



Comparison of financial performance between public and private personal accident insurance companies in Iran

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Abstract

In this article, we have compared the Financial Performance between Public and Private Personal Accident Insurance Companies in Iran, during 2007 till 2017. We analyze the comparative performance of selected public and private personal accident insurance companies in Iran. In this study, secondary data for 10 years is collected and t-test and ANOVA test is used for the analysis of data. The result show, there is no significant difference between financial performance of public and private of personal accident insurance companies in Iran.

Keywords: personal accident insurance, financial performance, key indicators

1. Introduction

Every risk involves the loss of one or other kind. In an older time, the contribution by the person was made at the time of loss. Today, only one business, which offers all walks of life, is an insurance business. Owing to the growing complexity of life, trade and commerce, individual and business firms and turning to insurance to manage various risks. Every individual in this world is subject to unforeseen uncertainties which may make him and his family vulnerable. At this place, only insurance helps him not only to survive but also to recover his loss and continue his life in a normal manner.

Insurance is an important aid to commerce and industry. Every business enterprise involves a large number of risks and uncertainties. It may involve risk to premises, plant and machinery, raw material and other things. Goods may be damaged or may be destroyed due to fire or flood. Some risk can be avoided by timely precautions and some are unavoidable and are beyond the control of a business. These unavoidable risks can be protected by insurance.

In fact, insurance is an arrangement by which a company or the state undertakes to provide a guarantee of compensation for specified loss, damage, illness, or death in return for payment of a specified premium. Personal accident insurance or PA insurance is an annual policy which provides compensation in the event of injuries, disability (permanent total or partial disability, temporary disability) or death caused solely by violent, accidental, external and visible events. It is different from life insurance and medical & health insurance. Accident insurance covers most of the risks of accidents at all times (24 hours) and at any location during the insurance period (usually a year).

Review of Literature

Shiu, Y. (2004) ^[12] determined the United Kingdom general insurance company performance. This study investigated the most important factors affecting company performance. This paper identifies the determinants of the performance of

United Kingdom general insurance companies using a panel data set consisting of economic data and Financial Services Authority/ Department of Trade and Industry returns over the period 1986 to 1999.

Findings addressed several important econometric problems that are usually ignored in applied work in the context of panel data analysis. Based on the empirical results, this study finds that liquidity, unexpected inflation, interest rate level and underwriting profits are statistically significant determinants of the performance of U.K. general insurers. Insurer performance is statistically significantly positively related to liquidity, interest rate level and underwriting profits, whereas performance is negatively related to unexpected inflation. These variables are regarded as determinants of general insurer performance. Finally, the overall performance of general insurers may be seriously damaged during periods of low interest earnings and poor underwriting results. This is because low interest rates prevent companies making enough investment earnings to offset underwriting losses. Interest rate level is not a firm specific factor, but a common factor affecting all firms in the market.

Ramanadh, K. (2006) ^[11] studied the performance management in Insurance Corporation. The study is done by author to know the key performance indicators and success factors for the Insurance companies. According to authors the financial performance & Non-financial performance indicators of life insurance companies are Financial Performance – Net Premium Earned, Profit from underwriting activities, Investment in company's assets and investment made outside. Non-Financial Performance – Internal speed in processing proposals, Dealing with drop outs, timely reminders, market research, Employees morale, Employee and agent training, External indicators are growth in number of policies, Market share, Customer satisfaction, Growth in number of branches, Average number of policies per agent.

Sane, R. (2009) ^[6, 10] argued that financial sustainability, incentive compatibility and consistency across multiple pension programs are critical. Simple model of Indexation shows that interactions between indexation rules of the first and second tiers of pension system and take ultimate advantage of replacement rate as well as outflows from general tax revenues. Wage indexation of first tier minimum pension and price indexation of second tier pension- implies more courage of eligible individuals for minimum pension over the course of retirement. Thus, Indexation of pensions secures against fall in purchasing power in old age is ubiquitous phenomenon in most OECD and developing countries.

Alamelu, K. (2012) ^[1] evaluated the financial soundness of life insurance companies in India. The researcher has analysed the financial performance of both public and private life insurance companies in India using capital adequacy, liquidity ratios and it was found that LIC is financial sound compare to private life insurance companies.

Neelaveni, V. (2012) ^[8] investigated the financial performance of life insurance companies and products. Researcher has analysed the financial performance of LIC, ICICI Prudential Life Insurance Company Limited, Balaji Allianz Life Insurance Limited, Birla sun-life Insurance Company Limited, and ING Life Insurance Company private Limited. She analysed compound annual growth rate by using variables such as share capital, fixed assets, current assets, cash and bank balances, current liabilities, net working capital. The study reveals that although LIC is big public sector company, in the past a decade period it is lagging behind in some of financial aspects. The reason is LIC has been facing the tough competition from private sector life insurance companies.

Bawa, S. K., *et al.* (2013) ^[2] examined the financial performance of life insurers in Indian insurance industry. The performance of the company plays a leading role towards the growth of the industry which ultimately leads to the overall success of the economy. Researchers examined the financial performance of Indian life insurers on the basis of various parameters. For measuring it, various financial ratios have been calculated taking into consideration liquidity, solvency, profitability and leverage of the insurance players. Generally, performance can be estimated by measuring the profitability of firm and insurers. In order to accomplish the aim, the study determines the impact of liquidity, solvency, leverage, and size and equity capital on the profitability of life insurers in India. The results of the study reveal that profitability of life insurers is positively influenced by liquidity and size and negatively related with capital. Profitability does not show any relationship with solvency and insurance leverage. The ratio is stable and presents a healthy picture of public insurer. As far as leverage analysis is concerned the performance of LIC is far better than that of private players. Regression analysis of the study shows that profitability has significant positive relationship with liquidity and size. On the other hand there is significantly negatively relationship between profitability and capital. The result also illustrates that profitability has no significant relationship with solvency and insurance leverage. It is therefore imperative to identify factors which can help insurance companies and investors to increase their profitability

Oscar, A. J., *et al.* (2013) ^[9] studied the financial

performance of life insurance companies in Ghana. In this research the authors analysed the financial performance of the life insurance industry in the emerging economy. They examined the financial performance of life insurance industry in the emerging economy. They examined the financial performance using three measures of insurers such as investment income, underwriting profit and overall total net profit. The study of ten life insurance companies revealed that the relationship between underwriting profit and investment income increases the profitability of the life insurance companies.

Burca, A. M., *et al.* (2014) ^[3] determined financial performance in the Romanian insurance market. The financial analysis of a company is an important tool used by actuaries in the process of decision making on underwriting and investment activities of the insurance company. This study attempts to analyse the determinants of the financial performance in the Romanian insurance market. According to the results achieved by applying specific panel data techniques, the determinants of the financial performance in the Romanian insurance market were the financial leverage in insurance, company size, growth of gross written premiums, underwriting risk, risk retention ratio and solvency margin. The insurance financial leverage reflected the potential impact of technical reserves' deficit on equity in the event of unexpected losses and has a negative influence on the insurers' financial performance. As for the company size, there is a positive linkage between this variable and the insurers' financial performance, since larger firms have more resources, a better risk diversification, complex information systems and a better expenses management. The underwriting risk has a negative influence on the insurer's financial performance, since taking an excessive underwriting risk can affect the company's stability through higher expenses. The retained risk ratio has a positive influence on the insurer's financial performance, as reinsurance involves a certain cost. As for the solvency margin, there is a positive linkage between this variable and the insurer's financial performance, because the insurer's financial stability is an important benchmark to potential customers.

The interpretation of this analysis' results should be made considering the fact that the insurance companies from Romania are facing the combined effects of deteriorating market conditions and financial crisis impact. Nevertheless, despite the fact that the effects of the financial crisis are still present and that the Romanian insurance market is below its potential, the insurance industry has interesting perspectives of evolution.

Showket, A. D. (2015) ^[13] analysed the financial performance of public and private Non-life insurance insurers in India. In this research an effort is made to evaluate the financial soundness and performance of selected public and private life insurers in India using capital adequacy, Earnings and Profitability and liquidity of life insurance companies. The tools used for the study are mean, standard deviation and T-test. The study reveals in terms of earnings & profitability the public life insurers have outperformed the private life insurers during the period under review and the public life insurers possess higher degree of liquidity during the study period.

Lee, C. C., *et al.* (2016) ^[7] explored the performance of the insurance industry, globalization, political institutions and financial liberalization. This paper investigated the impacts

of globalization, political institutions, and financial liberalization on the performance and risk-taking of insurance firms. Results point out that, globalization and political institutions are positively associated with insurer performance, implying that a higher degree of globalization and a stable political country benefit the life insurance sector in selected countries. The results also showed financial liberalization has a significantly negative impact on insurer performance and in regards to insurers' risk-taking, globalization and political institutions have an inverse and significant impact. Finally, they found some evidence that insurance firm performance and risk-taking were affected by the recent global financial crisis, while at the same time the effect of political institutions on the life insurance sector was not much. They also found evidence that these environmental factors influence firm performance and/or risk-taking. These findings were particularly important to insurance markets' competitors and national policymakers. Study of performance includes analysis and Interpretation of statements in such a way that it undertakes full diagnosis of earnings, profitability and turnover of the business. While a large number of potentially useful indicators exist to study the performance of personal accident insurance companies. The present study examines indicators which focus on analysis of performances of public and private insurance companies.

Methodology

In order to find the answer for the hypotheses, four insurance companies were selected. Two companies namely Iran and Alborz from public sector and two companies namely Saman and Parsian from private insurance sector selected using judgment sampling method.

The secondary data of insurance companies of ten years for the sample selected companies was collected from the annual reports of sample insurance companies in Iran, the hand book of statistics of central insurance company of Iran. T-test and ANOVA Test has been applied to analyses performance of selected public and private PAI companies in Iran.

For the purpose of the study, the following key indicators are used for analysing the performance of personal accident insurance indicators of selected public and private insurance companies in Iran.

▪ **Earnings and Profitability ratios**

▪ Net Premium Growth = $\frac{\text{Net Premium}_n - \text{Net Premium}_{n-1}}{\text{Net Premium}_{n-1}} \times 100$

▪ Net Premium Ratio = $\frac{\text{Net Premium}}{\text{Total Premium}} \times 100$

▪ Loss Growth = $\frac{\text{Total Loss}_n - \text{Total Loss}_{n-1}}{\text{Total Loss}_{n-1}} \times 100$

▪ Settled Claim Ratio = $\frac{\text{Settled Claim}}{\text{Total Settled Claim}} \times 100$

▪ Loss Ratio = $\frac{\text{Total Loss}}{\text{Net Premium}} \times 100$

▪ Insurance Density = $\frac{\text{Net Premium}}{\text{population}}$

▪ Insurance Penetration = $\frac{\text{Net Premium}}{\text{GDP}} \times 100$

▪ Loss Severity = $\frac{\text{settled Claims}}{\text{Loss Frequency}}$

Activity Ratios

Total Asset Turnover = $\frac{\text{Net Premium}}{\text{Total Asset}}$

Result

The main objective of this section is to examine the relationship between difference between financial performance of public and private personal accident insurance companies. For test of hypothesis the T-test and ANOVA Test has been used. For these analysis the secondary data related to performance of four selected insurance companies gathered in ten years from 2007-08 to 2016-17. The mean scores calculated for personal accident insurance companies of indicators of performance for earnings, profitability and activity ratios. The main hypothesis formulated as follows:

H₀: There is no significant difference between financial performance of public and private personal accident insurance companies.

H₁: There is significant difference between financial performance of public and private personal accident insurance companies.

Table 1: Mean Scores of PAI Companies of Key Indicators of Financial Performance for Earnings, Profitability and Activity Ratios

Key Indicators of Financial Performance	Tools for Analysis	Mean Scores	
		Public Personal Accident Insurance Companies	Private Personal Accident Insurance Companies
Earnings and Profitability Ratios	Net Premium Ratio	3.6	4.35
	Net Premium Growth	26.9	45.1
	Settled Claim Ratio	1.9	1.95
	Settled Claim Growth	48	67.6
	Loss Ratio	32.7	32
	Loss Severity	12	8.75
	Insurance Density	12.65	1.15
Activity Ratio	Insurance Penetration	12.4	1.1
	Total Asset Turnover	2.85	3.45

Source: Secondary Data

Table 2: T-Test: Paired Two Sample for Means

	Public	Private
Mean	17.00	18.38
Variance	247.29	587.49
Observations	9	9
Pearson Correlation	0.936	
Hypothesized Mean Difference	0	
Df	8	
t Stat	-0.377	
P(T<=t) one-tail	0.212	
t Critical one-tail	1.860	
P(T<=t) two-tail	0.716	
t Critical two-tail	2.306	

Source: Secondary Data

The above table represents the t-test statistics of key indicators of financial performance for earnings, profitability and activity ratios of personal accident insurance in public and private companies.

The P-value as portrayed in the above table is equal to 0.212 and 0.716 at 5 percent level of significance for various parameters of each key indicator. From the P-value, it can be said that the two set of companies seem to have statistically no significant differences in terms of financial performance for earnings, profitability and activity ratios of personal accident insurance of various parameters (Net Premium Ratio, Net Premium Growth, Settled Claim Ratio, Settled Claim Growth, Loss Ratio, Loss Severity, Insurance Density, Insurance Penetration and Total Asset Turnover). Hence the null hypothesis is accepted and alternate hypothesis is rejected. Therefore we can conclude that there is no significant difference between financial performance of public and private of personal accident insurance companies in Iran.

Table 3: ANOVA Test: Single Factor Summary

Groups	Count	Average	Variance
Public	9	17.00	247.29
Private	9	18.38	587.49

Source: Secondary Data

Anova

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	F Critical
Between Groups	8.611	1	8.611	.021	.888	4.49
Within Groups	6678.345	16	417.397			
Total	6686.956	17				

Source: Secondary Data

The key indicators (Earnings and Profitability ratios and Activity ratio) of financial performance of personal accident insurance companies of Iran for public PAI companies (Parsian and Saman) gave it mean score of 17 and for private PAI companies (Iran and Alborz) gave a mean score of 18.38.

An analysis of the above ANOVA table brings out that the F-value is 0.021 and significance is 0.888. Since the significance value is more than 0.05, there is no significant difference between the key indicators in assessing the financial performance of personal accident insurance companies.

In other words the mean differences existing for these parameters (Net Premium Ratio, Net Premium Growth, Settled Claim Ratio, Settled Claim Growth, Loss Ratio,

Loss Severity, Insurance Density, Insurance Penetration and Total Asset Turnover) across various key indicators of financial performance are not significant at 5% level. Hence, null hypothesis is accepted and alternate hypothesis is rejected.

Accordingly the findings support the statement that there is no significant difference between the key indicators in assessing the financial performance of personal accident insurance companies.

Conclusion

Accidents happen every day. From the danger of vehicle accidents during commutes to and from work to the danger of being hurt by the tools used at work, to the dangers faced because of improper infrastructure, the list is endless. Personal accident insurance gives you the satisfaction of knowing that whatever accident may come to pass, you and your dependents will be financially protected by accidental insurance cover.

According to statistical analysis there is no significant difference in terms of financial performance for earnings, profitability and activity ratios under this study of personal accident insurance for public and private insurance companies in Iran.

In order to have better returns; the insurance companies must make optimal utilization of its capitals. Private insurers need to have enough safeguard for any ups and downs in the investment for better support to unexpected claims. Proper check on management expenses will help to improve efficiency of insurance companies.

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