

# Performance Evaluation of Equity ULIPS: A Study with Reference to Private Life Insurance Player in India

<sup>1</sup>CHETHAN KC, <sup>2</sup>Dr. Mahesh R.

<sup>1</sup>ResearchScholar, <sup>2</sup>Professor, DOS in Business Administration, BIMS, UOM, Mysuru, India.

<sup>1</sup>chethankc2010@gmail.com, <sup>2</sup>maheshrajgopal@yahoo.com

**Abstract** - Insurance is a financial protection against possible damage or loss. A ULIP is combo plan that includes insurance plan coverage for the risk and flexible investment option. There are large numbers of studies conducted to examine the performances of ULIPs in developed and emerging countries context. Since large number of investors have invested their hard earned funds in the ULIPs of Indian Insurance. There is a need to examine the performances of Equity-ULIPs which risk exposed to market risk. The present study made an attempt analyze the performances of Equity-ULIPs of private life insurance players in India. There are eleven widely accepted performance measures of ULIPs are considered to examine the performances of ULIPs in present study. It is found that, of the 35 sample equity –ULIPs, four funds- Kotak Life Pension Growth funds, PNB Multiplier-III, Kotak Life Dynamic Balance Fund, and Kotak Life Guaranteed Growth fund are identified as the best performers by at least four performance measures.

**Key Words:** Insurance, ULIPs, Equity, Investor, Investment, Performance, Return, Risk.

## I. INTRODUCTION

As insurance is financial risk coverage for the loss of the life or the damage to person and/or a property. Thus, generally an individual wants protection against such financial losses. Along with the risk coverage an individual may also have desire to invest to increase his earnings. The Unit Linked Insurance Plans (ULIPs) satisfies both the objectives of an investor. A ULIP is combo plan that includes insurance plan coverage for the risk and flexible investment option. Such investments in ULIPs represented as units and the units' value is represented by Net Asset Value (NAV). The ULIPs are significantly alike mutual funds, in ULIPs premium paid by the policy holder is invested in the tradable market securities and presented by the units, the NAVs of such investments are directly linked to the performances of such investments and regularly they declare the value of NAVs.

Prior to liberalization of Indian economy, Life Insurance Corporation of India (LIC) was dominating the insurance sector. The government of India appointed the R N Melhotra committee to structure the private sector insurance in 1993. After, 2000 the competition among the insurance players significantly increased as 49% of FDI sharing is allowed in insurance (Bahekar and Sudame, 2015). This led to the entry of large number of private sector players into the insurance market and increase the competition among the private sector and public sector insurance players.

Due to such increased competition, various players have adopted different strategies to promote their policies, such intense competition led to a controversy around the ULIPs. In spite such controversies around the ULIPs there are large number of investors have invested their funds in ULIPs and they are interested in the performances of those funds and also to compare the performances of different players. As Indian economy passed through different phases (ups and downs) thus, it would be appropriate to measure the performances of ULIPs of different insurance companies in India since their inception to till recent past. Such performance evaluation indicates the potential of the insurance companies in managing ULIPs.

The present study is organized as follows: the section one deals with the introduction, section two focuses on the review of literature, in the section three presented the research gap, in the section four problem statement and objectives have been presented; section five deals with the research methodology, in the section six empirical results have been presented and in the section seven summary of findings and conclusion. In section eight scope for further research has been presented.

## II. REVIEW OF LITERATURE

The performance evaluation of stocks, mutual funds or ULIPs is an analysis of investment returns against the some bench mark returns or target returns(Kumar and Aneja, 2017). Harry M.Markowitz's (1952) Modern Portfolio

Theory (MPT) is a seminal work in the field of finance. The Modern portfolio theory (MPT) posits how a rational investor makes decision based on the expected risk and return of assets (stocks, bonds, mutual funds, ULIPs etc.). After the development of the Modern Portfolio Theory (MPT) there are many researchers (Sharpe,1964; Lintner,1965; and Mossin,1966) have contributed to the development of another important model i.e., Capital Asset Pricing Model(CAPM), this theory focuses on the average return and variance. Treynor (1965) developed first composite measure of performance, that considers risk and return, the theory depicts risk premium per unit of risk. The Sharpe's performance measure on the whole indicates the risk premium per unit of total risk. Another important composite performance measure is Jensen's measure. Originally the Jensen's (1969) measure was based on the Capital Asset Pricing Model (CAPM), the value indicates the ability of managers. A superior manager who will have significant Jensen's alpha value and an inferior manager is some whose returns consistently fall short of expectations based on the CAPM model producing a significant negative value for alpha ( $\alpha$ ). This measure shows the managers ability to derive above-average returns adjusted for risk. Fama and French (1993) proposed a 3-factor model comprising the market portfolio, firm size and book-to-market ratio. The Sortino (1980) ratio, this ratio was first introduced by Franc Sortino in 1980. This ratio is similar to Sharpe ratio, but here unlike Sharpe this ratio is risk adjusted comparative performance. This ratio contrast from the Sharpe, it does not penalize the investments for upside risks. This ratio based on the philosophy that upside risk of an investment is good; therefore, it employs downside deviation as the denominator to the formula of Sharpe. Subsequently, Carhart (1997) gave his four-factor model; Modigliani & Modigliani (1997) gave  $M^2$ -measure. This ratio has been proposed by Modigliani and Miller (1997), this ratio has been derived from the Sharpe ratio. This ratio attempts to consider total volatility as measure of risk of portfolio investment. The  $M^2$  measures the performance of portfolio managers by comparing the returns from their stock selects to the specific risks associated with those stocks. Shadwick and Keating (2002) gave the Omega ratio, this is another important performance of a portfolio, and it is similar to Jensen's alpha and / or Sharpe ratio. This ratio captures all higher movements of distributions of returns.

#### **Review of Empirical Studies on the Performance of ULIPs**

There are large number of empirical studies have been conducted to examine the performances of ULIPs in the developed and emerging countries including India ( Gupta, 1974; Sarkar and Majumdar ,1995, Leelama, 2004; Chetna ,2010; Khurana and Goyal, 2010; Saini, 2011; Nagarajan et al., 2013; Kumar, 2013; Lakhani, 2014; Ostrowska-Dankiewicz, 2015; Bansal and Kaur, 2016; Kumar and Aneja, 2017;Singh et al., 2018). It is found that, there are

different empirical results on the performance of Unit Linked Insurance Plans. This variation is caused due to the variations in selected funds for the sample, variation in the time period of the sample and the geographical variations (cross-country).

### **III. RESEARCH GAP**

The insurance sector is one of the largest sectors that contributed to the growth of the Indian economy. As it revealed in the 2018-19 annual report of IRDA, the Unit-Linked Insurance Products recorded a growth in the premium of 17.42 percent premium from Rs. 64,850.90 crores in 2017-18 to 76152.17 crores in 2018-19. On the other hand, the growth in premium from traditional products was at 9.65 percent, with premium 43,1979.87 crores as against 3,93,958.54 crores in 2017-18. Accordingly, the share of Unit-Linked Insurance Products in total premium increased to 14.99 percent in 2018-19 as against 14.13 percent in 2017-18. This shows the growth and importance of ULIPs in the Indian Life insurance market. Post global financial crisis results in the large volatility of the equity-markets across the globe. Since, crores of hard earned money of the investors has been put into the ULIPs. Thus, there is a need to analyse the performance of the Equity based ULIPs since their inception to till recent past, that, gives a comprehensive picture of the performances of the ULIPs and which in turn helps the investor to guide at proper direction. Further, to attract and sustain more number of investors into the ULIPs, such research based investor-education is order of the day; such a flow of household savings into the financial market results in the prosperity of economy and country as a whole.

### **IV. STATEMENT OF THE PROBLEM AND OBJECTIVES**

Unlike traditional endowment insurance plan, ULIPs provide the investment opportunity in addition to risk coverage. The first ULIP was introduced by the Unit Trust of India (UTI) in 1971 followed by LIC's ULIP mutual fund in 1989. The entry of foreign insurance companies and their practices led to significant increase in the competition. Despite certain controversies around the ULIPS, ULIPs have been good investment opportunities for 'evolved investors'. Thus, there are large number investors those who have invested their funds in ULIPs. Such investors naturally interested in the performances of their investments.

Though there are large number of studies have been conducted to measure the performances of the equity-ULIPs in India. But those studies have considered few performance measures and their study period has been limited to few years. Since, the investors have questions about- capital appreciation in the long run and want to compare performances and such capital appreciations

among the available Insurers. It would be appropriate to examine the performances of ULIPs since their inception, as Indian capital markets have been witnessed a greater volatility over the years. Therefore, there is a need to examine the performances of private sector Indian insurance companies ULIP plans by considering all widely accepted performance measures.

The study wants to achieve the following specific objectives:

1. To analyze the Performance equity ULIP funds of private life insurance players in India.
2. To compare the performance of equity ULIP funds of private life insurance players in India.

### V. RESEARCH METHODOLOGY

#### Data

The study is based on the secondary data. Data for the study has been collected from concerned insurance companies' websites, websites of Reserve Bank of India (RBI), Bombay Stock Exchange (BSE), National Stock (NSE), and other published sources such as journals, magazines, newspapers.

#### Sampling and sample size:

In the present study, purposive sampling techniques has been used to select the Insurance players and equity-ULIP funds. The final sample consists of 4 private life insurance players namely Aditya Birla Sun Life Insurance, Kotak Life Insurance, PNB Metlife Insurance and Tata AIA Life insurance companies. Based on the data availability 35 equity-ULIPs funds since inception till 31<sup>st</sup> October, 2019

have been selected. The data is collected from the respective Life Insurance players' website.

#### Tools of analysis:

The basic input of performance is Daily NAVs of ULIPs. To analyze the performances of Equity-ULIPs in the study, eleven widely accepted performance measures have been applied; those are also include relative performance measures. Those are- Absolute Return, Compounded Annual Growth Rate (CAGR), Standard Deviation, Sharpe ratio, Treynor ratio, Information ratio, Downside risk, Sortino ratio, Omega and M<sup>2</sup>.

For the calculation of these performance measures we have used MS-Excel.

#### Scope of the Study:

The present study is based on the Indian private-Insurance players equity-ULIPs. Data of such Equity based ULIPs and their NAVS have been considered since their inception (some of the ULIPS have their inception from Jan 1, 2004) till 31st October, 2019.

#### Limitations of the study:

No research can be conducted without limitations. The limitation of the present study is as follows:

In the study only private insurance companies-Equity ULIPs are considered, Public sector Insurance companies ULIPs are outside the scope of the study. The study is limited to only 35 equity-ULIPs.

However, the above limitations do not hinder the study from drawing inferences and conclusion.

### VI. RESULTS AND DISCUSSION

Table-1.0: Empirical Results of Performances of ULIPs

Funds	Absolute Return	CAGR	Std Deviation	Sharpe	Treynor	Jensen	Information ratio	Downside risk	Sortino Ratio	Omega	M2
ABSLI Multiplier	123.1800	0.1185	1.2356	0.9405	1.3414	0.4699	0.4715	0.9756	1.1911	0.1585	0.4191
ABSLI Maximiser	112.5200	0.0983	1.2879	0.8195	1.1445	0.1520	0.8252	0.9683	1.0900	1.0869	0.0808
ABSLI Magnifier	179.9700	0.0994	1.1427	1.5139	2.1171	0.1499	0.3663	0.8975	1.9275	1.1339	0.0762
ABSLI Maximiser Guranteed Fund	62.6600	0.1696	0.8211	0.6781	0.8789	0.1393	0.1986	0.5518	1.0091	1.1557	0.0160
ABSLI Capped & Nifty Index Fund	38.2300	0.1359	0.7958	0.3325	0.3325	0.0136	-0.0257	0.0257	0.6037	1.1396	0.1380
ABSLI Value & Momentum Fund	73.7900	0.1112	0.8821	0.8365	0.8176	0.0088	0.0144	0.6193	1.0788	1.1261	-0.0472
ABSLI Super 20	113.5200	0.1344	0.9677	1.1010	1.1245	0.1368	0.3541	0.6579	1.6194	1.1313	0.0372
ABSLI Pure Equity Fund	108.0000	0.1972	0.7668	1.3174	1.4018	0.4836	0.7566	0.5504	1.8354	1.2295	0.4031
Kotak Life Insurance Classic Opportunities Fund	109.9000	0.1299	0.9078	1.1337	1.1117	0.3009	0.6116	0.6307	1.6318	1.1421	0.2288

Kotak Life Insurance Front Line Equity Fund	100.0400	0.1176	0.9237	1.0074	1.0020	0.2089	0.4401	0.6332	1.4697	1.1262	0.1290
Kotak Life Insurance Opportunity Fund	165.2400	0.1797	1.0308	1.5353	2.1495	0.7575	1.1285	0.7109	2.2262	1.1791	0.6954
Kotak Life Insurance Dynamic Balance Fund	196.2800	0.1397	0.7756	2.4407	3.6274	0.6608	0.9317	0.6145	3.0806	1.1988	1.0197
Kotak Life Insurance Guranteed Growth fund	196.2500	0.1152	0.7847	2.4121	3.6086	0.6542	0.9149	0.6596	2.8695	1.2043	0.9792
Kotak Life Insurance Pension Opportunities Fund	108.1700	0.1283	0.9128	1.1086	1.1512	0.2015	0.3699	0.6305	1.6049	1.1324	0.0886
Kotak Life Insurance Pension Frontline Equity Fund	106.3300	0.1254	0.9280	1.0706	1.0675	0.9838	2.1015	0.6311	1.5742	1.1346	0.9571
Kotak Life Insurance Pension Growth Fund	111.3000	0.1312	0.5044	2.0681	2.5966	0.4880	0.9880	0.3418	3.0521	1.2497	0.8553
PNB Metlife Flexi Cap Fund	84.1200	0.0874	0.9100	0.8477	0.8209	0.0173	0.1247	0.6317	1.2212	1.1065	0.0610
PNB Metlife Multiplier II	74.4600	0.0863	0.9947	0.6784	16.6739	0.6422	1.4372	0.6649	1.0149	1.0995	2.1221
PNB Metlife Multiplier III	8.4780	0.1435	0.0106	1.4115	45.7429	0.0149	1.4036	0.0113	1.3278	1.0337	4.4587
PNB Metlife Multiplier I	154.6700	0.1673	1.3032	1.1333	1.5853	0.0924	-0.1951	0.9838	1.5012	1.1017	0.1808
PNB Metlife Virtual Fund II	89.4300	0.0946	0.7982	1.0330	1.1001	0.1166	0.3802	0.5594	1.4739	1.1308	1.8904
Tata AIA Insurance Equity Fund	197.0000	0.1515	1.3320	1.4266	2.1747	0.2748	0.1772	1.0499	1.8099	0.0270	0.1644
Tata AIA Insurance Whole Life Midcap Equity Fund	155.0000	0.1533	1.1384	1.3003	1.8538	0.5482	1.1552	0.9185	1.6115	0.2904	0.5248
Tata AIA Insurance Large-cap Equity Fund	100.0000	0.1054	1.1308	0.8226	1.1655	0.4831	0.4272	0.8268	0.7312	1.0908	0.4761
Tata AIA Insurance Future Equity Pension	116.7000	0.1238	1.1324	0.9690	1.3335	0.5157	1.2539	0.8161	1.3444	1.1065	0.4976
Tata AIA Insurance Select Equity Fund	157.7000	0.1708	0.8486	1.7761	2.3406	0.7266	1.0224	0.5738	1.4554	1.2036	0.7182
Tata AIA Insurance Future Select Equity	156.8000	0.1698	0.8547	1.7528	2.3300	0.7200	1.0084	0.5764	2.5992	1.2015	0.2182
Tata AIA Insurance Top 50	136.8000	0.1467	0.9768	1.3290	1.5328	0.1258	0.2293	0.6434	2.0177	1.1553	0.0298
Tata AIA Insurance Top 200	159.0000	0.1732	0.9362	1.6239	1.8381	0.3291	0.5554	0.6465	2.3514	1.1902	0.2530
Tata AIA Insurance Infrastructure Fund	67.5700	0.0780	1.0102	0.5998	0.6497	0.1097	-0.3240	0.7059	0.8583	1.0753	0.2498
Tata AIA Insurance Super Select Equity fund	118.9100	0.1413	0.7856	1.4247	1.3073	0.5855	-1.0072	0.5522	2.0270	1.1773	0.3137
Tata AIA Insurance Super Select Equity Pension Fund	113.6300	0.1346	0.7954	1.3408	1.2189	0.3700	0.6477	0.5563	1.9171	1.1709	0.2845
Tata AIA Insurance Indian Consumption Fund	58.0400	0.2135	0.7368	0.6930	0.6521	0.2385	0.3963	0.4869	1.0487	1.2309	0.1629

Absolute Returns are derived by the NAVs (Net Asset Values) of a ULIP plan. They are expressed as a percentage of the initial NAVs and is considered as one of the most effective ways of determining a plan's performance. As the above table-1.0 depicts the performances of ULIPs, based on the Absolute returns, the Tata Equity Fund is the best performer with 197 percent of returns, followed by the Kotak Dynamic Balance Fund with 196.28 percent, Kotak Guaranteed Growth fund with 196.25 percent and the AB

Magnifier of 179.97 percent. It is also found that, PNB Multiplier-III is the least performer with 8.48 percent, followed by the AB Capped & Nifty Index Fund with 38.23 percent, Tata Indian Consumption Fund with 58.04 percent and the AB Maximiser Guaranteed Fund with 62.66 percent.

The Compounded Annual Growth Rate (CAGR) is measure that shows how much an investment has grown over a specific period of time. The above table-1.0 also shows

that, on the basis of compounded growth rate, the Tata Indian Consumption Fund 21.35 percent, AB Pure Equity Fund 17.97 percent, Kotak Opportunity Fund 17.97 percent, Tata Top -200 17.32 percent are the best performing funds. The PNB Virtual Fund-II has 9.46 percent, Tata Infrastructure Fund has 7.80 percent, PNB Multiplier-II has 8.63 percent and PNB Flexi Cap Fund with 8.74 percent are the least performing funds in the sample.

Standard Deviation Shows how volatile ULIPs returns have been since their inception to till 31<sup>st</sup> October, 2019. Based on the Risk (Standard Deviation) the PNB Multiplier-III (0.0106), Kotak Pension Growth Fund (0.5044), Tata Indian Consumption Fund (0.7368), AB Pure Equity Fund (0.7668) are the least risky funds. Tata Equity Fund (1.332), PNB Multiplier-I (1.3032), AB Maximiser (1.2879), AB Multiplier (1.2356) funds have highest risk among the sample funds.

The Sharpe measure takes into consideration the overall risk of the portfolio. This measure indicates the risk premium per unit of total risk. The table-1.0 also shows, on the basis of Sharpe ratio the Kotak Dynamic Balance Fund (2.4407), Kotak Guaranteed Growth fund (2.4121), Kotak Pension Growth Fund (2.0681), Tata Select Equity Fund (1.7761) are the best performers. Whereas, the AB Capped & Nifty Index Fund (0.3325), Tata Infrastructure Fund (0.5998), AB Maximiser Guaranteed Fund (0.6781), PNB Multiplier-II (0.6784) are the least performers.

The Treynor ratio depicts the portfolio's return of the risk premium per unit of risk. Based on the Treynor ratio, PNB Multiplier-III (45.74) is the best performer, it shows that, the fund gives a returns of 45.74 percent of returns for per unit of beta, the PNB Multiplier-II has 16.67 percent of return for per unit of risk, the Kotak Dynamic Balance Fund has 3.62 of return for per unit of risk, the Kotak Guaranteed Growth fund has 3.61 percent of return per unit of risk. Whereas, the PNB Virtual Fund -II has -1.10 percent of negative returns for per unit of risk, the AB Capped & Nifty Index Fund has 0.3325 percent followed by Tata Infrastructure Fund with 0.6497 percent and Tata Indian Consumption Fund with 0.6521 percent of returns for per unit of risk are the least performers.

A positive value of Jensen's alpha indicates a fund manager has "beat the market" with their stock-picking skills. The table -1.0 also reveals the Jensen's alpha, as stated in the earlier section the value of Jensen's alpha indicates the ability of a managers. A superior manager who will have significant alpha value and an inferior manager is someone, whose returns consistently fall short of expectations. The results shows the alpha values of- the Kotak Pension Frontline Equity Fund 0.9838, Kotak Opportunity Fun 0.7575, Tata Select Equity Fund 0.7266, Tata Future Select Equity 0.72 are the higher alpha values, it indicates the superior performance of managers.

Whereas, Tata Super Select Equity fund has -0.5855, Tata Infrastructure Fund has -0.1097, PNB Multiplier-I has -0.0924, AB Capped & Nifty Index Fund has -0.0136, and AB Value & Momentum Fund has 0.0088 alpha values, indicating that the managers of these funds have least performance.

The information ratio is also referred as appraisal ratio, this ratio shows the additional amount of return that an investor receives per unit of increase in risk. Top most performers based on the Information ratio are the Kotak Pension Frontline Equity Fund (2.1015), the PNB Multiplier-II (1.4372), the PNB Multiplier-III (1.4036), and the Tata Future Equity Pension (1.2539). Further, the Tata Super Select Equity fund (-1.0072), Tata Infrastructure Fund (-0.324), PNB Multiplier-I (-0.1951), and AB Capped & Nifty Index Fund (-0.0257) are the least performers.

Downside risk explains a worst-case scenario for an investment or indicates how much the investor stands to lose. Based on the Downside risk the AB Capped & Nifty Index Fund (-0.0257), PNB Multiplier-III (0.0113), Kotak Pension Growth Fund (0.3418), Tata Indian Consumption Fund (0.4869) displays a least risk, that, indicates the best performance. The Tata Equity Fund (1.0499), PNB Multiplier- I (0.9838), AB Multiplier (0.9756), AB Maximiser (0.9683) exhibits higher risk, which shows the least performance of the funds.

Sortino ratio measures excess return per unit of downside risk. Based on the table-1.0 it can be inferred that, the Sortino ratio of the Kotak Dynamic Balance Fund (3.0806), Kotak Pension Growth Fund (3.0521), Kotak Guaranteed Growth fund (2.8695), Tata Future Select Equity (2.5992) are the best performing funds. Further, it can be inferred the AB Capped & Nifty Index Fund (0.6037), Tata Large-cap Equity Fund (0.7312), Tata Infrastructure Fund (0.8583), and AB Maximiser Guaranteed Fund (1.0091) are the least performers.

The Omega ratio captures all higher movements of distributions of returns, which is calculated as sum of all positive return scaled by sum of all negative returns. The table-1.0 also depicts the Omega ratio, based on it, the Kotak Pension Growth Fund (-1.2497), Tata Indian Consumption Fund (-1.2309), AB Pure Equity Fund (-1.2295), Kotak Guaranteed Growth fund (-1.2043) are the best performers. Whereas, Tata Equity Fund (-0.027), AB Multiplier (-0.1585), Tata Whole Life Midcap Equity Fund (-0.2904), and PNB Multiplier-III (-1.0337) are the least performing funds.

M<sup>2</sup> ratio has been derived from the Sharpe ratio. This ratio considers total volatility as measure of risk of portfolio investment. The table-1.0 also reveals the M<sup>2</sup> results, it shows the PNB Multiplier-III (4.4587), PNB Multiplier-II (2.1221), PNB Virtual Fund-II (1.8904), Kotak Dynamic Balance Fund (1.0197) are the best performers. The Tata

Infrastructure Fund (-0.2498), PNB Multiplier- I (-0.1808), AB Capped & Nifty Index Fund (-0.138), and PNB Flexi Cap Fund (-0.061) are the least performers.

## VII. FINDINGS OF THE STUDY

Based on the above table-1.0 and discussions, it is found that:

1. Based on the absolute returns Tata Equity Fund, the Kotak Dynamic Balance Fund, Kotak Guaranteed Growth fund are the top three performers.
2. On the basis of Compounded Annual Growth Rate (CAGR), Tata Indian Consumption Fund, AB Pure Equity Fund, Kotak Opportunity Fund are the best performing funds.
3. The PNB Multiplier-III, Kotak Pension Growth Fund, Tata Indian Consumption Funds have least risk.
4. Based on the Sharpe ratio the Kotak Dynamic Balance Fund, Kotak Guaranteed Growth fund, Kotak Pension Growth Fund, are the top three best performers.
5. The Treynor's ratio shows PNB Multiplier- III, the PNB Multiplier-II, the Kotak Dynamic Balance fund are the top three best performers.
6. Jensen's alpha indicates, the Kotak Pension Frontline Equity Fund, Kotak Opportunity Fund, Tata Select Equity Fund, are the top three funds those have higher alphas, the higher alpha values indicates the superior performance of managers.
7. The Information ratio shows, the Kotak Pension Frontline Equity Fund, the PNB Multiplier-II, and the PNB Multiplier-III are the top three performers among the sample equity funds.
8. Based on the Downside risk, the AB Capped & Nifty Index Fund, the PNB Multiplier-III (0.0113), and the Kotak Pension Growth Fund are the three best funds those displays a least risk.
9. Based on the Sortino ratio, the Kotak Dynamic Balance Fund, the Kotak Pension Growth Fund, Kotak Guaranteed Growth fund are the best three performing funds.
10. The Omega ratio shows, the Kotak Pension Growth Fund, Tata Indian Consumption Fund, and AB Pure Equity Fund are the top-three best performers.
11. The  $M^2$  results reveals, the PNB Multiplier-III, the PNB Multiplier-II, and PNB Virtual Fund- are the top three best performers.
12. The results exhibit, five performance measures ranked the Kotak Pension Growth funds as one of the top-three performers (Standard Deviation , Sharpe , Downside risk, Sortino Ratio, and Omega), PNB Multiplier-III also ranked as one of the three performers by five performance

measures( Standard Deviation, Treynor, Information ratio, Downside risk and  $M^2$ ). There are four measure of performances (Absolute Return, Sharpe, Treynor, and Sortino Ratio) ranked the Kotak Dynamic Balance Fund and Kotak Guranteed Growth fund(Absolute Return, Sharpe and Sortino Ratio) as one of the top three performers.

13. Further, there are three performance measures raked the PNB Multiplier- II (Treynor, Information ration and  $M^2$ ) and Tata Indian Consumption Fund(CAGR, Std Deviation and Omega) as the one of the three performance measures.
14. Only two performance measures have ranked the AB Pure Equity Fund (CAGR and Omega), the Kotak Opportunity Fund (CAGR and Jensen) and Kotak Pension Frontline Equity Fund(Jensen and Information ratio) as one of the three performers. Further, only one performance measures ranked the AB Capped & Nifty Index Fund (downside risk), Tata Equity Fund(Absolute Return) and Tata Select Equity Fund(Jensen) as one of the top three performers.
15. Only two of the eight funds of Aditya Birla have been placed in the one of the top three performers. Five of the eight funds of Kotak have been placed in one of the top three performers. Only two of the five Punjab National Bank Funds have been placed in the list of one of the top three performers'. Only three of the twelve funds of Tata insurance have been placed on the top three performers of the ULIPs.

## VIII. CONCLUSION

Based on the findings of the study, we can conclude that, among the sample five private insurance players 35 ULIPs, Kotak Pension Growth funds, PNB Multiplier-III, Kotak Dynamic Balance Fund, and Kotak Guaranteed Growth fund are the best performers; and as a company Kotak and PNB are performing better. Thus, after considering the life risk coverage aspect of ULIPs, the Equity-ULIPs are considered as one of the better investment options in long run.

## IX. SCOPE FOR FURTHER RESEARCH

Further research, a survey can be conducted to examine the investors' expectations and their opinions on the ULIPs. And a comparative performances ULIPs of Public sector and Private sector Insurances.

## REFERENCES

- [1] Bansal, A., Kaur, A., 2016. A risk and return analysis of selected unit linked insurance plans of selected public and private sector insurance companies.

- International Journal of Economics and Business Research 11, 83–99.
- [2] Carhart, M.M., 1997. On persistence in mutual fund performance. *The Journal of finance* 52, 57–82.
- [3] Eugene, F., Kenneth, R.F., 1996. Multifactor explanations of asset pricing anomalies. *Journal of Finance* 51, 55–84.
- [4] French, C.W., 2003. The Treynor capital asset pricing model. *Journal of Investment Management* 1, 60–72.
- [5] Gupta, A., 2012. Unit linked insurance products (ULIPs)-Insurance or investment? *Procedia-Social and Behavioral Sciences* 37, 67–85.
- [6] Jensen, M.C., 1972. Optimal utilization of market forecasts and the evaluation of investment performance.
- [7] Jensen, M.C., 1968. The performance of mutual funds in the period 1945–1964. *The Journal of finance* 23, 389–416.
- [8] Keating, C., Shadwick, W.F., 2002a. A universal performance measure. *Journal of performance measurement* 6, 59–84.
- [9] Keating, C., Shadwick, W.F., 2002b. An introduction to omega. *AIMA Newsletter*.
- [10] Khurana, A., Goyal, K., 2010. Exploration and analysis of structure and growth performance of selected Ulips. Available at SSRN 1713906.
- [11] Kumar, K.R., 2013. Mutual funds VIS-à-VIS Ulips: An evaluation. *EXCEL International Journal of Multidisciplinary Management Studies* 3, 86–97.
- [12] Kumar, P., Aneja, H., 2017. Performance Evaluation of Mutual Funds and Unit Linked Insurance Plans in India: An Empirical Study of Equity-Based Funds.
- [13] Lakhani, D., 2014. RISK-ADJUSTED RETURN OF UNIT LINKED INSURANCE PLANS. *Journal of Global Information and Business Strategy* 6.
- [14] Leite, P., Cortez, M.C., Armada, M.R., 2009. Measuring fund performance using multi-factor models: evidence for the Portuguese market. *International Journal of Business* 14, 175.
- [15] Lintner, J., 1975. The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets, in: *Stochastic Optimization Models in Finance*. Elsevier, pp. 131–155.
- [16] Lintner, J., 1969. The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets: A reply. *The review of economics and statistics* 222–224.
- [17] Lintner, J., 1965. Security prices, risk, and maximal gains from diversification. *The journal of finance* 20, 587–615.
- [18] Malkiel, B.G., Fama, E.F., 1970. Efficient capital markets: A review of theory and empirical work. *The journal of Finance* 25, 383–417.
- [19] Markowitz, H.M., 1978a. Portfolio selection. *Ji Fi*.
- [20] Modigliani, F., Leah, M., 1997. Risk-adjusted performance. *Journal of portfolio management* 23, 45.
- [21] Mossin, J., 1966. Equilibrium in a capital asset market. *Econometrica: Journal of the econometric society* 768–783.
- [22] Nagarajan, G., Ali, M.A.A., Sathyanarayana, M.N., 2013. A Study on Performance of Unit-Linked Insurance Plans (ULIP) Offered By Indian Private Insurance Companies. *International Journal of Advanced Research in Management and Social Sciences* 2, 114–127.
- [23] Ostrowska-Dankiewicz, A., 2015. The research on the effectiveness of unit-linked insurance plans. *Wiadomości Ubezpieczeniowe* 4, 53–62.
- [24] Racicot, F.-E., Theoret, R., 2009. Integrating volatility factors in the analysis of the hedge fund alpha puzzle. *Journal of Asset Management* 10, 37–62.
- [25] Saini, N., 2011. Unit linked insurance plans—a comparative study of selected insurance companies in Haryana and Punjab. *Journal of Banking Financial Services and Insurance Research* 1, 119–127.
- [26] Sarkar, J., Mazumdar, S., 1995. Weak form of efficient market hypothesis, a special analytical investigation. *Vikalpa* 25–30.
- [27] Scott, R.C., Horvath, P.A., 1980. On the direction of preference for moments of higher order than the variance. *The Journal of Finance* 35, 915–919.
- [28] Sharpe, W.F., 1964. Capital asset prices: A theory of market equilibrium under conditions of risk. *The journal of finance* 19, 425–442.
- [29] Singh, P.K., Nasa, P.T., Nasa, H., 2018. A Study of Awareness of Common Investors about SENSEX & NAV Indices of Unit Linked Insurance Plans. *Research Bulletin* 44, 13–24.