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Performance Evaluation of Mutual Funds and Unit Linked Insurance Plans in India: An Empirical Study of Equity-Based Funds

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Abstract

India is re-emerging as an economic power on the world stage with its rapidly growing economy becoming an investment led economy. Ever expanding impact of economic liberalization, privatization and globalization; growing incomes, savings and investments by individuals to fulfil their future requirements through achieving higher returns; rising risk-return appetites; and booming Indian stock markets with benchmark indices touching new all-time-highs; this all have generated a fervent environment for investments in the Indian equity markets. Mutual Funds and Unit Linked Insurance Plans (ULIPs) being professionally managed and well regulated; are becoming the most eligible proxies to investments inequities. In this paper one of the maiden study in the field of performance evaluation of Indian equity based mutual funds and ULIP funds is carried out on the basis of statistical measures Absolute Return, Compounded Annual Growth Rate (CAGR), Standard Deviation, Sharpe's Ratio, Treynor's Ratio, Information Ratio, Downside Risk, Sortino Ratio, Omega Ratio and Modified Sharpe Ratio for the period April-2008 to March-2016. The results of the study suggest that equity based mutual fund schemes out perform the equity based funds of Unit Linked Insurance Plans (ULIPs).

Keywords- Investment, Mutual Funds, Performance Evaluation, and Unit Linked Insurance Plans

1. Introduction

India is re-emerging as an economic power on the world stage with its rapidly growing economy becoming an investment led economy. Ever expanding impact of economic liberalization, privatization and globalization; growing incomes, savings and investments by individuals to fulfil their future requirements through achieving higher returns; rising risk-return appetites; increasing choices & opportunities in terms of different investment avenues available for investment; and booming Indian stock markets with benchmark indices touching new all-time-highs; this all have generated a fervent environment for investments and have created a strong demand for professional investment fund management in the country. But still a majority of potential investors lacks resources, time, knowledge, and professional expertise to directly invest and predict the conditions in complex

and volatile equities market. So Mutual Funds or Unit Linked Insurance Plans (ULIPs) being professionally managed, well regulated; and being the most eligible proxies to investments in equities, are emerging as the most popular channels in the Indian investment business. To fulfil the

expectations of millions of investors, the funds are required to maximize the value of investments by the individual investors. Evaluating performance of funds vis-a-vis such a goal is important for both the investors as well as the fund managers. Various performance reports which are periodically published on the basis of standard measures may not actually reflect the true investment performance of the funds. Moreover the Indian investors are not fully aware of the concept/functioning of these funds, and even if they are aware, then also they are

not capable of judging the most appropriate investment opportunities among the available alternatives. Besides, time and time again, these potential investors are posed by a critical question of choosing the best investment avenue among the mutual funds and ULIPs. Even though ULIPs have been ranked lower on performance being involved higher total costs and expenses than mutual funds, but after disregarding this differentiator ULIPs are remarkably similar to, mutual fund in terms of structure and functioning as premium payments is converted into units, net asset value (NAV) is declared regularly and performance is linked to the performance of the funds in which their moneys are invested. So performance comparison of mutual funds and ULIP funds poses a great case for study and various performance evaluation measures can be utilized for the same.

1. Review of Literature

Performance evaluation is an assessment of the investment returns against the return on some benchmark or target. Markowitz (1952) gave Modern Portfolio Theory (MPT) quantifying how rational investors make decisions based on expected return and risk. Sharpe (1964), Lintner (1965) and Mossin (1966) contributed the Capital Asset Pricing Model (CAPM) focusing on the average return and variance. Treynor (1965) developed reward to volatility measure known as the Treynor's Ratio as a measure of return per unit of market risk. Sharpe's (1966) contributed reward to variability measure known as Sharpe Ratio. Treynor and Mazuy (1966) revealed that the improvement in rate of return was due to the fund managers' ability to identify under-priced shares. Jensen (1968, 69) gave a comprehensive indicator of fund performance (Jensen's Alfa). Fama and French (1993) proposed a 3-factor model comprising the market portfolio, firm size and book-to-market ratio. Jegadeesh and Titman (1993) found the momentum anomaly. Sortino and Price (1994) introduced the Sortino ratio of the downside risk. Subsequently Carhart (1997) gave his four-factor model; Modigliani & Modigliani (1997) gave M2-measure. Shadwick and Keating (2002) gave the Omega ratio ratio that captures the information in the higher moments of a return distribution. Many other researchers proposed various other methods (e.g. Smith and Tito (1969), Bawa (1975) Grinblatt and Titman (1989, 1993); Ferson and Schadt (1996); Daniel et al. (1997), Busse (1999) and Chen et al. (2011)).

2.1 Empirical Literature Review on Fund Performance

Many researchers have undertaken lots of empirical study on performance evaluation of mutual funds. Friend et. al. (1962), made the first extensive study of mutual funds and concluded that the overall results do not suggest widespread inefficiency in the industry. Sharpe (1966); Carlson (1970) and Elton and Gurber (1996) established that past performance can predict future performance. Patel et al. (1992), De Bondt, (1993) and Statman (2000) concluded that investors think high past return predict higher future return.

There have been mixed empirical evidences on the performance of mutual funds. Many researchers either found adequate returns or superior returns than the benchmark/market returns from their studies (Gupta (1974), Gupta and Sehgal (1997), Sanjay (1999), Rakesh (1999), Vishal (2005), Khurana and Goyal (2010), Vikas (2011), Rasheed and Qadeer (2012)). Some other researchers have found negative returns or lesser returns than the benchmark/market returns in their empirical studies (Friends and Vickers (1965), James (1978), Jain (1982), Sarkar and Majumdar (1995), Jaydev (1996), Sethu (1999), Mishra (2001), Leelama (2004), Lakshmi (2007), Abhijit (2009), Chetna (2010), Nishant (2011)).

There are not many studies in the field of performance evaluation of Unit Linked Insurance Plans. Chowdhury, Rahman and Afza (2007) found that many people choose an insurance to earn higher returns. Divya (2011) found that NAV for equity based fund options moves in tandem with Sensex, while for debt based fund options it is not much affected by the movement of the Sensex. Udayan (2012) found that ULIPs selected for the study outperformed the market.

2. Research Focus

The literature review revealed that none of the researchers have so far examined and compared the performance of mutual funds and ULIP funds in India. Also thousands of crores of hard earned public money are managed in the form of 'assets under management' by mutual funds (Rs. 18.96 trillion as AUM of Mutual Funds; Source: AMFI Report June 2017) and ULIP funds (Average AUM 16, 97, 452.94 crore; Source: IRDA Annual Report

2015-16), this poses a strong case of thorough scrutiny of the performance.

3.1 Statement of the Problem

The research problem is to undertake performance evaluation of Mutual Funds and Unit Linked Insurance Plans in India. This is done through finding empirical evidences by studying the performance of equity-based mutual funds and ULIP funds.

3.2 Research Objectives

The performance of the mutual funds and the ULIP funds is evaluated through achieving the following main objectives:

- i. To evaluate the performance of equity based Mutual funds and ULIP funds in India.

Mutual Funds and ULIP funds for the period is collected. NSE Nifty has been chosen as the market benchmark index. The average return of '91 Day Treasury Bills' is chosen as proxy to risk free rate as used in many previous studies and data is collected from Reserve Bank of India (RBI) website.

4.2 Sampling Technique and Sample Selection

All Mutual funds and ULIP funds of India formed the sampling universe. The funds with a corpus size of more than 50 crore, at least 60% equity investment in its portfolio; and which are launched before April 1, 2008 are selected using a deliberate sampling method to make the study long term and robust. Funds with a specific policy and funds which changed their policy in the period are not included. This leads to a selection of 84 equity based mutual funds and 60 equity based ULIP funds

- ii. To compare the performance of equity based Mutual funds and ULIP funds in India.

3. Research Methodology

4.1 Research Design

The research followed is empirical in nature. Secondary data have been collected from Factsheets and websites of selected mutual funds and life insurance companies; and reports of SEBI, RBI and Association of Mutual Fund of India, etc. The sample period of study is chosen as the period from April-2008 to March-2016. Data in the form of historical daily Net Asset Values (NAVs) of different equity based open-ended growth

for the study. Statistical measures Absolute Return, Compounded. Annual Growth Rate (CAGR), Standard Deviation, Sharpe's Ratio, Treynor's Ratio, Information Ratio, Downside Risk, Sortino Ratio, Omega Ratio and Modified Sharpe Ratio are used to evaluate the performance of the funds.

4. Empirical Evidences

5.1 Performance Evaluation of Equity Based Mutual Funds

The performance of selected equity based mutual funds is evaluated on the basis of the different statistical measures and the results are tabulated in Table 1. The performance of the mutual funds and the ULIP funds is evaluate

Table 1: Performance Evaluation of Equity Based Mutual Funds

Mutual Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
Baroda Pioneer Growth	80.73	8.82	0.0140	1.991	0.032	1.61	0.0097	2.889	1.102	0.349
Birla Sun Life (I) Opportunities	145.38	13.68	0.0129	4.932	0.097	4.59	0.0091	6.935	0.975	0.529
Birla Sun Life Advantage	119.40	11.88	0.0149	3.759	0.066	4.76	0.0103	5.419	1.075	0.523
Birla SunLife Div. Yield Plus	172.31	15.39	0.0105	6.670	0.124	5.65	0.0074	9.471	1.015	0.551

Mutual Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
Birla Sun Life Equity	119.34	11.87	0.0139	3.767	0.065	4.53	0.0097	5.432	1.077	0.499
Birla Sun Life Frontline Eq	153.71	14.23	0.0133	5.183	0.087	7.53	0.0091	7.603	1.149	0.566
Birla Sun Life India GenNext	197.46	16.85	0.0116	7.264	0.136	7.28	0.0082	10.25	0.989	0.600
Birla Sun Life International Eq	61.63	7.10	0.0107	0.318	0.006	-1.82	0.0075	0.453	1.025	0.057
Birla Sun Life Top 100	143.93	13.59	0.0130	4.849	0.083	6.27	0.0090	7.027	1.098	0.543
BNP Paribas Dividend Yield	189.44	16.40	0.0107	7.315	0.130	7.18	0.0075	10.37	1.007	0.578
BNP Paribas Equity	107.47	10.99	0.0121	3.257	0.054	3.21	0.0085	4.646	1.032	0.417
Can Robeco Equity Divers	135.69	13.03	0.0129	4.517	0.077	5.72	0.0089	6.519	1.081	0.518
DSP-BR Equity	131.45	12.74	0.0120	4.430	0.077	4.59	0.0086	6.201	0.957	0.490
DSP-BR Opportunities	129.95	12.63	0.0124	4.316	0.071	5.56	0.0088	6.104	0.998	0.497
DSPBR Top 100 Equity	106.67	10.93	0.0125	3.214	0.054	3.26	0.0087	4.591	1.038	0.424
DWS Alpha Equity	84.91	9.18	0.0128	2.101	0.034	1.41	0.0090	2.984	1.015	0.334
DWS Investment Opportunity	64.16	7.34	0.0129	0.920	0.015	-1.19	0.0092	1.284	0.942	0.180
Franklin (I) Flexi Cap	168.16	15.13	0.0134	5.706	0.095	9.08	0.0093	8.259	1.093	0.592
Franklin High Growth	186.13	16.20	0.0135	6.315	0.108	9.36	0.0094	9.057	1.055	0.616
Franklin India Bluechip	136.09	13.06	0.0127	4.559	0.074	6.81	0.0087	6.638	1.117	0.518
Franklin India Opportunities	90.84	9.67	0.0139	2.486	0.041	2.76	0.0097	3.558	1.045	0.399
Franklin India Prima Plus	173.83	15.48	0.0122	6.173	0.104	8.41	0.0085	8.895	1.074	0.579
HDFC Capital Builder	159.26	14.58	0.0117	5.710	0.097	6.87	0.0083	8.066	0.993	0.545
HDFC Core & Satellite	106.31	10.90	0.0136	3.203	0.056	3.22	0.0096	4.523	0.991	0.452
HDFC Equity	152.79	14.17	0.0138	5.102	0.086	7.67	0.0097	7.272	1.029	0.573
HDFC Growth	101.92	10.56	0.0128	2.980	0.050	3.01	0.0091	4.203	0.986	0.413

Mutual Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
HDFC Large Cap	56.87	6.64	0.0135	0.593	0.010	-1.9	0.0095	0.847	1.033	0.132
HDFC Premier MultiCap	93.94	9.92	0.0133	2.604	0.045	2.08	0.0095	3.653	0.965	0.393
HDFC Small and Mid Cap	152.44	14.14	0.0134	5.124	0.086	7.76	0.0094	7.352	1.057	0.562
HDFC Top 200	136.27	13.07	0.0140	4.455	0.073	7.30	0.0097	6.414	1.070	0.546
HSBC Equity	60.59	7.00	0.0125	0.612	0.010	-1.89	0.0088	0.869	1.014	0.124
HSBC India Opportunities	98.39	10.28	0.0120	2.784	0.046	2.18	0.0085	3.920	0.980	0.377
ICICI Pru Dynamic Plan	143.25	13.54	0.0111	5.142	0.087	5.34	0.0079	7.198	0.958	0.497
ICICI Pru Exports & Other Serv.	161.71	14.73	0.0129	5.563	0.098	6.75	0.0092	7.802	0.965	0.568
ICICI Pru Indo Asia Equity	113.23	11.42	0.0109	3.628	0.069	2.23	0.0079	5.003	0.899	0.400
ICICI Prudential Multicap	121.48	12.03	0.0133	3.887	0.064	5.55	0.0093	5.548	1.034	0.492
ICICI Prudential Top 100	116.51	11.67	0.0133	3.665	0.060	5.11	0.0092	5.293	1.083	0.477
ICICI Pru Value Discovery	315.71	22.57	0.0118	10.85	0.199	12.67	0.0083	15.44	1.025	0.694
IDFC Classic Equity	58.97	6.85	0.0126	0.543	0.009	-1.84	0.0089	0.768	1.000	0.112
Imperial Equity	67.94	7.69	0.0131	1.177	0.019	-0.64	0.0091	1.692	1.062	0.224
JPMorgan India Equity	98.92	10.32	0.0136	2.853	0.046	3.65	0.0094	4.094	1.056	0.422
Kotak 50	95.42	10.04	0.0128	2.650	0.043	2.52	0.0089	3.795	1.048	0.386
Kotak Classic Equity	108.03	11.03	0.0121	3.287	0.055	3.08	0.0085	4.680	1.025	0.420
Kotak Opportunities	108.46	11.06	0.0134	3.294	0.054	4.14	0.0094	4.710	1.042	0.453
L&T Equity	142.28	13.48	0.0123	4.881	0.079	7.07	0.0085	7.011	1.061	0.522
L&T India Large Cap	136.79	13.10	0.0124	4.617	0.075	6.60	0.0087	6.629	1.059	0.513
L&T India Special Situations	148.31	13.87	0.0127	5.064	0.086	6.49	0.0089	7.226	1.033	0.537
LIC NOMURA Equity	59.59	6.91	0.0144	0.919	0.015	-0.96	0.0100	1.322	1.067	0.204

Mutual Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
LIC NOMURA Growth	85.55	9.23	0.0141	2.236	0.072	0.83	0.0096	3.290	1.162	0.376
Mirae (I) Opportunities	210.90	17.59	0.0136	7.085	0.117	13.06	0.0095	10.14	1.046	0.643
Principal Dividend Yield	88.66	9.49	0.0119	2.242	0.039	1.01	0.0086	3.113	0.926	0.325
Principal Growth	71.36	8.00	0.0132	1.403	0.023	-0.08	0.0096	1.931	0.893	0.256
Principal Large Cap	117.92	11.77	0.0132	3.730	0.061	5.22	0.0093	5.321	1.032	0.477
Quantum Long-Term Equity	180.73	15.89	0.0115	6.647	0.121	6.77	0.0080	9.622	1.093	0.578
Reliance Eqt Opportunities	205.91	17.32	0.0126	7.213	0.125	9.83	0.0089	10.258	1.021	0.626
Reliance Focused Large Cap	61.33	7.07	0.0127	0.709	0.012	-1.50	0.0090	0.999	0.981	0.144
Reliance Growth	119.27	11.87	0.0127	3.813	0.066	3.99	0.0091	5.344	0.962	0.472
Reliance RSF - Equity	121.70	12.05	0.0134	3.891	0.067	4.58	0.0096	5.446	0.957	0.495
Reliance Top 200	120.37	11.95	0.0138	3.821	0.062	5.97	0.0097	5.450	1.032	0.501
Reliance Vision	100.48	10.45	0.0132	2.918	0.049	2.91	0.0093	4.155	1.025	0.424
Religare Invesco Contra	183.38	16.04	0.0120	6.608	0.118	7.46	0.0083	9.474	1.054	0.588
Religare Invesco Growth	115.89	11.62	0.0114	3.732	0.064	3.20	0.0081	5.262	0.986	0.429
SBI Blue Chip	126.08	12.36	0.0129	4.101	0.068	5.59	0.0088	5.975	1.120	0.493
SBI Contra	82.63	8.99	0.0125	1.941	0.032	0.81	0.0088	2.766	1.027	0.308
SBI Magnum Equity	121.01	12.00	0.0131	3.863	0.064	5.06	0.1555	5.670	1.152	0.485
SBI Magnum Multicap	98.37	10.28	0.0131	2.807	0.047	2.80	0.0092	3.989	1.016	0.405
SBI Magnum Multiplier	143.19	13.54	0.0122	4.933	0.085	5.53	0.0086	7.011	1.018	0.523
Sundaram Equity Multiplier	92.81	9.83	0.0138	2.568	0.065	1.25	0.0096	3.676	1.046	0.400
Sundaram Growth	34.73	4.35	0.0142	-0.64	-0.039	-1.56	0.0101	0.898	0.993	-0.21
Sundaram Rural India	98.59	10.30	0.0132	2.825	0.069	1.46	0.0095	3.921	0.923	0.409

Mutual Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
Sundaram Select Focus	60.55	7.00	0.0139	0.888	0.057	-0.37	0.0097	1.279	1.074	0.190
Tata Equity Opportunities	103.01	10.64	0.0126	3.029	0.051	2.85	0.0090	4.257	0.972	0.410
Tata Equity PE	148.86	13.91	0.0126	5.112	0.090	5.80	0.0090	7.157	0.958	0.541
Tata Ethical	123.56	12.18	0.0115	4.118	0.073	3.56	0.0083	5.708	0.919	0.448
Tata Pure Equity	113.95	11.48	0.0124	3.570	0.059	4.17	0.0086	5.136	1.068	0.447
Taurus Star Share	62.88	7.22	0.0146	1.148	0.020	-0.32	0.0103	1.625	1.001	0.242
Templeton India Growth	112.91	11.40	0.0128	3.514	0.060	3.64	0.0090	4.986	1.011	0.455
UTI Dividend Yield	132.76	12.83	0.0110	4.637	0.078	4.60	0.0078	6.565	1.002	0.475
UTI Equity	154.68	14.29	0.0112	5.629	0.093	6.67	0.0079	8.002	1.019	0.529
UTI India Lifestyle	111.70	11.31	0.0112	3.514	0.059	2.93	0.0078	5.044	1.058	0.412
UTI Mastershare	108.63	11.08	0.0120	3.319	0.054	3.51	0.0084	4.772	1.064	0.419
UTI MNC	313.67	22.49	0.0090	13.36	0.260	10.16	0.0063	19.122	1.051	0.671
UTI Opportunities	153.14	14.19	0.0121	5.369	0.089	7.07	0.0083	7.836	1.128	0.543
UTI Top 100	86.44	9.31	0.0125	2.147	0.035	1.26	0.0087	3.088	1.067	0.330

From table 1 it can be inferred that ICICI Prudential Value Discovery Fund with 315.71% absolute return, UTI MNC Fund with 313.67%, Mirae (I) Opportunities Fund with 210.9%, Reliance Equity Opportunities Fund with 205.91% and Birla Sun Life India GenNext Fund with 197.46% absolute return are the top five best performing funds on the basis of absolute return. Whereas IDFC Classic Equity Fund with 58.97 %, HDFC Large Cap Fund with 56.87% and Sundaram Growth Fund with 34.73% absolute return are the worst performing funds on the basis of absolute return during the period of the study.

On the basis of Compounded Annual Growth Rate (CAGR) ICICI Prudential Value Discovery

Fund 22.57%, UTI MNC Fund with 22.49%, Mirae (I) Opportunities Fund with 17.59%, Reliance Equity Opportunities Fund with 17.32% and Birla Sun Life India GenNext Fund with a 16.85% CAGR are the top performers. Here IDFC Classic Equity Fund with 6.85%, HDFC Large Cap Fund with 6.64% and Sundaram Growth Fund with a 4.35% CAGR are the poorest performing funds on the basis of CAGR.

While comparing funds on the basis of standard deviation i.e. risk, it is found that UTI MNC Fund is the least risky with a standard deviation of 0.9 %, followed by Birla Sun Life Dividend Yield Plus Fund 1.05%, BNP Paribas Dividend Yield Fund 1.07%, Birla Sun Life International Equity Fund

1.07% and ICICI Prudential Indo Asia Equity Fund 1.09%. LIC NOMURA Equity Fund 1.44%, Taurus Star Share Fund 1.46% and Birla Sun Life Advantage Fund 1.49% standard deviation are the most risky funds.

UTI MNC Fund with Sharpe Ratio 13.36, ICICI Prudential Value Discovery Fund 10.85, BNP Paribas Dividend Yield Fund 7.32, Birla Sun Life India GenNext Fund 7.26 & Reliance Equity Opportunities Fund 7.2 are the best performing funds. Sundaram Growth Fund is the only fund with negative Sharpe Ratio i.e. -0.64. This means this fund has underperformed. IDFC Classic Equity Fund and Birla Sun Life International Equity Fund with the Sharpe Ratio of 0.54, 0.32 respectively, are other low performing mutual funds on the basis of Sharpe ratio.

Further analysis of the table reveals that UTI MNC Fund with Treynor Ratio of 0.26 is the best performing. This means this fund provided a 26 % return per unit of risk as measured by beta, whereas ICICI Prudential Value Discovery Fund provided a 20 % return per unit of risk. This is followed by Birla Sun Life India GenNext Fund (0.4), BNP Paribas Dividend Yield Fund (0.13) and Reliance Equity Opportunities Fund (0.12). Sundaram Growth Fund is again showing negative ratio with Treynor Ratio of -0.039. This proves underperformance as compared to the risk free rate. HDFC Large Cap Fund (0.0097), IDFC Classic Equity Fund (0.0091) & Birla Sun Life International Equity Fund (0.0057) are other non-performers.

Topmost performing funds on the basis of information ratios are Mirae (I) Opportunities Fund (13.06), ICICI Prudential Value Discovery Fund (12.67), UTI MNC Fund (10.16), Reliance Equity Opportunities Fund (9.83) and Franklin High Growth Fund (9.36). IDFC Classic Equity Fund (-1.84), HSBC Equity Fund (-1.89) & HDFC Large Cap Fund (-1.9) are the bottommost performing mutual funds.

On the basis of downside risk UTI MNC Fund (0.0063) Birla Sun Life Dividend Yield Plus Fund (0.0074), Birla Sun Life International Equity Fund (0.0075), BNP Paribas Dividend Yield Fund (0.0075) and UTI Dividend Yield Fund (0.0078) are the best performers by exhibiting least risk, while the Sundaram Growth Fund (0.0101), Taurus Star

Share Fund (0.0103) and Birla Sun Life Advantage Fund (0.0103) are the lowermost performing mutual funds.

UTI MNC Fund (19.12), ICICI Prudential Value Discovery Fund (15.44), BNP Paribas Dividend Yield Fund (10.37), Reliance Equity Opportunities Fund (10.26) and Birla Sun Life India GenNext Fund (10.25) are the top five performers on the basis of Sortino ratio. IDFC Classic Equity Fund (0.77), Birla Sun Life International Equity Fund (0.45) and Sundaram Growth Fund (-0.9) are the bottommost performers.

Furthermore, the table reveals that on the basis of Omega ratio LIC NOMURA Growth Fund (1.162), SBI Magnum Equity Fund (1.15), Birla Sun Life Frontline Equity Fund (1.149), UTI Opportunities Fund (1.13) and SBI Blue Chip Fund (1.12) are the top five best performing funds. Tata Ethical Fund (0.92), ICICI Prudential Indo Asia Equity Fund (0.9) and Principal Growth Fund (0.89) are the least performing mutual funds.

On the basis of Modified Sharpe Ratio ICICI Prudential Value Discovery Fund (0.69), UTI MNC Fund (0.67), Mirae (I) Opportunities Fund (0.64), Reliance Equity Opportunities Fund (0.63) and Franklin High Growth Fund (0.62) are the best performing mutual funds, whereas IDFC Classic Equity Fund (0.11), Birla Sun Life International Equity Fund (0.057) and Sundaram Growth Fund (-0.21) are the worst performing funds.

From the above analysis, it is clear that UTI MNC Fund and ICICI Prudential Value Discovery Fund have featured in most of the top five fund listings. So, these two can be taken as the overall best performing mutual funds. Similarly Sundaram Growth Fund can be taken as the worst performer.

5.2 Performance Evaluation of Equity Based ULIP Funds:

The performance of selected equity based ULIP funds is evaluated on the basis of the different statistical measures and the results are tabulated in Table 2.

Table 2: Performance Evaluation of Equity Based ULIP Funds

ULIP Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
Aviva Enhancer	95.08	10.02	0.0121	2.606	0.043	2.01	0.0085	3.721	1.035	0.367
Aviva Growth	54.14	6.38	0.0096	-0.58	-0.009	-3.42	0.0068	-0.816	0.997	0.104
Aviva Index	68.00	7.69	0.0147	1.435	0.023	0.43	0.0102	2.072	1.082	0.292
Bajaj Asset Allocation	113.54	11.45	0.0066	4.596	0.082	1.08	0.0046	6.541	1.022	0.325
Bajaj Equity Growth	91.68	9.74	0.0125	2.440	0.040	1.86	0.0088	3.469	1.019	0.357
Bajaj Equity Growth Pension	137.22	13.13	0.0124	4.640	0.077	6.24	0.0087	6.623	1.035	0.512
Bajaj Equity Index	68.23	7.71	0.0147	1.447	0.023	0.47	0.0102	2.098	1.100	0.293
Bajaj Equity Index II	60.92	7.03	0.0150	1.108	0.018	0.42	0.0104	1.603	1.091	0.246
Bajaj Equity Index Pension	69.34	7.81	0.0148	1.508	0.024	0.66	0.0102	2.187	1.100	0.302
Bajaj Equity Index Pension II	64.70	7.39	0.0148	1.265	0.020	0.08	0.0102	1.834	1.099	0.267
Bajaj Pure Stock	202.41	17.13	0.0103	8.063	0.141	7.88	0.0072	11.564	1.056	0.591
Bharti Axa Grow Money Pension	89.37	9.55	0.0140	2.420	0.045	1.66	0.0097	3.483	1.068	0.397
Bharti Axa Grow Money	93.00	9.85	0.0150	2.659	0.253	1.06	0.0103	3.881	1.126	0.426
Birla Sun Life Multiplier	177.86	15.72	0.0128	6.185	0.111	7.36	0.0091	8.734	0.992	0.593
Birla Sun Life Magnifier	78.41	8.62	0.0124	1.690	0.027	0.35	0.0086	2.431	1.067	0.278
Birla Sun Life Maximiser	80.69	8.82	0.0139	1.972	0.032	1.59	0.0096	2.857	1.096	0.345
Birla Sun Life Plan 1	60.96	7.04	0.0108	0.296	0.005	2.37	0.0077	0.418	0.998	0.053
Exide Life Equity	59.83	6.93	0.0132	0.712	0.012	1.48	0.0092	1.018	1.043	0.150
HDFC Equity Managed	106.81	10.94	0.0111	3.249	0.055	2.42	0.0077	4.666	1.059	0.391
HDFC Equity Managed II	132.76	12.83	0.0110	4.637	0.078	4.60	0.0078	6.565	1.002	0.475
HDFC Equity Managed Pension	115.08	11.56	0.0112	3.691	0.062	3.20	0.0078	5.333	1.085	0.425
HDFC Growth	97.03	10.17	0.0129	2.732	0.046	2.45	0.0090	3.930	1.066	0.397
HDFC Growth II	78.77	8.65	0.0129	1.763	0.030	0.54	0.0090	2.511	1.026	0.298
HDFC Growth Pension	96.47	10.13	0.0130	2.706	0.045	2.43	0.0090	3.889	1.062	0.396
ICICI Prudential Flexi Growth	132.76	12.83	0.0110	4.637	0.078	4.60	0.0078	6.565	1.002	0.475

ULIP Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
ICICI Prudential Flexi Growth IV	96.77	10.15	0.0118	2.685	0.044	1.98	0.0082	3.853	1.057	0.362
ICICI Prudential Multiplier II	87.88	9.43	0.0131	2.278	0.037	1.97	0.0091	3.282	1.072	0.357
ICICI Pru Pension Flexi Growth	88.35	9.47	0.0118	2.209	0.036	1.11	0.0083	3.143	1.022	0.319
ICICI Pru Pension Flexi Growth II	102.95	10.64	0.0118	3.024	0.050	2.64	0.0083	4.309	1.028	0.391
ICICI Pru Pension Maximiser	93.69	9.90	0.0133	2.588	0.042	2.70	0.0092	3.730	1.074	0.394
ICICI Pru Pension Multiplier II	68.64	7.75	0.0135	1.286	0.021	-0.31	0.0095	1.839	1.043	0.247
ICICI Prudential Pension Rich	101.72	10.54	0.0121	2.956	0.048	2.81	0.0084	4.293	1.106	0.396
ICICI Prudential Flexi Growth II	96.85	10.16	0.0118	2.689	0.044	1.99	0.0082	3.864	1.062	0.363
ICICI Prudential Maximiser II	108.37	11.06	0.0134	3.292	0.054	4.39	0.0093	4.770	1.097	0.456
ICICI Prudential Pension Rich II	112.50	11.37	0.0122	3.506	0.057	3.96	0.0084	5.090	1.105	0.439
Kotak Aggressive Growth	97.58	10.22	0.0132	2.777	0.045	3.22	0.0092	3.980	1.052	0.411
Kotak Dynamic	79.43	8.71	0.0102	1.514	0.025	-0.51	0.0072	2.124	0.965	0.211
LIC Growth	63.82	7.31	0.0093	0.174	0.003	-2.08	0.0065	0.249	1.035	0.027
Max Life Growth	87.92	9.43	0.0077	2.046	0.036	-0.35	0.0053	2.978	1.115	0.207
PNB Metlife Accelerator	61.80	7.12	0.0106	0.301	0.005	-2.50	0.0074	0.432	1.051	0.053
PNB Metlife Multiplier	52.86	6.25	0.0134	0.313	0.005	-2.88	0.0093	0.450	1.067	0.073
PNB Metlife Virtue	72.90	8.14	0.0123	1.348	0.022	-0.40	0.0086	1.927	1.040	0.231
Reliance Life Equity	88.34	9.47	0.0129	2.286	0.037	1.92	0.0090	3.251	1.020	0.354
Reliance Life Pension Equity	88.02	9.44	0.0129	2.271	0.037	1.90	0.0091	3.230	1.020	0.353
Reliance Life Super	83.75	9.08	0.0103	1.820	0.029	-0.06	0.0072	2.582	1.009	0.245
SBI Equity	101.39	10.52	0.0159	3.079	0.095	1.91	0.0110	4.435	1.073	0.496
SBI Equity Optimiser	77.50	8.54	0.0151	1.961	0.060	0.69	0.0105	2.811	1.051	0.367
SBI Equity Optimiser	76.33	8.44	0.0151	1.909	0.059	0.64	0.0106	2.734	1.048	0.361

ULIP Fund	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio
Pension										
SBI Equity Pension	86.21	9.29	0.0160	2.458	0.074	1.31	0.0111	3.534	1.064	0.445
SBI Growth	60.97	7.04	0.0135	0.836	0.026	-0.53	0.0095	1.187	1.013	0.173
SBI Growth Pension	74.61	8.29	0.0144	1.729	0.054	0.39	0.0100	2.486	1.065	0.324
Shriram Accelerator	54.13	6.38	0.0141	0.548	0.009	-2.12	0.0098	0.785	1.052	0.129
Shriram Maximas	71.61	8.02	0.0095	0.841	0.014	-1.55	0.0066	1.204	1.046	0.119
Shriram Wealth Creator	48.02	5.76	0.0140	0.172	0.003	-3.10	0.0098	0.245	1.038	0.044
Tata Aggressive Growth	80.03	8.76	0.0087	1.412	0.024	-0.80	0.0061	2.021	1.046	0.171
Tata Equity	51.62	6.13	0.0133	0.230	0.004	-2.29	0.0093	0.329	1.050	0.055
Tata Future Equity Pension	90.27	9.63	0.0128	2.377	0.041	1.62	0.0088	3.456	1.111	0.364
Tata Growth	64.56	7.38	0.0089	0.141	0.002	-2.12	0.0063	0.199	1.011	0.021
Tata Large Cap	85.05	9.19	0.0127	2.092	0.036	1.08	0.0088	3.030	1.095	0.332
Tata Whole Life Aggressive	103.60	10.69	0.0083	3.282	0.056	0.94	0.0058	4.717	1.063	0.312

From table 2 it can be concluded that Bajaj Pure Stock Fund 202.41% has been the topmost performer amongst the equity based Unit Linked Insurance Plan (ULIP) funds on the basis of absolute return. Birla Sun Life Multiplier Fund 177.86%, Bajaj Equity Growth Pension Fund 137.22%, HDFC Equity Managed Fund II 132.76% and ICICI Prudential Flexi Growth Fund with 132.76% absolute return, are the other top performers. It can be seen that the PNB Metlife Multiplier Fund with 52.86%, Tata Equity Fund 51.62% and Shriram Wealth Creator Fund with 48.02% absolute return are the worst performing funds.

On the basis of Compounded Annual Growth Rate Bajaj Pure Stock fund (17.13%), Birla Sun Life Multiplier fund (15.72%), Bajaj Equity Growth Pension fund (13.13%), HDFC Equity Managed

fund II (12.83%) and ICICI Prudential Flexi Growth fund (12.83%) are the top performing equity based ULIP funds. Also PNB Metlife Multiplier fund (6.25%), Tata Equity fund (6.13%) and Shriram Wealth Creator fund (5.76%) are the lowest performing equity based ULIP funds.

The Bajaj Asset Allocation Fund is the least risky with a standard deviation of 0.66 %, followed by Max Life Growth Fund 0.77%, Tata Whole Life Aggressive Fund 0.87% and Tata Growth Fund 0.89%. SBI Equity Optimiser Pension Fund 1.51%, SBI Equity Fund 1.59% and SBI Equity Pension Fund 1.6% standard deviation are the most risky ULIP funds.

Bajaj Pure Stock Fund with Sharpe Ratio 8.06, Birla Sun Life Multiplier Fund 6.19, Bajaj Equity Growth Pension Fund 4.64, HDFC Equity Managed Fund II 4.64 and

only fund with negative Sharpe Ratio i.e. -0.58. This means this fund has underperformed. Shriram

ICICI Prudential Flexi Growth Fund 4.64 are the best performing funds. Aviva Growth Fund is the

Wealth Creator Fund and Tata Growth Fund with the Sharpe Ratio of 0.17, 0.14 respectively, are other lowest performing ULIP funds.

Further analysis of the table discloses that Bharti Axa Grow Money Fund with Treynor Ratio of 0.25 is the best performing. This means this ULIP fund provided a 25% return per unit of risk as measured by beta, whereas Bajaj Pure Stock Fund provided a 14 % return per unit of risk. This is followed by Birla Sun Life Multiplier Fund (0.11), SBI Equity Fund (0.095) and Bajaj Asset Allocation Fund (0.082). Aviva Growth Fund is again showing negative ratio with Treynor Ratio of -0.0094. This proves underperformance as compared to the risk free rate. Shriram Wealth Creator Fund (0.0027) & Tata Growth Fund (0.0024) are other non-performers.

Topmost performing funds on the basis of information ratios are Bajaj Pure Stock Fund (7.88), Birla Sun Life Multiplier Fund (7.36), Bajaj Equity Growth Pension Fund (6.24), HDFC Equity Managed Fund II (4.6) and ICICI Prudential Flexi Growth Fund (4.6). PNB Metlife Multiplier Fund (-2.88), Shriram Wealth Creator Fund (-3.1) and Aviva Growth Fund (-3.42) are the bottommost performing ULIP funds.

On the basis of downside risk Bajaj Asset Allocation Fund (0.0046), Max Life Growth Fund (0.0053), Tata Whole Life Aggressive Fund (0.0058), Tata Aggressive Growth Fund (0.006) and Tata Growth Fund (0.0063) are the best performers by exhibiting least risk, while SBI Equity Optimiser Pension Fund (0.0106), SBI Equity Fund (0.011) and SBI Equity Pension Fund (0.0111) are the lowermost performing ULIP funds.

From table 2 it can also be concluded that the Bajaj Pure Stock Fund (11.56), Birla Sun Life Multiplier Fund (8.73), Bajaj Equity Growth Pension Fund (6.62), HDFC Equity Managed Fund II (6.56) and ICICI Prudential Flexi Growth Fund (6.56) are the top five performers on the basis of Sortino ratio. Shriram Wealth Creator Fund (0.245),

Tata Growth Fund (0.199) and Aviva Growth Fund (-0.816) are the bottommost performers.

Furthermore, the table reveals that on the basis of Omega ratio Bharti Axa Grow Money Fund (1.13), Max Life Growth Fund (1.12), Tata Future Equity Pension (1.11), ICICI Prudential Pension Rich Fund (1.11) and ICICI Prudential Pension Rich Fund II (1.1) are the top five best performing funds. Aviva Growth Fund (0.997), Birla Sun Life Multiplier Fund (0.992) and Kotak Dynamic Fund (0.965) are the least performing mutual funds.

From the table it can be established that on the basis of Modified Sharpe Ratio Birla Sun Life Multiplier Fund (0.59), Bajaj Pure Stock Fund (0.59), Bajaj Equity Growth Pension Fund (0.51), SBI Equity Fund (0.5) and HDFC Equity Managed Fund II (0.47) are the best performing mutual funds whereas LIC Growth Fund (0.027), Tata Growth Fund (0.021) and Aviva Growth Fund (-0.104) are the worst performing funds.

From the above analysis, it is clear that the Bajaj Pure Stock Fund and Birla Sun Life Multiplier Fund have featured in most of the top five fund listings based on different performance measures. So, these two can be taken as the overall best performing ULIP funds. Similarly Aviva Growth Fund can be taken as the worst performer.

5.3 Performance Comparison of Mutual Funds and ULIP Funds

Selected 84 Mutual funds and 60 ULIP funds are firstly ranked on the basis of different selected performance measures. After this, rank-total for a particular fund is calculated by adding all these ranks. Finally Comprehensive Ranking is given to all the funds in the increasing order of their rank-totals. This means a fund with the least rank-total is the best performer and the one with highest rank total is the worst performer. The results are tabulated in Table 3

Table 3: Performance Comparison of Equity Based Mutual Funds and Equity Based ULIP Funds

Fund (Mutual Funds in Uncolored Cells & ULIP Funds in Blue Cells)	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio	Comprehensive	Comprehensive Rank	
UTI MNC	2	4	6	1	1	3	5	1	62	2	87	1	
Bajaj Pure Stock	5	7	11	3	4	8	10	3	55	9	115	2	
Quantum Long-Term Equity	10	12	29	9	9	21	27	8	20	12	157	3	
ICICI Prudential Value Discovery	1	3	35	2	3	2	36	2	94	1	179	4	
BNP Paribas Dividend Yield	7	9	15	4	6	16	16	4	11	13	201	5	
Franklin India Prima Plus	12	14	49	13	14	7	42	12	29	11	203	6	
Religare Invesco Contra	9	11	38	10	10	12	38	9	58	10	205	7	
UTI Opportunities	19	21	42	18	22	17	35	17	4	22	217	8	
Birla Sun Life Dividend Yield Plus	13	15	13	8	8	31	13	10	10	5	18	234	9
Birla Sun Life India GenNext	6	8	30	5	5	15	31	6	12	4	6	236	10
Reliance Equity Opportunities	4	6	63	6	7	4	66	5	97	4	262	11	
UTI Equity	17	19	26	16	20	23	25	16	10	1	25	288	12
HDFC Capital Builder	16	18	31	14	17	19	37	15	12	1	20	308	13
Birla Sun Life Frontline Equity	18	20	10 0	19	23	11	85	19	3	16	314	14	
Franklin (I) Flexi Cap	14	16	10 6	15	18	6	98	14	21	8	316	15	
Mirae (I) Opportunities	3	5	11 3	7	11	1	11 1	7	68	3	329	16	
Franklin High Growth	8	10	10 9	11	13	5	10 5	11	57	5	334	17	
L&T Equity	28	29	50	27	31	18	46	27	49	29	334	18	
Franklin India Bluechip	32	33	66	35	39	20	56	29	7	30	347	19	
Birla Sun Life Top 100	25	26	85	28	29	26	72	25	16	21	353	20	
Birla Sun Life Multiplier	11	13	72	12	12	13	83	13	12	2	7	358	21
ICICI Prudential Dynamic Plan	26	27	22	20	24	36	26	23	13	6	36	376	22
L&T India Large Cap	30	31	55	33	38	24	55	30	51	32	379	23	
L&T India Special Situations	23	25	68	24	25	25	67	22	83	24	386	24	
SBI Magnum Multiplier	27	28	48	25	28	35	48	26	10	2	27	394	25
HDFC Small and Mid Cap	21	23	10 7	21	27	9	10 3	20	53	17	401	26	
UTI Dividend Yield	34	35	19	30	32	41	20	32	11	2	46	401	27
Bajaj Equity Growth Pension	29	30	54	29	37	27	57	31	79	33	406	28	

Fund (Mutual Funds in Uncolored Cells & ULIP Funds in Blue Cells)	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio	Comprehensive	Comprehensive Rank
HDFC Equity Managed II	35	36	20	31	33	42	21	33	11 3	47	411	29
Can Robeco Equity Divers	33	34	82	36	36	30	69	36	26	31	413	30
ICICI Prudential Flexi Growth	36	37	21	32	34	43	22	34	11 4	48	421	31
ICICI Pru Exports & Other Services	15	17	83	17	15	22	91	18	13 2	15	425	32
SBI Blue Chip	39	40	76	41	47	32	65	40	6	40	426	33
Tata Equity PE	22	24	62	22	21	29	74	24	13 5	23	436	34
HDFC Equity Managed Pension	51	52	25	51	57	61	19	49	23	60	448	35
HDFC Equity	20	22	11 5	23	26	10	11 9	21	87	14	457	36
HDFC Top 200	31	32	12 2	37	41	14	12 4	37	34	19	491	37
ICICI Prudential Pension Rich II	56	57	47	57	66	52	41	54	11	57	498	38
DSP-BR Equity	37	38	41	38	35	44	49	38	13 8	42	500	39
Bajaj Asset Allocation	53	54	1	34	30	99	1	35	95	10 3	505	40
DSP-BR Opportunities	38	39	56	39	44	33	63	39	11 8	37	506	41
Tata Ethical	40	41	28	40	42	55	34	41	14 2	54	517	42
Tata Pure Equity	52	53	52	54	63	49	52	53	36	55	519	43
UTI India Lifestyle	57	58	24	55	62	65	23	55	52	68	519	44
Birla Sun Life (I) Opportunities	24	2	14 4	26	16	45	88	28	12 9	26	528	45
SBI Magnum Equity	43	44	86	44	53	39	14 4	42	2	43	540	46
UTI Mastershare	58	59	40	58	72	56	40	58	43	65	549	47
ICICI Prudential Top 100	49	50	97	52	61	38	89	51	24	44	555	48
Religare Invesco Growth	50	51	27	49	55	62	28	52	12 6	58	558	49
HDFC Equity Managed	63	64	23	64	70	76	18	63	50	83	574	50
ICICI Prudential Multicap	42	43	96	43	54	34	10 0	43	81	41	577	51
Tata Whole Life Aggressive	66	67	3	62	67	102	3	60	45	10 6	581	52
Birla Sun Life Equity	46	47	12 1	47	51	47	12 1	46	27	35	588	53
ICICI Prudential Indo Asia Equity	54	55	18	53	46	77	24	56	14 3	73	599	54

Fund (Mutual Funds in Uncolored Cells & ULIP Funds in Blue Cells)	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio	Comprehensive	Comprehensive Rank
ICICI Prudential Pension Rich	70	71	45	71	81	68	39	69	10	78	602	55
Birla Sun Life Advantage	45	46	13 6	48	50	40	13 8	47	28	28	606	56
Principal Large Cap	48	49	91	50	58	37	96	50	84	45	608	57
Reliance Growth	47	48	67	46	49	51	81	48	13 4	49	620	58
Kotak Classic Equity	61	62	43	61	69	63	44	62	93	64	622	59
Reliance Top 200	44	45	11 7	45	56	28	12 3	44	86	34	622	60
BNP Paribas Equity	62	63	44	63	74	60	43	64	85	66	624	61
ICICI Prudential Maximiser II	60	61	10 4	60	75	48	97	59	17	50	631	62
Templeton India Growth	55	56	71	56	60	54	75	57	10 8	51	643	63
DSPBR Top 100 Equity	64	65	59	65	76	57	58	65	77	61	647	64
Reliance RSF - Equity	41	42	10 3	42	48	46	11 4	45	13 7	39	657	65
ICICI Pru Pension Flexi Growth II	68	69	36	69	78	72	33	68	88	82	663	66
ICICI Prudential Flexi Growth II	79	80	33	80	90	81	29	81	47	90	690	67
Kotak Opportunities	59	60	10 5	59	71	50	10 4	61	74	52	695	68
ICICI Prudential Flexi Growth IV	80	81	32	81	91	82	30	82	54	91	704	69
SBI Equity	71	72	14 1	67	19	85	14 2	67	32	38	734	70
HDFC Growth	78	79	80	78	85	74	71	76	41	76	738	71
Max Life Growth	96	97	2	102	10 3	118	2	10 2	8	12 2	752	72
Tata Equity Opportunities	67	68	65	68	77	67	73	70	13 0	70	755	73
HSBC India Opportunities	75	76	39	76	83	78	47	78	12 8	85	765	74
Aviva Enhancer	83	84	46	84	93	80	45	85	78	88	766	75
HDFC Growth	69	70	70	70	79	64	82	71	12 5	67	767	76
HDFC Growth Pension	81	82	84	79	86	75	76	79	46	79	767	77
JPMorgan India Equity	73	74	11 2	73	84	53	10 6	73	56	63	767	78
Kotak Agressive Growth	77	78	93	77	88	59	93	75	59	69	768	79
Bharti Axa Grow Money	86	87	13 7	82	2	100	13 6	80	5	59	774	80

Fund (Mutual Funds in Uncolored Cells & ULIP Funds in Blue Cells)	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio	Comprehensive	Comprehensive Rank
Reliance Vision	72	73	95	72	80	66	10 1	72	92	62	785	81
Tata Future Equity Pension	90	91	74	92	96	89	64	92	9	89	786	82
Kotak 50	82	83	73	83	92	73	70	83	66	84	789	83
HDFC Core & Satellite	65	66	11 4	66	68	58	11 7	66	12 3	53	796	84
SBI Magnum Multicap	76	77	87	75	82	69	90	74	10 3	72	805	85
ICICI Pru Pension Maximiser	85	86	99	86	94	71	95	84	30	80	810	86
UTI Top 100	98	99	58	99	10 5	95	54	99	39	10 1	847	87
ICICI Pru Pension Flexi Growth	93	94	34	98	10 2	97	32	97	96	10 5	848	88
Sundaram Rural India	74	75	90	74	45	92	11 2	77	14 1	71	851	89
Bajaj Equity Growth	88	89	60	90	97	87	60	91	10 0	93	855	90
Tata Large Cap	10 1	10 2	69	101	10 4	98	62	10 0	19	10 0	856	91
ICICI Prudential Multiplier II	97	98	88	94	99	83	86	94	33	94	866	92
LIC NOMURA Growth	10 0	10 1	12 7	97	43	103	11 5	93	1	86	866	93
Sundaram Equity Multiplier	87	88	11 6	87	52	96	11 8	86	67	74	871	94
Tata Aggressive Growth	10 7	10 8	4	116	11 5	125	4	11 6	70	12 7	892	95
SBI Equity Pension	99	10 0	14 2	89	40	94	14 3	89	44	56	896	96
Reliance Life Super	10 3	10 4	12	108	11 1	113	11	10 8	11 0	11 7	897	97
Bharti Axa Grow Money Pension	91	92	12 3	91	89	88	12 5	90	35	77	901	98
Principal Dividend Yield	92	93	37	96	98	101	50	98	14 0	10 2	907	99
Franklin India Opportunities	89	90	12 0	88	95	70	12 6	88	71	75	912	10 0
Reliance Life Equity	94	95	78	93	10 0	84	80	95	99	95	913	10 1
Birla Sun Life Magnifier	11 0	11 1	53	111	11 2	112	53	11 1	40	11 2	925	10 2
HDFC Premier MultiCap	84	85	98	85	87	79	10 9	87	13 1	81	926	10 3
Reliance Life Pension Equity	95	96	81	95	10	86	84	96	98	96	928	10

Fund (Mutual Funds in Uncolored Cells & ULIP Funds in Blue Cells)	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio	Comprehensive	Comprehensive Rank
					1							4
SBI Contra	10 4	10 5	61	106	10 8	104	61	10 6	89	10 7	951	10 5
Kotak Dynamic	10 8	10 9	10	112	11 4	122	12	11 3	13 3	12 1	954	10 6
Shriram Maximas	11 5	11 6	8	127	12 8	130	8	12 7	69	13 3	961	10 7
DWS Alpha Equity	10 2	10 3	75	100	10 6	93	79	10 1	10 4	99	962	10 8
Birla Sun Life Maximiser	10 6	10 7	11 8	104	10 9	91	11 3	10 4	18	98	968	10 9
Baroda Pioneer Growth	10 5	10 6	12 4	103	10 7	90	12 2	10 3	12	97	969	11 0
PNB Metlife Virtue	11 4	11 5	51	118	12 0	120	51	11 8	75	11 9	100 1	11 1
HDFC Growth II	10 9	11 0	77	109	11 0	108	78	10 9	90	10 9	100 9	11 2
SBI Equity Optimiser	11 1	11 3	13 9	105	59	105	14 0	10 5	61	87	102 5	11 3
PNB Metlife Accelerator	12 7	12 8	14	137	13 8	141	14	13 7	63	13 8	103 7	11 4
LIC Growth	12 5	12 6	7	140	14 0	136	7	14 0	80	14 1	104 2	11 5
SBI Equity Optimiser Pension	11 2	11 2	14 0	107	64	107	14 1	10 7	65	92	104 7	11 6
Birla Sun Life International Equity	12 8	12 9	16	135	13 5	132	15	13 5	91	13 6	105 2	11 7
SBI Growth Pension	11 3	13 0	13 0	110	73	111	13 0	11 0	42	10 4	105 3	11 8
Bajaj Equity Index Pension	11 7	11 8	13 5	113	11 6	106	13 4	11 2	13	10 8	107 2	11 9
Tata Growth	12 3	12 4	5	142	14 2	137	6	14 2	10 9	14 2	107 2	12 0
Imperial Equity	12 1	12 2	89	121	12 4	124	87	12 1	48	12 0	107 7	12 1
Bajaj Equity Index	11 9	12 0	13 3	114	11 8	109	13 2	11 4	14	11 0	108 3	12 2
Sundaram Select Focus	13 4	13 4	11 9	126	65	119	12 0	12 6	31	12 4	109 8	12 3
Aviva Index	12 0	12 1	13 2	115	11 9	110	13 5	11 5	25	11 1	110 3	12 4
Birla Sun Life Plan 1	13 1	13 1	17	138	13 7	140	17	13 8	11 7	13 9	110 5	12 5

Fund (Mutual Funds in Uncolored Cells & ULIP Funds in Blue Cells)	Absolute Return (%)	CAGR (%)	Standard Deviation	Sharpe's Ratio	Treynor's Ratio	Information Ratio	Downside Risk	Sortino Ratio	Omega Ratio	Modified Sharpe Ratio	Comprehensive	Comprehensive Rank
Bajaj Equity Index Pension II	12 2	12 3	13 4	120	12 2	115	13 3	12 0	15	11 3	111 7	12 6
ICICI Pru Pension Multiplier II	11 8	11 9	11 0	119	12 1	116	10 7	11 9	73	11 5	111 7	12 7
Reliance Focused Large Cap	12 9	1 1	14 3	130	12 9	129	77	13 0	12 7	12 9	112 4	12 8
Aviva Growth	13 9	13 9	9	143	14 3	144	9	14 3	11 9	14 3	113 1	12 9
HSBC Equity	13 3	13 3	57	131	13 1	134	59	13 1	10 6	13 2	114 7	13 0
Principal Growth	11 6	11 7	94	117	11 7	114	11 6	11 7	14 4	11 4	116 6	13 1
Exide Life Equity	13 5	13 5	92	129	13 0	128	92	12 9	72	12 8	117 0	13 2
Bajaj Equity Index II	13 2	13 2	13 8	123	12 5	121	13 9	12 3	22	11 6	117 1	13 3
SBI Growth	13 0	11 4	10 8	128	11 3	123	11 0	12 8	10 7	12 6	118 7	13 4
DWS Investment Opportunity	12 4	12 5	79	124	12 7	127	94	12 5	13 9	12 5	118 9	13 5
IDFC Classic Equity	13 7	13 7	64	134	13 3	133	68	13 4	11 6	13 4	119 0	13 6
LIC NOMURA Equity	13 6	13 6	12 9	125	12 6	126	12 9	12 4	38	12 3	119 2	13 7
PNB Metlife Multiplier	14 1	14 1	10 2	136	13 6	142	99	13 6	37	13 5	120 5	13 8
HDFC Large Cap	13 8	13 8	11 1	132	13 2	135	10 8	13 2	82	13 0	123 8	13 9
Taurus Star Share	12 6	12 7	13 1	122	12 3	117	13 7	12 2	11 5	11 8	123 8	14 0
Tata Equity	14 2	14 2	10 1	139	13 9	139	10 2	13 9	64	13 7	124 4	14 1
Shriram Accelerator	14 0	14 0	12 6	133	13 4	138	12 7	13 3	60	13 1	126 2	14 2
Shriram Wealth Creator	14 3	14 3	12 5	141	14 1	143	12 8	14 1	76	14 0	132 1	14 3
Sundaram Growth	14 4	14 4	12 8	144	14 4	131	13 1	14 4	12 0	14 4	137 4	14 4

From table 3 it can be concluded that in the top-five fund rankings based on different performance measures the only ULIP fund present is the Bajaj Pure Stock Fund (Absolute Return rank 5, Sharpe's Ratio rank 3, Treynor's Ratio rank 4, Sortino Ratio rank 3). Also the overall topmost performing fund is a mutual fund i.e. UTI MNC Fund. This is followed by a ULIP fund i.e. Bajaj Pure Stock Fund. Three other top rankings are also taken by mutual funds. This proves that the mutual funds have outperformed the ULIP funds during the study. The same can be verified by studying the top-50 fund rankings. In the top fifty funds, there are 41 mutual funds and 09 ULIP funds. Also, most of the funds present in the bottom of the table are ULIP funds. On the basis of above analysis, it can be established that ULIP funds are outperformed by the mutual funds.

6. Findings Of The Study

The following important findings are made during the study:

- i. ICICI Prudential Value Discovery Fund, UTI MNC Fund and Mirae (I) Opportunities Fund are the top-three mutual funds, whereas Bajaj Pure Stock Fund, Birla Sun Life Multiplier Fund and Bajaj Equity Growth Pension Fund are the top-three ULIP funds on the basis of fund absolute return.
- ii. ICICI Prudential Value Discovery Fund, UTI MNC, Mirae (I) Opportunities Fund are the top-three mutual funds, whereas HDFC Equity Managed fund II, ICICI Prudential Flexi Growth fund are the top-three ULIP funds on the basis of fund CAGR.
- iii. UTI MNC Fund, Birla Sun Life Dividend Yield Plus and BNP Paribas Dividend Yield Fund are the top-three mutual funds, whereas Bajaj Asset Allocation Fund, Max Life Growth Fund and Tata Whole Life Aggressive Fund are the top-three ULIP funds on the basis of fund standard deviation.
- iv. UTI MNC, ICICI Prudential Value Discovery Fund and BNP Paribas Dividend Yield Fund are the top-three mutual funds, whereas Bajaj Pure Stock Fund, Bajaj Equity Growth Pension Fund and HDFC Equity Managed Fund are the top-three ULIP funds on the basis of the fund Sharpe ratio.
- v. UTI MNC Fund, ICICI Prudential Value Discovery Fund and Birla Sun Life India GenNext Fund are the top-three mutual funds, whereas Bharti Axa Grow Money Fund, Bajaj Pure Stock Fund and Birla Sun Life Multiplier Fund are the top-three ULIP funds on the basis of the fund Treynor ratio.
- vi. Mirae (I) Opportunities Fund, ICICI Prudential Value Discovery Fund, UTI MNC Fund are the top-three mutual funds, whereas Bajaj Pure Stock Fund, Birla Sun Life Multiplier Fund and Bajaj Equity Growth Pension Fund are the top-three ULIP funds on the basis of the fund Information ratio.
- vii. UTI MNC Fund, Birla Sun Life Dividend Yield Plus Fund and Birla Sun Life International Equity Fund are the top-three mutual funds, whereas Bajaj Asset Allocation Fund, Max Life Growth Fund and Tata Whole Life Aggressive Fund are the top-three ULIP funds on the basis of the fund downside risk.
- viii. UTI MNC Fund, ICICI Prudential Value Discovery Fund and BNP Paribas Dividend Yield Fund are the top-three mutual funds, whereas Bajaj Pure Stock Fund, Birla Sun Life Multiplier Fund and Bajaj Equity Growth Pension Fund are the top-three ULIP funds on the basis of the fund Sortino ratio.
- ix. LIC NOMURA Growth Fund, SBI Magnum Equity Fund and Birla Sun Life Frontline Equity Fund are the top-three mutual funds, whereas Bharti Axa Grow Money Fund, Max Life Growth Fund and Tata Future Equity Pension are the top-three ULIP funds on the basis of the fund Omega ratio.
- x. ICICI Prudential Value Discovery Fund, UTI MNC Fund and Mirae (I) Opportunities Fund are the top-three mutual funds, whereas Sun Life Multiplier Fund, Bajaj Pure Stock Fund and Bajaj Equity Growth Pension Fund are the top-three ULIP funds on the basis of the fund Modified Sharpe ratio.
- xi. The mutual funds have outperformed the ULIP funds during the study.

7. Conclusions of The Research Study

The study has evaluated the performance of 84 equity based mutual funds and 60 equity based ULIP funds in India over a period encompassing April 2008 to March 2016. It is found that, over the period, UTI MNC Fund and ICICI Prudential Value Discovery Fund are the topmost performing mutual funds, whereas Bajaj Pure Stock Fund and Birla Sun Life Multiplier Fund are the best performing ULIP funds. Overall, the mutual funds have clearly outperformed the ULIP funds. This gives support to the one school of thought supporting the point that it's better to invest in mutual funds and buy a separate insurance plan to satisfy one's insurance needs than investing in Unit Linked Insurance Plans (ULIP).

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