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IMPACT OF INTERNAL (MICRO) AND EXTERNAL (MACRO) FACTORS ON PROFITABILITY OF INSURANCE COMPANIES

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ABSTRACT

The research is conducted to analyze the impact of internal and external factors on the profitability of insurance companies by taking into consideration three measures of profitability of insurers that are overall profit (ROA), Underwriting Profit (UP), and Investment Income (INI). Panel data regression is used for analysis of life insurance companies in Pakistan for a period of 2006-2016. The findings of the study elucidate that Gross written premium, Expense on management, Size, and Interest rate have a significant impact on the profitability of insurance companies. The results show the underwriting losses that have been incurred by life insurance companies, emphasized the need of separate and actuary departments for proper validation of the policies. The paper facilitates the risk managers and regulatory authorities by depicting the factors affecting the performance of insurance sector. The research helps the management and policy makers in expediting the growth and performance of insurance sector.

Keywords*:* Profitability, Return on Assets (ROA), Underwriting Profit (UP), Investment Income (INI), Life Insurance Companies.

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1. INTRODUCTION

Insurance companies hold a very imperative position in financial services industry in developed as well as developing countries. They play a very important role in the development of financial sector by mobilizing savings. Sales of insurance policies can raise huge amount of funds. A well-developed insurance sector can provide long-term funds for infrastructure development (Charumathi, 2012). Insurance like other financial services has gained importance because of risks and uncertainties in society. Insurance companies provide unique financial services for the growth and progress of the economy. They provide financial stability and soundness in financial markets by absorbing risk. The world of business is risky without insurance and they do not have capability to absorb risk in this environment of global uncertainties (Akotey, Amoah, Manso & Sackey, 2016). The major aim of the study is to assess the internal (Micro) and external (Macro) factors of the profitability of insurance companies. Profitability is the main concern of every firm, and hence enhancing the wealth of its stakeholders (Gitman, 2007). Profitability is one of the most important purposes of financial management and to maximize the owner's wealth. A non-profitable business cannot exist whereas only a profitable business has the ability to reward its owner for a large return on investment. Hence profit earning is the main goal of business in order to ensure the sustainability of business in rapidly changing market conditions (Malik, 2011). This paper fills the gap in the literature by comprehensively analyzing the firm specific internal factors and external factors that are affecting the profitability of life insurance companies in Pakistan as the comprehensive study in this regard has not been conducted. As insurance industry is one of the components of financial system, and hence being relevant within macroeconomic context it is necessary to analyze the impact of macro factors on the performance of insurance sector. The study also extends the previous research by taking into consideration the core operating activities such as underwriting profit (UP) and Investment Income (INI). Literature shows that most of studies in Pakistan analyzed the major determinants of profitability of banking sector. The research delves the major critical internal as well as external factors that are affecting the performance of life insurance industry of Pakistan.

2. LITERATURE REVIEW

The insurance companies play a very imperative role in economic and financial development. They are the financial intermediaries that provide long term finance and effective risk management. Insurance sector reduces the amount of capital that would be needed to bear the losses individually by introducing the risk pooling mechanism (Feyen, Lester & Roacha, 2011). It holds a very important position for individuals as well as businesses as they provide a compensation for losses and brings them back to same position before occurrence of losses. The businesses are not capable of taking all the risk in extremely uncertain and volatile environment, therefore the current business without insurance companies is highly unstable (Ahmed, 2011). As a part of financial sector the importance of insurance companies has increased tremendously both as a supplier of major financial services to consumers and as an investor in the capital market. However large variance is observed in life insurance consumption, and hence raises the question on its determinants. The importance of life insurance companies are gaining importance in the financial sector, but developing countries are still experiencing very low level of insurance consumption (Beck & Webb, 2011).The significance of life insurance for individuals and families for managing the risk is increasing with each passing day. Financial performance shows the strength and progress of every firm and it shows that that how the firm is efficiently utilizing resources for increasing the value of its shareholders. No insurer can attract outside capital without profits, and hence unable to achieve its objectives in this era of globalized world and ever changing environment. Apart from improving insurer's solvency state, profit plays a central role in motivating and persuading the major stake holders to increase the supply of funds to insurance firms (Akotey et al., 2016). A measure of profitability is required because of various reasons such as demonstrating the investors that the money they have invested in the insurance company is giving them a sound return for the risk involved. Various measures of profitability are witnessed in literature such as ROE and ROA (Malik, 2011). The researchers also used other measures of profitability such as Tobin's Q to measure the financial performance (Shah et al., 2011). Investment performance revealed the efficiency and effectiveness of investment decisions. It is the critical factor for measuring the financial strength of an insurer. One of the fundamental differences between other industries and insurance industry is the accessibility of funds for investment purposes (Foong & Idrees, 2012).

Underwriting income forms the key component of the operating income whereas investment income is the next important component of operating income. Both of them are the key elements of measuring the financial performance of the firms (Srivastava & Ray, 2011).

Premium is the rate that is charged to insured, according to his expectation of loss or risk. The Gross Written Premium (GWP) amount has a significant relationship with the profitability of the insurance companies. Growth in premiums improves major and central operations of insurers and hence leads toward overall profitability (Akotey et al., 2016). The rate of market penetration is measured by premium growth. Fast growth of premium is one of the underlying factors in the solvency of insurance companies, but too much possessed with the premium can lead to self-destruction especially during the economic turndown (Chen & Wong, 2004). Kozak (2011) endorsed the relationship between Gross written premium (GWP) and performance of insurance sector. In Indian life insurers positive relationship was found between premium growth and profitability (Charumathi, 2012). Gross written premium has insignificant relationship with the performance (Chen & Wong, 2004) whereas Batrina and Burca (2014) a find the positive association between the premium growth and performance. This leads toward the first hypothesis:

H1a: *There is a significant effect of Gwp on Return on Assets.*

H1b: *There is a significant effect of Gwp on Underwriting Profit.*

H1c*: There is a significant effect of Gwp on Investment Income.*

Claims are the appeal by insured's to insurance company for the compensation of loss that has been incurred. Srivastava and Ray (2011) analyzed the solvency state of Indian life Insurance and explained that claims incurred have significantly influenced the profitability of insurance sector. According to findings of Pervan et al. (2012) there exists a significant relation of claims ratio on the performance of the insurance industry in Bosnia and Herzegovina. Akotey et al. (2013) found a significant relationship between the claims and performance:

H2a: *There is a significant effect of claims on Return on Assets.*

H2b: *There is significant effect of Claims on Underwriting Profit.*

H2c: *There is significant effect of Claims on Investment Income.*

The relationship between expense on management and performance has been extensively discussed in literature. Kozak (2011) found a significant relationship between management expense and profitability of insurance sector. Ikonic (2011) analyze the performance of insurance sector in Serbia by using CARMEL method and found the insignificant impact of management expenditure on the profitability of firm.

H3a: *There is significant effect on Management expanse and Return on Assets.*

H3b: *There is a significant effect of Management expanse and Underwriting Profit.*

H3c: *There is significant effect of Management expanse on Investment Income.*

Leverage is an important determinant of profitability in corporate finance. The choice of the capital structure has been of utmost importance. If the optimal capital structure exists and in the case it is existing, the use of debt increases the profitability (Malik, 2011). The level of risk of insurer increase with the increase in insurance leverage or financial leverage. Literature on capital structure endorsed that as leverage increases up to a desirable point firm's value will increase and then value goes down if leverage is further increased beyond that optimum level (Chen & Wong, 2004). Chen et al. (2009) used structural equation modeling that includes factor analysis and path analysis to substantiate the connection among leverage, operational risk, and profitability, whereas according to his findings there exist a significant and negative relationship between leverage and profitability.

H4a: *There is no significant effect of Leverage on Return on Assets*.

H4b: *There is no significant effect of Leverage on Underwriting Profit.*

H4c: *There is no significant effect of Leverage on Investment Income.*

Large insurers have more capacity to deal with the market fluctuations whereas the capacity to deal with these fluctuations is less in small insurers. As a result the large companies outperform in the market as compared to small companies, and unfortunately small firms earnings are more volatile than the larger ones (Shiu, 2004). One of the major ways to analyze the financial soundness of organization is done through estimating Size or total assets of the firms. The small insurers are

more prone to insolvency as regulators are less likely to liquidated large insurers (Chen & Wong, 2004). It is widely accepted that in terms of labor cost large firms have economies of scale. Furthermore the capacity to deal with fluctuations in market is more in large insurers as compared to small insurers. Moreover large companies can hire employees with great expertise and professional knowledge as compared to small insurers that will result in better performance of large insurers as compared to small insurers. According to findings of Malik (2011), there is a significant and positive relationship between the size of firm and profitability by analyzing life and non-life insurance sector of Pakistan. Charamuthi (2012) analyzed the Indian life insurance sector and found a positive and significant between the size and profitability.

H5a: *There is a significant effect of size on Return on Assets.*

H5b: *There is a significant effect of size on Underwriting Profit.*

H5c: *There is a significant effect of Size on Investment Income*.

The influence of macroeconomic factors on the performance of insurance companies cannot be negated. It has been observed that managers of life insurance companies are not taking into consideration the economic shocks and as a result having adverse effects on the profitability and the pace of market development**.** Sadhek (2006) has analyzed that there exist a significant relationship between various macroeconomic variables and profitability of life insurance. One of the major risks that are posing serious threat to insurance sector is the interest rate risk that is because of interest rate changes. Interest rate change affects the insurance firms in multidimensional way as it affects value of assets and cost of claims. It has been empirically tested that insurer's profitability is affected by interest rate volatility because of sensitivity in of nature of insurer's assets and liabilities, and attributes that insurer's insolvency is because of interest rate volatility (Brewer et al., 2007). Lee (2014) analyzed the success factors of property-liability insurance industry in Taiwan with the help of a panel data from 1999 to 2009 and the results claimed that economic growth rate has a significant impact on profitability. Chen and Wong (2004) analyzed the impact of economic and market factors on the life insurer solvency and found that increased in insolvencies is related with interest rate fluctuations, and higher the interest rate higher will be the insolvencies. Shiu (2004) analyzed the impact of internal as well as external determinants of the performance of general insurance companies of United Kingdom found that

lower inflation and higher interest rate are the predictors of firms performance and have the significant impact.

H6a: *There is a significant effect of Interest rate and Return on Assets.*

H6b: *There is a significant effect of Interest rate and Underwriting Profit*.

H6c: *There is a significant effect of Interest rate and Investment Income*.

Kozak (2011) found a positive impact of GDP growth rate and market share of foreign owned companies on the profitability of non-life insurance companies during period of integration and found the significant impact of GDP on the performance. Batrnia and Burca (2014) analyzed the determinants of profitability of insurance sector within macroeconomic context and found GDP as a significant factor affecting the insurance sector as economic growth improves the level of income and living standard of people and as a result purchasing power of people increases.

H7a: *There is a significant effect of Gdp and Return on Assets.*

H7b: *There is a significant effect of Gdp on underwriting profit.*

H7c: *There is a significant effect of Gdp on Investment Income.*

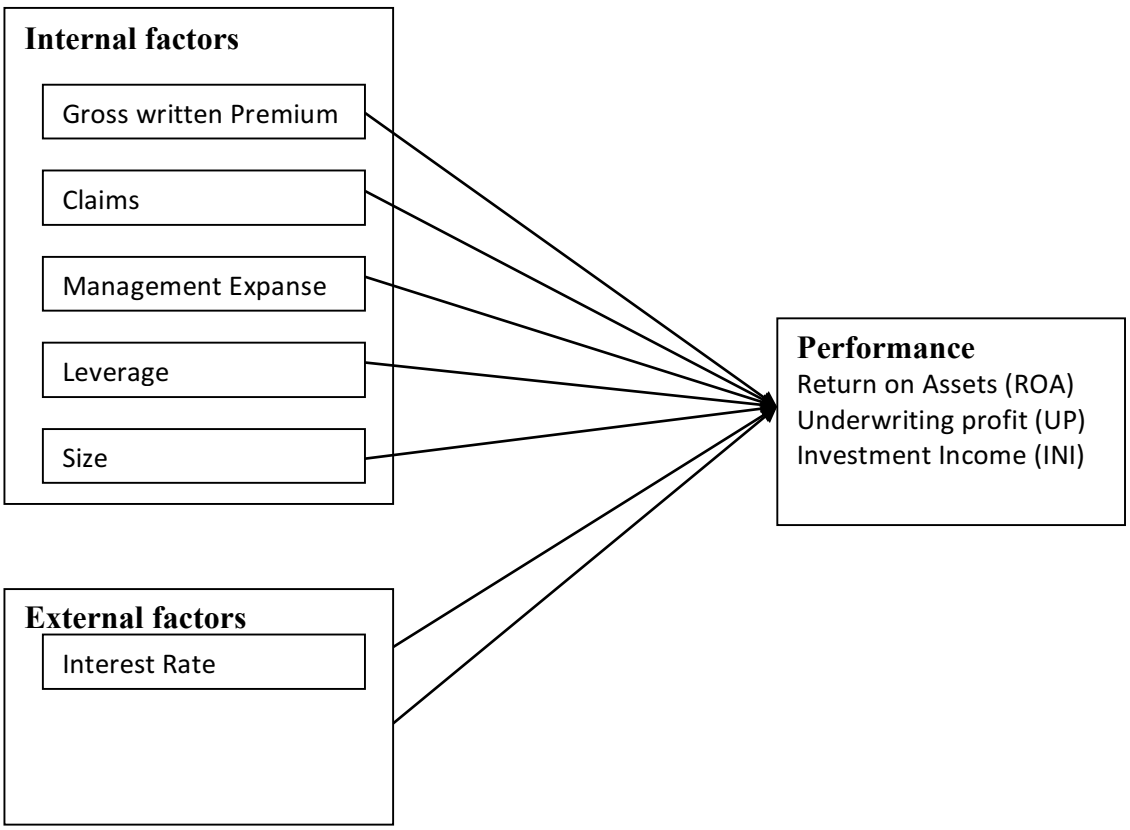
2.1. LITERATURE GAP

Life insurance sector is growing at a fast pace in Pakistan but despite that this area is less explored in Pakistan. The paper adds body of knowledge by extending prior research and contributes to literature. It is the first comprehensive research on the determinants of profitability of insurance companies by considering the firm specific factors (Internal factors) and external factors (macroeconomic factors). Lee (2014) emphasized the importance of macroeconomic factors on the performance of insurance sector. Hence insurance sector profitability is strongly influenced by the macroeconomic environment in which it is working that has not yet addressed in insurance industry of Pakistan. Akotey et al. (2016) analyzed the internal as well as external factors of firms financial performance highlights the importance of operating income in augmentation of overall profitability of firm. Moreover dynamic analysis of the insurance companies is an important tool

that can be used for making underwriting and investment operations. Therefore the in-depth analysis of determinants of financial performance of life insurance industry in Pakistan on the operating income will paves the way for the development and improvement of sector.

3. THEORETICAL EXPERIENCE

The empirical model which has been used in the study to analyze the micro as well as macro factors of life insurer's profitability has been estimated by taking into consideration three measures of profitability namely Return on Assets (ROA), underwriting profit (UP), and Investment Income (INI) for robustness of our results. The schematic diagram of theoretical framework is shown below.



4. RESEARCH METHODOLOGY

4.1. EMPRICAL SPECIFICATION OF MODEL

The econometric frameworks used in the study are as follows

$$\mathbf{ROA_{it}}=B_0+B_1\boldsymbol{Gwp_{it}}+B_2\boldsymbol{Clm_{it}}+B_3\boldsymbol{Emg_{it}}+B_4\boldsymbol{Lev_{it}}+B_5\boldsymbol{Siz_{it}}+B_6\boldsymbol{Inr_{it}}+B_7\boldsymbol{Gdp_{it}}+Mit\ldots\ldots\ldots (1)$$

$$\mathbf{UP_{it}}= B_0+B_1\boldsymbol{Gwp_{it}}+B_2\boldsymbol{Clm_{it}}+B_3\boldsymbol{Emg_{it}}+B_4\boldsymbol{Lev_{it}}+B_5\boldsymbol{Siz_{it}}+B_6\boldsymbol{Inr_{it}}+B_7\boldsymbol{Gdp_{it}}+Mit\ldots\ldots\ldots (2)$$

$$\mathbf{INI_{it}} =B_0+ B_1\boldsymbol{Gwp_{it}}+B_2\boldsymbol{Clm_{it}}+B_3\boldsymbol{Emg_{it}}+B_4\boldsymbol{Lev_{it}}+B_5\boldsymbol{Siz_{it}}+B_6\boldsymbol{Inr_{it}}+B_7\boldsymbol{Gdp_{it}}+Mit\ldots\ldots\ldots (3)$$

Dependent variable

The dependent variable for the study is profitability and the proxies for dependent variable are Return on Assets (ROA), Underwriting Profit (UP), and Investment Income (INI).

Independent variables

Independent variables are firm specific characteristics (Gross written premium, claims, size, leverage, expense on management) and external factors (Interest rate and GDP).Econometric style of Kozak (2011), Batrina & Burca (2014), Lee (2014) and Akotey et al. (2016) is adopted with few changes.

4.2. TYPE OF STUDY

This is a descriptive study based on cause and effect, and aimed at analyzing various firm specific and external factors that are affecting the performance of insurance companies. A deductive approach and quantitative measurement of variables is used to understand and interpret the relationship between them.

4.3. SAMPLE

The basic purpose of the study is to analyze the impact of firm specific factors and external factors that are affecting the profitability of life insurance companies. The sample comprised of six life

insurance companies in Pakistan on the basis of data availability. Secondary data is used in this study for analysis which is obtained from yearbooks of Insurance Association of Pakistan (IAP). The annual financial statements are used for the analysis. The data on external factors affecting the company's profitability is retrieved from the data bases of Ministry of Finance and State Bank of Pakistan.

4.4. DATA ANALYSIS

The data was analyzed through panel data regression models for evaluating the determinants of insurer's profitability. STATA 12 is used for analyzing the data. A panel data regression model is adopted for proper evaluation of internal and external factors affecting the company's profitability.

4.5. DATA COLLECTION

Secondary data is used in this study for analysis which is obtained from yearbooks of Insurance Association of Pakistan (IAP). The annual financial statements are used for the analysis. The data on external factors affecting the company's profitability is retrieved from the data bases of Ministry of Finance and State Bank of Pakistan.

4.6. SAMPLING TECHNIQUE

Convenient sampling technique is used as the companies selected on the basis of data availability and number of years the insurance company has been in operations.

5. RESULTS AND DISCUSSION

5.1 .DESCRIPTIVE STATISTICS

For checking the normality of data we used descriptive statistics, before applying panel data regression models. Table 6.1 demonstrates the descriptive statistics. All of them are satisfactory confirming the normality of data. The averages of ROA, UP, and INI are 0.026, -96.615, and 534.417. Over the seven years' timeline underwriting profit depicts a negative mean value of -96.615. Weak structure of actuaries in the firms is attributed to these underwriting losses in the insurance sector.

Table 5.1

Descriptive statistics of all the variables

	Obs	*Mean*	*Std. Dev.*	*Min*	*Max*
ROA	48	0.026	0 .109	-0.639	0.176
UP	48	-96.615	1748.053	-4992	5272
INI	48	534.417	1297.557	-3367	5187
Gwp	48	3219.348	4104.007	52	16349
Clm	48	673.174	1100.694	-3486	3646
Emg	48	836.3096	1163.797	-1535	4257
Siz	48	5521.809	8714.013	28.938	37894
Lev	48	5507.175	8214.505	-158.26	35813
Inr	48	11.242	1.456	9.005	12.787
Gdp	48	3.544	1.458	1.7	6.1

5.2 CORRELATION MATRIX

The correlation statistics results are depicted in the table below tells the association between independent variables and dependent variables. Results in table 5.2 indicates weak to strong correlations between Return on Assets (ROA) and Gwp, Clm, Emg, Lev, Siz, Inr, Gdp. There is a moderate uphill (positive) relationship between Underwriting Profit (UP) and Gwp, Clm, Emg, Lev, Siz whereas there is a weak uphill positive relationship between UP, Inr and Gdp. Similarly the correlation between Investment Income (INI) and (Gwp, Clm, Emg, Lev, Siz, Inr, Gdp) also shows strong to weak positive relationship between variables.

Table 5.2

Intercorrelation among the variables

	ROA	*UP*	*INI*	*Gwp*	*Clm*	*Emg*	*Lev*	*Siz*	*Inr*	*Gdp*
ROA	1									
UP	0.170	1								
INI	0.169	0.265*	1							
Gwp	0.411*	0.522*	0.645*	1						
Clm	-0.748*	0.561*	0.551*	0.190	1					
Emg	-0.641*	0.275*	0.589*	0.307*	0.186	1				
Lev	-0.421*	0.238*	0.233*	0.386*	0.368*	0.070	1			
Siz	0.282*	0.764*	0.675*	0.157	0.156	0.307*	-0.094	1		
Inr	-0.303*	-0.265*	0.233*	0.102	0.143	0.154	0 .147	0.125	1	
Gdp	0.670*	-0.183	0.027	-0.142	-0.125	-0.217	0.055	-0.189	-0.487*	1

Note:*P<0.05

5.3 PANEL DATA ESTIMATION

Panel data regression models are used for the estimation of results. Fixed effect and random effect models are used and later Hausman test is applied to test which estimation technique is best applicable in this study.

5.3.1. FIXED EFFECT MODEL

The results of fixed effect models are for the three performance measures Return on Assets (ROA), underwriting Profit (UP), and Investment Income (INI) are shown in the tables below.

Table 5.3

Fixed effect model for ROA

Dependent Variable: ROA			
Variable	Coefficient	t-statistics	Prob.
Gwp	-0.0464	-1.04	0.969
Clm	0.0012	0.96	0.954
Emg	-0.0222	-0.56	0.581
Lev	0.1223	1.14	0.263
Siz	0.0602	0.56	0.582
Inr	- 0.2546	-2.70	0.004*
Gdp	- 0.0117	-1.29	0.207
Cons	0.4562	1.97	0.057
R-Square			
Overall	44.20		
Within	32.86		
Between	41.60		

Note: * indicates the level of significance, *p< .05

In the above model our dependent variable is Return on Assets (ROA) and is regressed on the predictor's Gross written premium, Claims, Expense on management, Leverage, Size, Interest rate, and Gdp. The results show that all the variables are insignificant except Interest rate. The overall R^2 value shows 44.20 percent variation in ROA is explained by the independent variables included in the model.

Table 5.4

Fixed effect model for UP

Dependent Variable: UP			
Variable	Coefficient	t-statistics	Prob.
Gwp	-0.6309	-2.33	0.038 *
Clm	0.1352	1.71	0.097
Emg	0.3298	2.21	0.034 *
Lev	-0.1711	-10.61	0.000*
Siz	0.2945	7.07	0.000 *
Inr	-0.2014	-2.06	0.007 *
Gdp	0.4409	0.87	0.390
Cons	-0.2111	-2.44	0.020*
R-Square			
Overall	0.7987		
Within	0.6626		
Between	0.9223		

Note: * indicates the level of significance, *p< .05

In the above model our dependent variable is Underwriting Profit (UP) and is regressed on the predictor's Gross written premium, Claims, Expense on management, Leverage, Siz, Interest rate, and Gdp. The results show that all the variables are significant except claims and Gdp. Overall predicting power of model that is measured by R^2 which in this model is 79.87 %.

Table 5.5

Fixed effect Model for INI

Dependent Variable: INI			
Variables	Coefficient	t-statistic	Prob.
Gwp	0.5413	0.71	0.480
Clm	0.1705	1.35	0.186
Emg	-0.5373	-2.25	0.031*
Lev	-0.0128	-0.50	0.622
Siz	0.2964	1.08	0.289
Inr	-0.1654	-2.92	0.002*
Gdp	0.2199	0.27	0.787
Cons	-0.4137	-3.02	0.001*
R-Square			
Overall	0.3129		
Within	0.2919		
Between	0.4300		

Note: * indicates the level of significance, *p< .05

In the above model in which Investment Income is regressed against independent variables, all of them show insignificant results except expense on management and interest rate. Overall R^2 is 0.3129 which shows that that 31.29 percent variation in dependent variable is because of independent variables.

5.3.2. RANDOM EFFECT MODEL

The results of random effect models for the performance measures of Return on Assets (ROA), Underwriting Profit (UP) and Investment Income (INI) are shown in the table below.

Table 5.6

Random effect model for ROA

Dependent Variable: ROA			
Variable	Coefficient	t-statistics	Prob.
Gwp	0.0417	2.34	0.010*
Clm	-0.0015	-1.22	0.223
Emg	-0.0767	-2.64	0.001*
Lev	-0.0087	-1.72	0.264
Siz	0.5069	2.99	0.003*
Inr	-0.0269	-2.01	0.002*
Gdp	-0.0095	-0.72	0.343
Cons	0.4076	2.13	0.033*
R-Square			
Overall	44.27		
Within	43.42		
Between	80.99		

Note: * indicates the level of significance, *p< .05

The results of random effect models show that all the predictors have significant impact on ROA except Gdp, Leverage, and Claims. The R^2 overall value that is 44.27 percent exhibiting the goodness of fit of the model.

Table 5.7

Random effect model for UP

Dependent Variable: UP			
Variable	Coefficient	t -statistics	Prob.
Gwp	-0.7848	-2.67	0.004 *
Clm	0.7613	1.07	0.285
Emg	0.1116	1.42	0.155
Lev	-0.1618	-0.96	0.249
Siz	0.0019	0.85	0.092
Inr	-0.3062	-1.59	0.556
Gdp	0.1083	0.21	0.833
Cons	-0.8791	-2.28	0.003*
R-Square			
Within	0.3940		
Between	0.7388		
Overall	0.4786		

Note: * indicates the level of significance, *p<0 .05

In the table above dependent variable UP is regressed against predictors (Gwp, Clm, Emg, Lev, Siz, Inr, and Gdp).The results of random effect model shows insignificant results except Gwp. Overall R^2 of the model is 47.86 percent.

Table 5.8

Random effect Model for INI

Dependent Variable: INI			
Variables	Coefficient.	t-statistics	Prob.
Gwp	0.8790	2.26	0.001 *
Clm	0.1109	1.05	0.293
Emg	-0.2715	-2.34	0.019 *
Lev	-0.1784	-2.65	0.020 *
Siz	0.2989	2.26	0.027*
Inr	0.1178	2.53	0.016*
Gdp	0.5033	0.66	0.508
Cons	-0.1067	- 0.97	0.334
R-Square			
Within	0.4722		
Between	0.7426		
Overall	0.6577		

Note: * indicates the level of significance, *p< .05

The results of random effect model for the investment income are depicted in the table above. All the independent variables have the significant impact on the investment income except Gdp and claims. The R^2 overall value is 75.77 percent.

5.3.3. HAUSMAN TEST

Hausman test is applied to select the best model for this panel data estimation. The results show probability is insignificant it is 0.6978 so random effect model are best for estimation of the data in case of return on assets.As depicted in the table above as probability is significant fixed effect

model is best for estimation in case of underwriting profit as probability is less than 0.05.The results show probability is insignificant it is 0.1540 so random effect model are best for estimation of the results in case of investment income.

5.3.4. RESULTS OF HYPOTHESES

As indicated in the results of random effect model that Gwp has a significant and positive impact on the ROA whereas in case of fixed effect model Gwp has a significant negative impact on UP. Gwp has a significant positive impact on INI as depicted in the results of random effect model. Hence the proposed hypotheses of the study are accepted. The results show that claims do not have any significant relationship with ROA, UP and INI that leads towards the rejection of hypotheses conceptualized in the study. The results of the study are contradictory to the findings of Akotey et al. (2016).The findings of the study shows that Emg has significant and negative impact in case of performance measures ROA and INI whereas Emg has a positive and significant impact on UP. Hence the hypotheses are accepted as endorsed by results. The results show that leverage has a negative and significant impact on UP and INI thus contradicting the results of Akotey et al.(2016) and Kozak (2011).There exist the negative and insignificant relationship between leverage and ROA similar to Malik (2011).The results of the study show that size has a significant and positive impact on the ROA, UP and INI.The findings are similar to Malik (2011) There exists a significant and negative impact of Inr on the ROA and UP whereas in case of INI there is a significant positive impact of interest rate. Hence the hypotheses proposed in the study are accepted.As indicated in the results that Gdp has no significant impact on ROA, UP and INI .Hence the proposed hypotheses of the study are rejected and results are contradictory to findings of Lee (2014).

6. IMPLICATIONS

The implications of study are for managers, academicians, actuaries and policy makers. The study highlighted the need of reforming insurance industry s by highlighting the critical factors of insurance sector performance, and thus helping the risk managers, supervisory authorities, and policy makers in designing the policies that will boost the performance of sector. Moreover the study facilitates the policymakers in elucidating the true facts so that new regulatory framework can be made and strategic decisions can be taken, and reminds the policy makers that which of the

factors internal or external are of the utmost importance in improvement of the insurance industry. Gross written premium, size, and expense on management, interest rate and Gdp are of utmost importance for industry and have strong implications for actuaries in proper estimation for proper risk management and progress and development of the sector. Moreover the underwriting losses emphasized the need for separate actuary department for proper validation of policies. With the target of achieving premium growth without proper validating of the policies can give rise to huge underwriting losses. The study also has important implications for the government in analyzing the factor that are positively affecting the performance of this important sector as now this is the integral part of financial sector.

7. LIMITATIONS

There are certain limitations of the study along with its strength. The sample size is inadequate because of scarcity of resources and paucity of time. Limited time is one of the major hindrance and time constraints make it difficult to take the large sample size that can yield better results. Large sample size over the large time period horizon can yield better.

8. CONCLUSION AND RECOMMENDATIONS

The study investigated the major determinants of profitability of insurance companies by taking into consideration internal and external factors. Return on Assets (ROA), Underwriting Profit (UP), and Investment Income (INI) are the three parameters that are considered for analyzing the profitability of insurance companies in Pakistan. All these parameters depict the true picture of the operations of life insurance companies. The findings of the study show that Gross written premium has a significant relationship with all the three measures of profitability. Claims are not having significant impact on any of the performance measures. Expense on management also has a significant relationship with the profitability of insurers. Leverage also has significant and negative relationship with the performance measures UP and INI except ROA. Size of the firm also has a significant relationship with all the performance measures, and it depicts that by expanding the branch network and adaption of new technologies the performance of life insurers will improve. The interest rate also has a significant impact on all the performance measures. The results how that there exist a positive and significant relationship of interest rate with Return on Assets (ROA) and Underwriting Profit (UP) which shows that if lucrative interest rates are offered by insurers,

more insurance coverage is availed by prospective policyholders. Gross Domestic Product (GDP) has no significant impact on the performance of life insurers.

The study shows that insurance companies are incurring underwriting losses which shows that life insurance sector is not working at its full potential, and is not showing up to mark performance, and this can be attributed to poor management of actuaries in the life insurance sector. The findings of the paper elucidate the fact that there should be separate actuary department for core operations of life insurers that are underwriting activities and investment operations. Actuaries can play a central role in validating the policies properly and thus can prevent underwriting losses.

For future research there are many variables that can be included which are of importance and depicts different dimensions. There are other factors such as management practices and government support that can have impact and can play a very important role in improving the performance of insurance industry and thus can help in giving protection and cover to poor segment of the society. In further studies these factors can be included so that impact of internal (micro) and external (macro) factors on the performance of insurance industry can be analyzed. Performance of insurance industry can be seen from various perspectives. Furthermore the study could be carried on wider scale as this study is conducted in life insurance industry by not taking consideration into non-life insurance industry in Pakistan. Large sample size over a long time period can yield a better result. Moreover cross section studies among different countries is carried out to compare the performance of different countries. More macroeconomic variables can be included in the study for analyzing the impact of external factors on the life insurer's performance. Type of insurer's impact can be analyzed separately.

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