Influence of FDI Policy on Financial Efficiency of Indian Public Insurance Companies:An Analytical Elucidation

Puspalata Mahapatra, Arpan Mahapatra, Sushanta Tripathy, Surya Kanta Panda

Abstract: Financial Efficiency is one of the important barometer for measuring the performance of Companies irrespective of their sector including insurance to attain their sustainability in the long run. Through this study attempt has been made to evaluate the influence of overseas Investment on the financial efficiency of Indian Insurers (Public) and to find out whether Foreign Participation has remarkable impact on it or not. The existing study is analytical and descriptive in nature and used both primary as well as secondary data from different sources like Govt. Body report, IRDA annual report , Different Journals and on line data base. The collected data were analyzed through inferential statistical techniques like correlation, Multiple regression , f-test and Analysis of Variance (ANOVA) with the help of SPSS (18.0 version). The study wind-up with remarks that there is a significant association among FDI and Financial aspect including all the sub parameters. This Study will helpful to the Policy maker, IRDA and Govt to take the remedial measures to attract more and more FDI in to the Indian Insurance Sector to make it more penetrated and deveeloped.. Hence, it is recommended that more FDI should be encouraged in Indian Insurance sector to place it a better position in the global ranking and to assure financial stability in India.

Keywords : Indian Insurance Company, Profitability, Correlation, Multiple Regression, Liquidity and Investment.

I. INTRODUCTION

It is being noticed that the growth, development and performance of Indian Insurance Sector is sub-standard,disappointing and least developed in comparison to other developed and developing countries like USA, Russia and Japan, although the history of Indian Insurance is a long part (Das, 2004). The contribution of Indian Insurers in terms of Penetration and Density seems to be very negligible and laughable also.Indian Insurance market is a vast untapped market and vast opportunity is lying to cover and initiative should be taken to bring more and more prospective customers under the insurance blanket.Though the trend of Indian Insurance Industry in all the parameters looks impressive, but if we compare the figures of Indian Insurance Industry with other top economies of the word, we are at the lowest level in almost all the parameters,so to accelerate its growth to compete at global level the role of FDI is need of the hour (Chandel & Naveen Kumar,2016). In the year 1999, India Govt. liberalised the insurance market and allowed the Foreign Insures to invest in India through FDI in the form of Joint venture with Indian partners. For the economic development of India and to increase the density, penetration, Gross direct premium and revenues of the insurance industry, it is need of the hour to encourage more and more foreign equity participation in Indian Insurance Industry.

II. LITERATURE REVIEW

Kalyani Mulchandani, Manish Sitlani and Ketan Mulchandani etl. (2018) studied the different dependent and independent factors which have influential influence on profitability of Indian insurers . Finally revealed that Capital, Foreign holdings and Yield on investments have significant impact on profitability ie Return on Equity. Najjar and Petrov, (2011) revealed that there is a powerful connection between FDI and liquidity position, Size of Firm, Revenue generation Growth and Overall performance of th Indian Insurers including private and private. Ćurak and Pepur (2011) explored the determinants of financial performance and studied the impact of FDI in Croatia by using the panel data technique and found that underwriting risk, inflation and equity returns have the significant impact on ROA. According to Verma (2014) there is a profound connection among Liquidity, Growth, Profitability and Age with Solvency Ratio, As per GMM model used by the Author. FDI has the influential impact on Profitability, Firm Size, and Income on investment of the insurance Company. Kumari (2013) analysed the financial performance of public insurance business taking in to consideration various parameters like number of insurance companies, Number of offices, penetration, density, premium income and various financial ratios. Finally observed that after privatization and introduction of FDI, there is an influential CAGR with respect to significant increase in the comprehensive business growth Indian Insurance Industry.

III. OBJECTIVES & RESEARCH METHODOLOGY OF THE STUDY

To identify the influence of "FDI on Financial Efficiency of public sector Insurers of India"

This study uses the time series data with respect to different variables including FDI inflows from different secondary sources like IRDA Annual report, Companies web site , Journals and different data base.In this study various statistical tools like Multiple regression , Correlation,

Revised Manuscript Received on April 01, 2020.

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Analysis of variance and F-test have been used to know the impact of FDI on Indian Insurance Industry and to test the related Hypothesis.

IV. HYPOTHESIS:

The study used the hypotheses to explore the effect of FDI on Indian public sector Insurer are:
H0: The FDI has no significant impact on financial efficiency of Indian Public Insurance Companies.
HI: The FDI has a significant impact on Financial Efficiency of Indian Public Insurance Companies.

V. INFLUENCE OF OVERSEAS INVESTMENT ON FINANCIAL EFFICIENCY OF INSURERS

Foreign direct investment is an optimistic move for the future of Indian Insurance Sector, since this sector need huge amount of capital investment which can be done effectively only through increase in FDI and it enhance overall performance of insurance sector. (Rajesh K.Yadav (2016). Overall performance includes both Finalcial and Non financial performance Profitability otherwise termed as financial efficiency in dissimilar from performance and particularly in insurance sector, it is the combination of premium earned, return from investment and equity, size of firm and risk and leverage. Companies use the profitability as a measuring tool to generate more revenues from their operational activities to survive in the long term. Hence the analysis tries to explore the impact of overseas investment (Direct) on the various parameters of financial efficiency of Indian Insurers including gross direct premium, Amount of Investment, Return on Investment (%) and Solvency indicator (Liquidity). In the given analysis, four independent variable have been used like Inflation rate, Interest rate, GDP including inflows of FDI. To find out whether FDI has noteworthy impact or not on the profitability of public sector insurers and also to test the hypothesis, here the study use “t” test with 5% level of significance.

Analysis of Variables (Independent & Dependent)

Analysis of Variables (Independent & Dependent)

Here through the analysis attempt has been made to know whether impact is there if yes to what extent impact is present between FDI and other dependent variable.

(A) Dependant variable (Liquidity Ratio)

Table-1 Multiple Regression Analysis

Regression Statistics	
Multiple R	0.8142
R Square	0.6630
Adjusted R Square	0.5506
Standard Error	0.8643
Observations	17

The above table shows that liquidity ratio variation can be explained by 66,30% by four independent and exploratory variable like FDI, Inflation Rate, Interest rate and GD, as the co-efficient of determination (R^2) was 0.6630 which indicates in between these variables well established relationship exits also.

Table-2 Anova (Liquidity Ratio)

Particulars	*df*	*SS*	*MS*	*F*	*Significance F*
Regression	4	17.632	4.408	5.902	0.007
Residual	12	8.963	0.747		
Total	16	26.595			

Liquidity ratio *(Y)* = 3.100 - 0.691 (FDI Equity inflows) – 0.187 (Inflation rate) + 7.326 (GDPI) – 1.043 (Interestrate)

As per the ANOVA (F-test) table of Liquidity Ratio, it is found that (p value) is 0.007 , which is very significant and explains that the explanatory variables are relevant at 1% level of significance in relation to the variable Liquidity.
On the basis of Equation of Liquidity Ratio and Multiple Regression output table with its constituent variables, an Equation is derived It is observed from the equation that on the basis of ‘p’ value which is less than .05 only GDP and Interest rate has the impact on Liquidity ratio and on the other hand FDI and Inflation rate got no impact on it.

VI. (B) DEPENDENT VARIABLE (RETURN ON EQUITY)

Table-3 Multiple Regression Analysis

Regression Statistics	
Multiple R	0.7896
R Square	0.6234
Adjusted R Square	0.4979
Standard Error	6.1589
Observations	17

As per the observation from the above table, the variation in ROE can be well explained and influenced 62.34% by these four independent variable as the co-efficient of determination (R^2) was 0.6234.

Table-4 Anova (ROE)

ROE *(Y)* = 9.571 + 6.189 (FDI inflows) -42.13 (Inflation rate) – 11.868 (GDPI) + 8.059 (Interest rate)

The “ANOVA (F-test) indicates that factor (ROE) was quite significant since (p-value) of F-test is 0.01”. It means that Four explanatory variables are significant at 5 percent level (sign.0.01) with respect to the explained factor i.e. “ROE”.Multiple Regression output table of “ROE (Y)” and it's constituent variables, gives us the following equation with the explanation that only GDP and Interest rate have impact on ROE and others like FDI and Inflation rate got no impact on it since the p value is higher than .05.

C) Investment by Companies as an Dependant variable

Table-5 Multiple Regression Analysis Model Summary (Investment by Companies)

Regression Statistics	
Multiple R	0.9970
R Square	0.9940
Adjusted R Square	0.9920
Standard Error	0.3675
Observations	17

It is seen from table (5) that the co-efficient of determination (R^2) was 0.9940 which indicates that 99.4% of Investment by Companies can be influenced and explained by FDI including three other variables , which is a good basis for establishing a well set of relationship.

Table-6 ANOVA (Investment by Companies)

Particulars	df	SS	MS	F	Significance F
Regression	4	268.466	67.116	496.906	0.000
Residual	12	1.621	0.135		
Total	16	270.086			

The "ANOVA (F-test) indicates that the scale/ factor – Investment" by companies was quite significant since it is seen from the table, that "the significant value (p-value) of F-test is 0.025", which means that explanatory variables are significant at 1 percent level (sign.0.000) with respect to the explained factor i.e. "Investment by Companies". It is being observed that only one variable i.e Interest rate has significant impact on Investment by Companies, for other independent variables do not have any any impact on it.

Our study on the basis of Multiple Regression Analysis of Investment by Companies out put tables derives the following equation

Investment by companies (Y) = -2.456 + 0.370 (FDI Equity inflows) + 9.442 (Inflation rate) + 0.282 (GDP) + 0.529 (Interest rate)

(D) Investment Income as an Dependant Variable

Table-7 Multiple Regression Analysis Model Summary (Investment Income)

Regression Statistics	
Multiple R	0.972
R Square	0.945
Adjusted R Square	0.926
Standard Error	1.193
Observations	17

Here the table(7) indicates that coefficient of determination stands as .945 indicating 94.50% of the difference in the investment income is explained and influenced by these four explanatory variables including FDI equity inflows.

So there is a strong base for establishing a good indicator for establishing a well set of relationship among the independent variables.

Table-8 ANOVA (Investment Income)

Particulars	df	SS	MS	F	Significance F
Regression	4	292.402	73.101	51.347	0.000
Residual	12	17.084	1.424		
Total	16	309.486			

Investment Income (Y) = -3.275 + 0.221 (FDI Equity inflows) +5.743(Inflation rate) + 0.509 (GDP) + 0.596 (Interest rate)

The "ANOVA (F-test) indicates that the factor – Investment Income" was quite significant since the "the significant value (p-value) of F-test is 0.00", which means that explanatory variables are significant at 5 percent level (sign.0.000) with respect to the explained factor i.e. "Investment Income".On the basis of results the study derives the following equation As per the results of the equation, no variables including the FDI have got the impact on the Investment Income since the "P-values are higher than 0.05" in each case.

(E) PROFIT BY COMPANIES AS THE DEPENDENT VARIABLE

Table-9 Multiple Regression Analysis Model Summary (Profit)

Regression Statistics	
Multiple R	0.9070
R Square	0.8226
Adjusted R Square	0.7635
Standard Error	1.5220
Observations	17

As the (R^2) Co-efficient of determination is .8266 indicating that the profit can be explained 82.26% by all independent variables like FDI, GDP, Interest rate and Inflation rate, it is quite good basis for establishing a good relationship.

Table-10 ANOVA (Profit)

Particulars	df	SS	MS	F	Significance F
Regression	4	128.935	32.234	13.914	0.000
Residual	12	27.800	2.317		
Total	16	156.735			

As per the results of table (10) F' value stands as 0.000, which indicates that explanatory variables have the significant impact on the Profit at 5% level of significance

Profit (Y) = -1.150 + 0.282 (FDI Equity inflows) - 33.386 (Inflation rate) -0.560 (GDP) + 1.660 (Interest rate)

Based on the Multiple Regression output table of "Profit (Y)" and it's constituent variables, the following formula can be derived.

It is observed from the equation that Interest as a variable has an impact on Profit since the 'p' value stands less than .05 which reveals that progess on Interest will put re markable growth of Profit.Again, all three independent variable like FDI,GDP and Inflation rate have no impact on profit.

Table-11 Testing of Hypothesis (Public Insurance Company)

Dependent Variables	Independent Variables	R^2	Significance F	P-Values	Impact of FDI	Null Hypothesis
Liquidity ratio	FDI Inflows	0.435	0.003	<0.05	Significant Impact	Rejected
ROE	FDI Inflows	0.354	0.011	<0.05	Significant Impact	Rejected
Investment by Companies	FDI Inflows	0.942	0.000	<0.05	Significant Impact	Rejected
Investment Income	FDI Inflows	0.884	0.000	<0.05	Significant Impact	Rejected
Profit	FDI Inflows	0.711	0.000	<0.05	Significant Impact	Rejected

VII. FINDINGS

The above illustrated table (11) exhibit the relationship between independent & dependent variables through assigning same statistical "p" values. The study reveals that co-efficient of independent factor FDI is excess with regard to investment where as lower and button most in case of Return on Equity (.354) So investment and income from investment is much more influenced by overseas investment followed by profit & solvency position (Liquidity). Same times the research displays the ANOVA (p) value for which all dependent variables stands <0.05(5% level of significance), which ultimately shows that the null hypotheses is being rejected and alternative hypothesis is accepted. So, inference can be drawn from the study that the FDI has a remarkable and noteworthy impact on financial performance on Indian Public Sector Insurers. The findings of the study is represented in table (12) with the p' value.

Table-12
Result of Impact of FDI on Financial Performance

Dependent Variable	FDI Impact (p' value)	Result
Liqudity Ratio	.435	Significant
Return on Investment	.354	Significant
Investment	.942	Significant
Investment Income	.884	Significant
Profit	.711	Significat
Significance level (5% level)	Significant Impact on Overall Finacial Performance	

VIII. CONCLUSION

Aftermath of the study, followed with the conclusion that Indian Insurers , has attended a noticeable growth with respect to Solvency position (Liquidity), Gross Premium collected (GDP), Amount of Investment, Revenues from Investment, Per-capita Premium(Density), GDP contribution (Penetration) on the ground of introduction of overseas investment in the Indian insurance sector. As it is noticed that with respect to all variables of Independent factor (FDI), calculated 'p' value less than .05 at 5% (sig.), hence it is proved that there is a influential effect of FDI on all these variables. Other than strong impact FDI on Financial Efficiency (profitability), there is a good correlation among depended and independent variables. So study can be concluded with the statement that FDI is an essential element for the financial exploration of Indian Insurance Industry . So the introduction of FDI is an optimistic move for the growth, development and to obtain long term survival of the Insurance Industry.

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Dr. Puspalata Mahapatra now working as Asst. Professor(II) in KIIT DU,Odisha. She has received her M.com , MBA and Ph.D degree from Utkal University, Vanibihar, Bhubaneswar, Odisha.She has 14 years of teaching experience in different B.Schools of Odisha . She has more than 15 publications in different journals and more than 20 papers presented in both national and international conferences. Her area of interest is Financial Accounting, Financial Management and Financial Service , Corporate Law, Insurance and Banking Services.

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