PERFORMANCE APPRAISAL OF UNIT LINKED INSURANCE PLANS (ULIPS) IN INDIA : A CASE STUDY

Udayan Samajpati*

udayansamajpati@gmail.com

ABSTRACT

In this paper the performance evaluation of ULIPs is carried out through Risk-Return Analysis, Treynor's Ratio, Sharpe's Ratio and Jensen's Measures. The data used in the study is daily closing NAVs for the period from 1st July 2009 to 31st August 2011. The schemes selected for study are ICICI Life Stage RP-Maxi miser (Growth) Fund, Bajaj Allianz New Family Gain-Equity Index Fund II and ING High Life Plus-Growth Fund. The results of performance measures suggest that all the three ULIPs schemes have outperformed the market. Among the three schemes ING Vysya ULIP is best performer.

INTRODUCTION

Unit Linked Insurance Plan (ULIP) is a life insurance plan which provides for the benefit of risk cover as well as flexibility in investment. The investment in ULIPs is denoted as unit and is represented by the value called Net Asset Value (NAV). In a ULIP, the amount of premium to be invested after deducting for all charges and premium for risk cover are pooled together to form a fund. The value of fund at any time is equal to the amount of units multiplied by value of unit at that time.

LITERATURE REVIEW

Khurana (2009) made a comparative analysis of performance of ULIPs of private sector companies and found that there is no significant difference between the performances of pension funds-growth of selected insurance companies. Prasad, Babu, Chiranjeevi and Rao (2009) found that in spite of various investment opportunities, ULIPs have gained more reputation among the investors. Hence his study focused on assessing the significant relation between demographic features and ULIPs feature and level of investment in ULIP. Rao (2003) done the performance evaluation of mutual funds in a bear market and his results suggest that most of mutual funds have given excess returns over expected return. Dash, Lalremtluangi, Atwal and Thapar (2007) the researchers tried to find out rate of return given by different insurance policies and the effect of mortality and he found that different returns are given by different insurance policies and the mortality does not affect return. Devasenathipathi, Saleendran and Shanmugashunaram (2008) found that due to changes in LPG policies, preferences of people are changing. Therefore a wide range of ULIPs products is being offered to customers according to their preferences. Korivi and BS (2009) examined that mutual funds offered customer-tailor products to suit investors' requirement. So insurance companies also offered ULIPs which is an insurance product with an investment fund wrapped around it.

RESEARCH OBJECTIVES

The objectives of the study are:-

- To analyze various charges such as Premium allocation charge, Top up allocation charge, Fund management charge, Policy administration charge, switching charge and surrender charge etc.
- To examine the performance of endowment funds-growth of selected insurance companies in comparison to its peer groups and market.

METHODOLOGY

The present study evaluates the performance of the selected endowment plans of the three insurance companies. The insurance companies selected for the study are ICICI Prudential Life Insurance, Bajaj Allianz Life Insurance and ING Vysya Life Insurance. This study evaluates the performance of Unit Linked Endowment Plans ICICI Life Stage RP-Maxi Miser (Growth) Fund, Bajaj Allianz New Family Gain-Equity Index Fund II and ING High Life Plus-Growth Fund. The study is primarily based upon the secondary data.

* *Lecturer, Department of Commerce, Vasantha College for Women, Varanasi (Uttar Pradesh)*

The main source of secondary data is books, journals, brochures, and websites of the selected insurance companies. Period chosen for the study ranges from 1st July 2009 to 31st August 2011. For the study daily closing NAVs of the three selected insurance companies have been taken from their websites and other sources.

Analysis of Charges: The analysis of various charges of selected endowment plans is done under the study. The various charges are as Premium allocation charge; Top up allocation charge; Fund management charge; Policy administration charge; switching charge.

Return: For each ULIP scheme under study the daily returns are computed as

$$r_p = \frac{\text{Ending NAV} - \text{Beginning NAV}}{\text{Beginning NAV}} = \text{Return of portfolio}$$

The market returns are computed on similar lines with NIFTY (National Stock Exchange Index) as benchmark.

$$r_m = \frac{\text{NIFTY1} - \text{NIFTY0}}{\text{NIFTY0}}$$

Where r_m = return of market

Risk: risk is the measure of variability in returns.

Standard deviation: Measure of Total Risk.

$$\text{Var}(r) = \frac{1}{n}\sum_{i-1}^{n}(r_p - r_{am})^2$$

Where r_p = return of portfolio

r_{am} = mean rate of return on individual ULIPs. (Portfolio)

Standard deviation = $\sqrt{Var(r)}$

The variance and standard deviation are computed from daily return.

Beta: Measures of Systematic Risk: For obtaining the beta of selected endowment plans, regression model is applied. Mathematically:

Y = ?+âX

Where, Y = return on ULIPs scheme

X = market return called NIFTY return

? = intercept

Â = slope of the beta coefficient

Risk Free Asset: Risk less asset has zero variability in returns. For this purpose the Treasury bill rate – 182 days have been taken as the risk free asset and the interest rate on such deposits are considered as risk free return. The Treasury bill – 182 days rate on 30th August 2011 is 8.3998.

Treynor's Ratio: Treynor's ratio is a reward to volatility ratio based on systematic risk (beta) developed by Jack Treynor (1965).

$$T_p = \frac{\textit{Risk Premium}}{\textit{Systematic Risk Index}} = \frac{r_p - r_f}{\beta_p}$$

Where

T_p = Treynor's ratio

R_p = Portfolio return

R_f = Risk free return

Â = Beta coefficient for portfolio

Sharpe's Ratio: It is a reward to volatility ratio based on total risk (standard deviation) developed by William F Sharpe (1966).

$$S_p = \frac{r_p - r_f}{\sigma_p} = \frac{\text{Risk Premium}}{\text{Total Risk}}$$

Where,

S_p = Sharpe's Ratio

R_p = Portfolio return

R_f = Risk free return

$?_p$ = Standard deviation of portfolio return

Jensen's Measure: The Sharpe's and Treynor's ratio provides ranking of portfolio in comparison to benchmark whereas Jensen's measures developed by Michael C Jensen (1968) indicate that the portfolio provides a higher return over CAPM returns if its value is positive and vice-versa for negative value of Jensen's measures.

J_p = Portfolio Return – CAPM Return = r_p - [r_f + $â_p$ (r_m – r_f)]

Where,

J_p = Jensen's Measure for portfolio

R_p = portfolio return

R_f = risk free return

$Â_p$ = beta coefficient of the portfolio

R_m = market return

Results

Charges:

Premium Allocation Charge (PAC): Premium allocation charge is a premium based charge. The premium allocation charge of the Bajaj Allianz is highest and of ING Vysya Life Insurance (Table 1).

Top up Allocation charge: Top up charges is levied on the extra investment amount in addition to the regular premium. It reveals that the top up allocation charge of the ICICI Prudential is lowest 1.1% and that of ING Vysya is highest 2% (Table 2).

Table 1: Premium Allocation Charges (%)

Year	ICICI Life Stage RP-Maxi Miser (Growth) Fund	Bajaj Allianz New Family Gain-Equity Index Fund II	ING High Life Plus-Growth Fund
1	23 – 26.5	6 – 26	12
2	5	6 – 26	3
3	5	3	2 thereafter
4	2.5 thereafter	1.50 – 3	-
5	-	1.50 – 3	-
6	-	1 thereafter	-

Fund Management charge (FMC): Fund management charge is a charge levied as a percentage of the value of assets and deducted at the time of computation of daily unit prices. It shows that FMC is the highest (1.25%) for the ING Vysya Invest whereas it is lowest (0.80) for the ICICI Prudential.

Policy Administration Charge: It is a flat charge levied to cover regular administration costs. It shows that the policy administration charges vary between 20-75 per month for the endowment plans of the selected insurance companies. Hence, the charge is lowest for ICICI Prudential and highest for Bajaj Allianz.

Table 2: Top up, FMC and Policy Administration Charge

Fund Name	Top Up Charge (%)	FMC % Per Annum	Policy Administration Charge Per Month
ICICI Prudential	1.1	0.80	Rs 60 first year
		Rs 20 thereafter	
Bajaj Allianz	1.5	1.10	Rs 75 throughout policy term
ING Vysya	2	1.25	Rs 50 throughout policy term

Switching Charge: Switching is an option which allows the policy holder to shift the funds from one fund to another. Table 3 depicts the switching charges of the endowment funds of the selected insurance companies. It reveals that the number of free switches is maximum for the Bajaj Allianz and lowest for the ICICI. The charges for the switching thereafter range between Rs 100–500. The charge is highest Rs 500 for the ING Vysya whereas it is same for ICICI and Bajaj Allianz (Table 3).

Table 3: Switching Charge

Fund Name	No of Free Switches	Switching Charge (Charges per switch in rupee)
ICICI Life Stage RP-Maxi Miser (Growth) Fund	4	100
Bajaj Allianz New Family Gain-Equity Index Fund II	12	100
ING High Life Plus-Growth Fund	6	500

Surrender Charge: A surrender charge is applicable when a policy holder surrenders the endowment plan before completion of the minimum policy term. It reveals that the surrender charges are highest for the Bajaj Allianz whereas there is no surrender charge in ICICI and ING Vysya after 3rd year (table 4).

Table 4: Surrender Charges (%)

Parameters	ICICI Life Stage RP-Maxi Miser (Growth) Fund	Bajaj Allianz New Family Gain-Equity Index Fund II	ING HighLife Plus-Growth Fund
1	NA	100	NA
2	NA	75	NA
3	NA	50	NA
4	0	25	0
5	0	10	0
6+	0	0	0

Return and Risk: All the three ULIP schemes and market has given positive returns during the period. Among all the three companies schemes the ING Vysya is the best performer as its return is highest during the period (Table 5).

Table 5: Returns and Risk

Schemes	Returns	Standard Deviation	Intercept α	Beta β
ICICI Life Stage RP-Maxi Miser (Growth) Fund	0.0015	0.0125	0.00019	0.5213
Bajaj Allianz New Family Gain-Equity Index Fund II	0.0016	0.0118	0.00034	0.4950
ING High Life Plus-Growth Fund	0.0018	0.0123	0.00058	0.4662
NIFTY Index Value	0.0026	0.0232	NA	NA

Table also shows the standard deviation measure of variability in returns of the three ULIPs schemes as well as that of the market. It shows that the standard deviation of the market returns is highest which means that the returns of the market are more variable. The returns of all the three schemes are less variable as compared to market and among the three schemes the Bajaj Allianz Insurance returns are less risky as compared to other and are best in terms of minimization of risk. It also shows the intercept and beta coefficients of the three ULIPs scheme with respect to market return and it can be concluded that the ICICI Prudential returns are more sensitive in relation to market as its beta is highest 0.521 as compared to Bajaj Allianz and ING Vysya.

Performance Evaluation

The analysis of Treynor's measures reveals that all the three ULIPs schemes of the selected insurance companies have outperformed the market as their Treynor's ratio is greater than that of the market and among the three companies ING Vysya is the best performer as its value is highest 0.0036 (Table 6).

The analysis of Sharpe's measure reveals that all the three companies ULIPs schemes have outperformed the market as their Sharpe's ratio is higher than that of the market. Among the three ULIPs schemes the ING Vysya is best in terms of the returns offered by its value is highest 0.1377.

Table 6: Performance Evaluation

Schemes	Treynor's Ratio	Sharpe's Ratio	Jensen's Measure
ICICI Life Stage RP-Maxi Miser (Growth) Fund	0.0027	0.1153	0.00013
Bajaj Allianz New Family Gain-Equity Index Fund II	0.0030	0.1297	0.00028
ING High Life Plus-Growth Fund	0.0036	0.1377	0.00052
NIFTY Index Value	0.0025	0.1084	1.00000

As per Jensen's value for all the three ULIPs scheme, among three ULIPs scheme the ING Vysya is best as its value is highest 0.00052 as compared to ICICI Prudential and Bajaj Allianz.

CONCLUSION

The analysis of various charges such as policy administration charge, premium allocation charge, fund management charge, top up allocation charges, switching charge, surrender charge in overall terms reveals that the charges of the ICICI are lowest as compared to ING Vysya and Bajaj Allianz. The analysis of the returns shows that all the three ULIPs schemes and market has given positive returns during the period. Among all the three companies scheme the ING Vysya is the best performer as its return is highest during the period. However, Bajaj Allianz return is less risky as compared to other and is best in terms of minimization of risk.

The performance evaluation is done using three measures Treynor's Index, Sharpe's ratio and Jensen's measure. The findings reveal that all the three companies ULIPs performance is better than that of the market and all the three have outperformed the market. Among the three companies ING Vysya is best performer as per all the three measures.

REFERENCES

1. Dash Mihir, C. Lalremtluangi, Atwal Swimer and Thapar Supriya. 2007. A study on risk-return characteristics of life insurance policies. Working paper http://ssrn.com/abstract=1303350. September.
2. Devasenathipathi, Saleendran and Shanmugashunaram 2008. A study on consumer preferences and comparative analysis of all life insurance companies. The icfai university, Journal of Consumer Research.
3. Khurana, Ashok 2009. An empirical study on performance of unit linked pension plans of selected private sector life insurance companies. Indian Journal of Finance. November.
4. Korivi Sunder Ram and BS Venkatesh. 2009. Life style wraps: cost efficient alternatives to ULIPs. Google scholar 5th December.
5. Prasad J Chandra, Babu S Hari, Chiranjeevi K and Rao KVVS Visweswara. 2009. Unit Linked Insurance plans- the taster's perceptions on the mixed bag of fruits. Indian journal of finance.
6. S narayan rao, M ravindran. 2003. Performance evaluation of Indian mutual funds. Working paper http://ssrn.com/abstract=433100. October.
7. www.amfiindia.com
8. www.valueresearchonline.com
9. www.mutualfundsindia.com
10. www.mutualfundsnavindia.com
11. Finance.indiamart.com
12. www.icicipruamc.com
13. www.inglife.co.in
14. www.bajajallianz.com