marine and life which is Rs.6077.3 crore, Rs.3003.4 crore, Rs.842.4 crore and Rs.35 crore respectively. Standard Deviation explains the variation of a value around the mean while Coefficient of Variation expresses this variation as a percentage of mean.The coefficient of variation explains the consistency or the stability of a variable over a period of time. Highest variation of 113% has been seen in the gross premium earned by life reinsurance segment while lowest variation of 37.2% is observed for miscellaneous segment. Coefficient of variation comes out to be 40.2% for marine segment and 38.8% for fire segment.

Highest average incurred claims of Rs.4890 crore are noticed for miscellaneous segment. The average incurred claims are observed as Rs.2191.4 crore for fire segment, Rs.563.5 crore for marine segment and Rs.19.8 crore for life segment. Incurred claims show coefficient of variation of 160.6%, 64.5%, 49.3% and 42.2% for life, fire, marine and miscellaneous segment of the company.

Highest average operating profits of Rs.751.8 crore are bagged by marine reinsurance segment of GIC Re. The second position is attained by miscellaneous segment with average operating profits of Rs.370.5 crore. Average operating profits for life segment are Rs.5.8 crore and average operating losses of Rs.125.3 crore are observed for fire segment. The coefficient of variation is calculated as 187.6%, 113.8%, 42.7% and -656% for miscellaneous, life, marine and fire segment.

From Table 2 we can observe that the highest compound growth rate of 73% for gross premium for the period under study is observed for life reinsurance

Table 2

Average, Standard Deviation, and Coefficient of Variation and Compound Annual Growth Rate ofthe Gross Premium, Incurred Claims and Operating Profit / Loss for Each Segment of GIC Re from 2004-05 to 2013-14

Variable	Mean ($\bar{X}$)	Standard Deviation (S.D)	Coefficient of Variation (C.V) (%)	Compound Annual Growth Rate (%)	Significance
Gross Premium					
Fire	3003.4	1166	38.8	13.9	0.00**
Miscellaneous	6077.3	2261.4	37.2	13.3	0.00**
Marine	842.4	339	40.2	15.4	0.00**
Life	35	43	122.9	73	0.00**
Incurred Claims					
Fire	2191.4	1412.6	64.5	20.6	0.00**
Miscellaneous	4890	2064.6	42.2	15	0.00**
Marine	563.5	278	49.3	10.3	0.02*
Life	19.8	31.8	160.6	85.3	0.00**
Operating Profit / Loss					
Fire	-125.3	822	-656	23.7	0.79 NS
Miscellaneous	370.5	695	187.6	30.9	0.25 NS
Marine	751.8	321.4	42.7	27	0.00**
Life	5.8	6.6	113.8	25	0.08***

Source : Computed Data, (*, ** , ***, indicates that the coefficients are statistically significant at 5 percent level, 1 percent level and 10 percent level respectively, NS indicates that the coefficients are not statistically significant.

segment. Next in the order comes marine segment of GIC Re with 15.4% compound growth rate, followed by 13.9% for fire and 13.3% for miscellaneous segment respectively. Compound growth rate for incurred claims under the period of study comes out to be 85.3%, 20.6%, 15% and 10.3% for life, fire, miscellaneous and marine segment of the company. Compound growth rate comes out to be 30.9%, 27%, 25% and 23.7% for operating profit (loss) of GIC Re for miscellaneous, marine, life and fire reinsurance segment respectively.

Now following ratios are calculated for each segment to evaluate its performance.

Table 3

Ratio	Formula
Net Retention Ratio	Gross Premium /Net Premium
Management Soundness Ratio	Operating Expenses / Gross Premium Written.
Combined Ratio	Operating Expenses + Net Claims Incurred / Premium Earned
Operating Profit Ratio	Operating Profits /Net Premium.

Source : Author's Own Design

(Note : Net Premium is obtained after deducting Premium on Reinsurance ceded from Gross Premium. Net Premium gives picture of the business generated and held by the company.Earned Premium is the portion of premium which is actually earned by the insurance company. It is determined considering the original value of premium, and calculating the time period for how long the policy has been there sans claim. And the percentage of time for which there was no claim to the total time period of the policy is the amount of premium earned by the company.Operating Expenses are the expenses of revenue nature that a company incurs in order to sustain its day to day operations)

Net Retention Ratio

This Ratio gives us the idea about the risk bearing capacity of the company. It is calculated as a ratio of Gross Premium to Net Premium .Higher Ratio accounts for better risk bearing abilities of the company. If the company is unable to bear the risk underwritten, it transfers a part of it to the retrocession companies. This transfer lowers the Net Premium of the company and thereby the retention ratio.

Management Soundness Ratio

Management Soundness Ratio explains the efficiency of the management of the company in providing its services. The management's efficiency relates to its operational efficiency. It is calculated as a ratio of Operating Expenses and Gross Premium Written. The lower the ratio the better it is. It shows that the business generated by the company or the revenue pulled in by the company is far more than the expenses incurred by it. It also shows that the company has the capability of making profits even if its revenue decline.

Table 4

Ratios Calculated for the Segments of GIC Re from 2004-2005 to 2013-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average Ratio
Net Retention Ratio											
Fire	82	74.8	77	77	88.8	83.8	81.8	84.5	80	79.6	80.93
Miscella-neous	95	93.9	75	82.4	94.5	93.8	94.6	96.6	97	96.8	91.96
Marine	84	83.7	77	84.8	84.4	89.8	85.4	89.7	83.4	86.2	84.84
Life	100	100	100	100	100	100	99.4	100	81.6	80	96.1
Management Soundness Ratio											
Fire	0.8	0.9	0.6	0.6	0.8	0.76	0.73	0.8	0.9	1.3	0.82
Miscella-neous	0.8	0.56	0.5	0.7	0.68	0.56	0.56	0.6	0.8	1.2	0.7
Marine	0.6	0.7	0.5	0.4	0.6	0.5	0.5	0.6	0.6	0.9	0.6
Life	12	15.4	0.08	0.6	0.8	0.7	0.6	0.64	0.63	1.2	3.3
Combined Ratio											
Fire	61.5	74	73.3	94.5	88.2	70.3	81.3	167	88.4	104	90.22
Miscella-neous	95.4	118	63.9	76.3	74.7	96.1	98.2	104	85	88.5	90.02
Marine	103	95.8	124	135	104.2	65.2	71.4	142	51.8	55.7	94.69
Life	107	53.8	47.3	18.9	27.5	53.9	74.8	45	98.8	96	62.31
Operating Profit Ratio											
Fire	18.5	11.4	3.6	-12.6	-1.9	12.1	8.7	-67.8	11.7	0.6	-1.57
Miscella-neous	1.9	-12.6	27.1	13.4	22	-1.5	-2.9	-9	9	13.9	6.13
Marine	-5.38	14	-20.2	-28.7	-10	34.5	18.9	-40.4	58.17	54.5	7.54
Life	190	30.8	52.9	26	79.5	34.5	11.6	48	2.8	6.9	48.35

Source : Computed Data

Combined Ratio

Combined Ratio or Operating Ratio or Trade Ratio is considered to be one of the most important ratios for any insurance or reinsurance corporation .This ratio talks about the underwriting prudence of the company, or its knack of carrying the business underwritten efficiently. It is calculated as a ratio of sum of operating expenses and net claims incurred to premium earned. A ratio below 100% is deemed good as the ratio above 100% shows that the operating expenses and the claims incurred are exceeding the premiums earned and the company is suffering underwriting losses. This ratio excludes investment performance of the company from its ambit. A satisfactory combined ratio is a must as it is a key parameter that is considered while rating a Reinsurance company.

Operating Profit Ratio

It is of paramount importance to increase the profitability of the company through its core operations as otherwise its market image would be damaged. As a result, it would become incapable of taking aid from the capital market which will affect its liquidity and thus, its claims paying ability. The ratio is calculated by dividing operating profits with net premium. The higher the ratio the better it is for the company.

It can be been seen from Table 4 that the retention ratio has been quite satisfactory throughout the period. Retention has been specifically good in life reinsurance where it has been 100% in almost all the years. Life reinsurance business volume has not been high enough to demand cession of business to the retrocessionaries. Such commendable retention ratios in all the segments speak volumes about the self sufficiency of GIC Re. On an average the retention ratio of life reinsurance segment has been the best of all being 96.1%, followed by 91.96% of miscellaneous, 84.84% of marine and 80.93% of fire reinsurance segment.

We can clearly observe from Table 4 that in all the segments of GIC Re the management soundness ratio has managed to be 1% or below in most of the years which verbalizes the excellent efficiency of management in running the business of the company. It shows that the company is rendering adequate control over the expenses of management. On an average the best performance under this ratio has been observed for marine reinsurance segment with a ratio of 0.6% followed by miscellaneous segment with a ratio of about 0.7%, 0.82% of fire and highest 3.3% for life.

Observing combined ratios from Table 4 it could be seen that non-life segments have not shown satisfactory performance in several years. The ratio has been above 100% in many years. On an average, worst performance is shown by marine segment with a ratio of 94.69%, followed by 90.22% by fire, 90.02% by miscellaneous and 62.31% by life.

No consistency has been seen in the operating profit ratio of fire, miscellaneous or marine reinsurance segment. The ratio has turned negative in the years with heavy claims.On average fire reinsurance segment has been least profitable operationally with -1.57% ratio while life reinsurance has been highly profitable with 48.35% ratio. The average ratio for marine segment and miscellaneous segment comes out to be 7.54% and 6.13% respectively.

CONCLUSIONS AND SUGGESTIONS

- From the above analysis we can conclude that the segment that has awesomely contributed to the business of GIC Re is Miscellaneous reinsurance. It takes the credit of being the most heavily reinsured segment of insurance. Within this segment the sub segment that is specifically responsible for this scenario is Motor reinsurance followed by Other Miscellaneous, Aviation & Engineering respectively. Initially there was lack of awareness about the importance of personal lines of business. But with the passage of time Health, Personal Accident, Financial Liability and Liability Insurance also appeared on the scene. And the contribution of these new lines has been commendable. Fast growing middle class which is educated and aware of its rights and has started valuing insurance more.
- After miscellaneous segment, the show has been stolen by fire class of GIC Re. It has also procured significant share for the business of GIC Re.
- Contribution to the business by Marine segment is also noticeable.The company is the largest capacity provider for marine insurance in the Middle East & Indian sub-continent with a capacity of US$75Mln GIC Re has been awarded the esteemed Marine Insurance Award at Seatrade Middle East & Indian subcontinent Awards on 17th October, 2011. GIC Re has been given the same award on 26th Nov, 2012 for the second time.GIC is the largest capacity provider for marine insurance in the region with a capacity of US$75Mln.

- Life reinsurance segment contributed the least to the business of GIC Re with average gross premium of just Rs.35 crore. The reason for such a performance of Life reinsurance segment could be the late entry of GIC Re into this class. Generally also reinsurance has been more the dimension of non-life insurance. Life reinsurance, however, has given GIC Re the opportunity to put eggs in different baskets and it would turn out to be a blessing in disguise for the company. The company can practice more diversification and can benefit manifolds as this class of business has lesser tendency to bring dramatic losses for the company.The pace at which the contribution of the segment is increasing is however awe-inspiring. Prior to liberalization, there was only one life insurance company in India while the number has considerably increased today to 24.This shows remarkable increase in the importance of life insurance in the country and hence the reinsurance business in the segment.Earlier mandatory cessions were applicable for non-life reinsurance only, but now similar compulsions might be posed for Life reinsurance as well. In the IRDA (Life Insurance-Reinsurance) Regulations 2013, notified in the gazette, the regulator had mandated life insurance companies to reinsure a percentage of the sum assured on each policy with domestic reinsurers. It had said this percentage would be notified by the regulator, adding it wouldn't exceed 30 per cent of the sum assured This unveils the fact that the picture for Life reinsurance is brighter in future and the doors are open. Though life reinsurance has contributed the least in terms of the average gross premium, the segment has reported highest CAGR of 73% for the period of study.
- After Life reinsurance segment highest CAGR has been reported for Marine segment followed by Fire and Miscellaneous segment respectively.
- Highest average incurred claims are noticed for miscellaneous segment followed by fire segment, marine segment and life segmentrespectively. Compound growth rate for incurred claims under the period of study comes out to be 85.3%, 20.6%, 15% and 10.3% for life, fire, miscellaneous and marine segment of the company.
- Highest average operating profits are observed for marine segment followed by miscellaneous and life and fire segment has given losses on an average. However, the Compound Growth Rate of operating profits is

highest for miscellaneous segment followed by marine, life and fire segment respectively.

- Retention of all the segments has been satisfactory with life reinsurance being the most well-retained segment. Holzheu & Lechener (2005) stated that commercial lines of insurance usually have lower retention rate than personal lines. Miscellaneous and Marine segment have also been successful in retaining the business. Fire segment has been relatively more cautious and has shown slightly lesser retention comparatively.
- The expenses have been marginal in comparison to the business generated by each class. This stamps that the management has been sound in effectively carrying regular business in each class. Marine segment has been the most efficient while life segment the least.
- Marine segment has reported highest combined ratio on an average which shows that this segment is mainly responsible for poor underwriting. Life Reinsurance segment has shown best average of combined ratios.
- Fire segment hasreported the worst average operating profit ratio while life segment has reported the best.
- Although on an average, highest claims are paid for miscellaneous segment still the segments mainly contributing to the underwriting losses and operating losses of the company are marine reinsurance and fire reinsurance respectively. Therefore, the company should be cautious while underwriting business of these classes. Miscellaneous class undoubtedly reported heavy claims but at the same time contributed maximum to the business of the company.
- The company can diversify its business and procure business from different markets in order to avoid any adverse situation. Also, more commission should be charged for the segment of business that has tendency to bring more claims for the company. The underwriters should not be hesitant to say 'No' whenever it is wise.
- Life reinsurance segment has been the most profitable segment though its contribution to the business has been the least. Life reinsurance segment has given GIC Re the opportunity to put eggs in different baskets and it would turn out to be a blessing in disguise for the company. The company can practice more diversification and can benefit manifolds as this class of business has lesser tendency to bring dramatic losses for the

company.Earlier mandatory cessions were applicable for non-life reinsurance only, but now similar compulsions might be posed for Life reinsurance as well. In the IRDA (Life Insurance-Reinsurance) Regulations 2013, notified in the gazette, the regulator had mandated life insurance companies to reinsure a percentage of the sum assured on each policy with domestic reinsurers. It had said this percentage would be notified by the regulator, adding it wouldn't exceed 30 per cent of the sum assured. This unveils the fact that the picture for Life reinsurance is brighter in future and the doors are open.

References

(2015) After Llyod's, many other reinsurers keen to start operations in India, *The Economic Times*, Retrieved from http://articles.economictimes.indiatimes.com/2015-03-17/news/60212088_1_foreign-reinsurers-swiss-re-llyod.

Bhattacharya, Mahasweta; and Gandhi, Sunil Kumar (2009), "Reinsurance Business in India and Performance Analysis of the National Reinsurer", *Journal of Business and Economic Issues*, Vol.1, No.2, pp. 81-93.

Burca, Ana-Maria; and Batrinca, Ghiorghe (2014), "The Determinants of Financial Performance in the Romanian Insurance Market", *International Journal of Academic Research in Accounting, Finance and Management Sciences,* Vol. 4, No. 1, pp. 299-308.

Chen, Yueyun; Hamwi, Iskandar, S.; and Hudson, Tim (2001), "The Effect of Ceded Reinsurance on Solvency of Primary Insurers", *Springer,* Vol.7, No.1, pp. 65-82.

Darzi, Tanveer, Ahmad (2011), "Financial Performance of Insurance Industry in Post-Liberalization Era in India", Doctoral Dissertation, University of Kashmir, Srinagar, retrieved from http://shodhganga.inflibnet.ac.in/

Das, Salil, R. (2012) "Designing a Reinsurance Programme", *IRDA,* Vol. 10, No.9, pp. 26-29.

Ghimire, Rabindra; and Kumar, Prashant (2014), "Testing of Financial Performance of Nepalese Life Insurance Companies by Caramels Parameters", *Journal of Business and Management*, ISSN 2350-8868, pp. 1-15.

Holzheu, Thomas; and Lechner, Roman. (2005), "The Global Reinsurance Market", *Handbook of International Business : Huebner International Series on Risk, Insurance, and Economic Security,* US : Springer, pp. 877-902.

Hrechaniuk, Bohdana; Lutz, Stefan; and Talavera, Oleksandr (2007), "Do the Determinants of Insurers' Performance in "Old" EU and the "New" EU and Outside?", http://www.webmeets.com/files/pape/EARIE/2007/155/Ins-GLT-EARIE.pdf, accessed on the 7th January, 2016.

Ikonic, Dragana; Arsic, Nina; and Milosevic, S. (2011), "Growth Potential and Profitability Analysis of Insurance Companies in the Republic of Serbia", *Chinese Business Review,* Vol.10, No.11, pp. 998-1008.

Naik, K. L. (2004) "What We Must Do", *IRDA,* Vol.2, No.4, pp. 24-25.

Nema, D. K.; and Jain, Parul (2012), "Growth of Reinsurance in India", *Zenith International Journal of Business Economics & Management Research,* Vol. 2, No. 1, pp. 57-70.

Rao, G. V. (2012), "Reinsurance Scene & India - Need for a Relook?", *IRDA,* Vol.10, No. 8, pp. 29

Saraswathy, M. (2015, September 8), "Life Insurers' Risk Cession to GIC on hold", *Business Standard,* Retrieved from http://www.business-standard.com/article/finance/life-insurers-risk-cession-to-gic-on-hold-115090700798_1.html.

Singh, Manjit; and Kumar, Rohit (2009), "Emerging Trends in Financial Performance of General Insurance Industry in India", *Indian Management Studies Journal*, Vol.13, pp. 31-44.

Sinha, Abhijit (2013), "Financial Soundness in Indian Life Insurance : A Comparison Between Two Leading Private Players", *Indian Journal of Finance,* Vol. 7, No. 4, pp. 22- 30.

Simpson, Samuel Nana Yaw; and Damoah, Obi Berko Obeng (2009), "An Evaluation of Financial Health of Non-life Insurance Companies from Developing Countries : The Case of Ghana", *Journal of Risk and Insurance,* Vol. 6, No. 1, pp. 30-49.

Sugrue, Dennis; and Kulkarni, Trupti (2011), "Reinsurance Peer Analysis : Shift to Short-tailed Lines Contributes to Peak Capital Levels and Strong Operating Performance in Recent Years", *Standard & Poor's Global Reinsurance Highlights,* pp. 33-38.

Woldegebriel, Mezgebe Mihretu (2010), "Assessment of the Reinsurance Business in Developing Countries : Case of Ethiopia"

Watson, Graham (2004), "Life Reinsurance - A Perspective", *IRDA,* Vol. 2, No.4, pp. 26-27.

Annual Reports of General Insurance Corporation (GIC Re) from 2004-05 to 2013-14.

gicofindia.com