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Analysis of Causes of Variation in the Performance of Equity Oriented Mutual Fund Schemes in India

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Abstract

With the series of financial sector reforms and various government initiatives Indian economy has become the fastest growing economy in the world. With year on year rise in GDP size, India has become 5th largest economy in 2019 with a nominal GDP of $3.20 Trillion. Increase in employment opportunities, FDI inflow and per capita income has results an increase in gross domestic savings rate which reached to 36 per cent of GDP in 2016. This growth in Gross Domestic Savings Rate is attributed by all three components: household savings, private corporate savings and public sector savings. High saving rates encouraged more investment from individuals and corporates. All the financial investment avenues witnessed a double digit growth rate in asset under management since the year 2000. Bank deposits being the most preferred investment avenue reached Rs125 Trillion in 2019. Asset under management with insurance companies grows with an annualized rate of around 20 per cent during the period 2000 to 2016 and stood at Rs40 Trillion by 2019. With the entry of private players mutual fund industry also witnessed a huge surge of investment inflow. The asset under management of the industry grew from Rs5.05 trillion in 2008 to Rs26.8 Trillion as of 31st March 2019, witnessing more than fivefold jump in 11 years.

The present study identified seven parameters or performance indicators which causes variations in the performance of equity oriented mutual fund schemes which were launched during the period 1st January 2008 to 31st December 2010 and also analyze their impact on the performance of schemes selected from their date of inception till 31st December 2015. Seven parameters identified by the researcher are fund size, expense ratio, investment strategy, ownership, portfolio turnover ratio, risk level and type of scheme. The results shows that fund size and risk level has a positive correlation with the scheme return while expense ratio and portfolio turnover ratio has negative correlation with the scheme return. Funds with active investment strategy have performed better as compared to funds with passive investment strategy. Returns of various types of schemes also varied with each other. Small cap funds have performed better as compared to other type of schemes. Returns of schemes owned by various fund houses varied with each other. Schemes owned by Axis Mutual Fund has generated better returns as compared to schemes owned by other fund houses.

Keywords: Mutual Funds, Equity Performance, Equity Funds, Asset Under Management, Domestic Savings Rate, Equity Oriented Schemes, FDI.

Introduction

A Mutual Fund is a collective investment plan that pools the savings of a number of investors who share a common financial goal. Any investor with a surplus fund of as little as a few hundred rupees can invest in Mutual Funds. Every mutual fund scheme has a defined investment objective and strategy. Investors can buy units of a particular Mutual Fund scheme at the prevailing market price known as Net Asset Value (NAV). Every mutual fund scheme is

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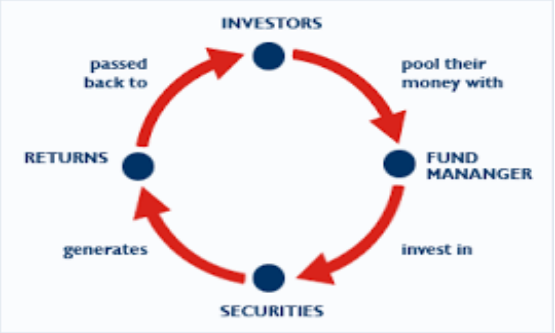
managed by a fund manager who invests the collected money on behalf of investors by using his investment skills in different types of securities such as shares, bonds, money market instruments and other securities as per the scheme's stated objectives. An investor also known as a unit holder owns units, which basically represent the portion of the fund that he holds, based on the amount invested by him. The income earned through these investments and the capital appreciation realized is distributed among the unit holders inproportion to the number of units owned by them after deducting applicable expenses, load and taxes. Mutual fund provides number of opportunities to investors like diversified investment and professionally managed basket of securities at a relatively low cost, thus making it a suitable investment for a common man. In comparison to investing directly in bonds and stocks, mutual funds have an advantage in terms of diversity and liquidity at lower cost.



Mutual fund industry in India has shown impressive growth not just in the scale of assets under management (AUM) but also in terms of no. of schemes and variety of products. Buoyed by robust capital inflows and strong participation of retail investors, the asset base of the mutual fund industry has created new peak levels year on year and reached the mark of Rs26.8 trillion in 2019. The industry has shown a consistent growth over last 19 years with Asset Under Management growing more than 23 times between 2000 to 2019 with an annualized growth rate of 18.14 per cent. This growth may be jointly attributed to a positive outlook in domestic markets along with well-timed initiatives by SEBI and customer awareness campaign by various agencies to re-energies the mutual fund industry and to gain the faith of investors. Mutual Fund companies have also launched a variety of products to fulfill the need of investors with different profile which again accelerate the industry growth.

The growth of the industry was slow till 2005. The popularity of these schemes increased after 2005 when the schemes provided superior returns over other investment avenues due to robust performance of stock market and also beat the benchmark indices. It was only in the year 2001, 2009 and 2011 when the AUM has shown a downfall. Rest all years has shown a positive inflow of money. Year 2017 proved to be the best in terms of growth in AUM as the asset under management increased by more than Rs.5433 Billion. To study the above projected description kindly refers to table #1.

Aim of the Study

To find out various factors which affected the performance of equity oriented mutual fund scheme in India and to give a basis to investors in selection of equity oriented mutual fund schemes.

Equity Mutual Fund Schemes

Funds that invest large part of their assets in equity shares are called equity funds. As equity shares carry expectations to generate high returns, these funds carry the principal objective of capital appreciation of the investment over a medium to long-term investment horizon. Equity Funds also carry high risk due to their exposure to equity shares and their returns are linked to the movement of stock markets. They are best suited for risk taker investors who are seeking long term growth. There are different types of equity funds such as Diversified funds, Sector specific funds, Index based funds etc.

As per Indian Income Tax Act, an equity oriented fund (EO fund) refers to a fund in which the funds invested in equity shares in domestic companies exceed 65% of the total proceeds of such fund and which has been set up under a scheme of a mutual fund specified under Section 10(23D) of the Act. The percentage of equity shareholding of the fund is computed with reference to the annual average of the monthly averages of the opening and closing amounts.

The reference data table #2 pertains to the no. of accounts and average ticket size across different type of mutual fund schemes as of 30th June 2019. There were 83,771,689 accounts in the Indian mutual fund industry. Equity oriented schemes has the largest holding with a share of 72.4 per cent accounts. This shows the popularity of equity oriented mutual fund schemes. But, despite of the largest number of accounts equity mutual fund schemes has a low average ticket size i.e. ticket size per account of Rs.1,25,379 only. This is due to the large participation of retail investors in equity oriented mutual fund schemes. Around 94.3 per cent accounts in equity schemes are held by retail investors, 5.4 per cent by HNIs and only 0.3 per cent by institutional investors. Liquid/Money market schemes, Debt Oriented schemes and ETF/FoFs have high ticket size due to more participation of institutional investors as compared to equity schemes.

Review of Literature

No relation between the fund size and performance of mutual fund schemes was found (Gusni et al. 2018 and Johansson and Jacobsson 2012). Gusni et al. (2018) investigated the performance of equity mutual funds in Indonesia by using risk-adjusted performance and examined the factors affecting mutual fund performance by using the ability of investment manager (market timing

and stock selection skill), fund size and inflation. For this research the authors selected 19 equity mutual funds using purposive sampling method from the period 2011 to 2015. The result showed that equity mutual fund performance was influenced by stock selection skill and inflation while, market timing skill and fund size have no significant effect on the equity mutual fund performance. Relationship between mutual fund size and performance of 91 Swedish mutual funds was studied by Johansson and Jacobsson (2012) during a six year period (2006-2011). They investigated the relationship between fund size and management fees & fund size and persistence in performance. Their results were based on regressions and significance tests and for all the five subgroups and over the whole time period their results indicate that there is no significant relationship between fund size and fund performance that is robust over time. Their findings also show that there is no persistence in performance for any of the size-based fund groups which helps them to draw the conclusion that past performance is not a good measure for predicting future performance regardless of the size of the funds. The results also indicate that mutual funds with a larger asset base tend to have lower management fees than smaller funds.

Agarwal and Mirza (2017) addressed multiple research issues about mutual fund industry in India during the period 2013 to 2016 by covering 100 mutual funds schemes using performance evaluation measures like sharpe ratio, treynor ratio, jensen's Alpha and Value at risk. The sample of their study comprised of 18 diversified equity schemes, 9 tax saving schemes, 17 large cap funds, 16 long term gilt, 8 long term income, 8 short term income funds, 11 small/ mid cap funds and 12 ultra-short term funds. They measure the performance of mutual schemes on the basis of risk and return and compare the performance of these selected schemes with benchmark index to see whether the scheme is outperforming or underperforming the benchmark. The results showed that Sharpe ratio and Treynor ratio of 90 percent of the schemes have performed better than their benchmarks. As per the Jensen's Alpha, the returns generated by 79 schemes compensated adequately over the average market return. The Value at risk for equity based mutual funds was higher than that of debt fund which showed that even though the equity funds have higher potential for returns but on the other hand, the downside risk is also comparatively higher.

A study conducted by Mingo-Lopez (2017) found that fund investors can obtain different risk-adjusted returns by investing in funds with high or low turnover ratios. They considered a sample of 4,058 US domestic equity mutual funds during the period 1999-2014. The results showed that high-turnover funds do not provide investors with greater risk-adjusted returns than low-turnover funds during last years. In fact, they performed significantly worse after the recent financial crisis. Rao (2010) identified the portfolio turnover strategies of selected equity/growth oriented mutual fund schemes in India. He studied the effect of portfolio turnover ratio on fund performance and examined the relationship between them in Indian context. The effect of change of Portfolio Ratios on Absolute Fund Return (AFR) and Performance of Fund relative to Benchmark Index (FPB) was analyzed by the author. Four Hypotheses pertaining to Portfolio Turnover Ratio and fund performance were formulated and tested for statistical significance. The findings of this study were of mixed nature and lacks evidence that is statistically significant to suggest that increase in portfolio turnover ratio would result in enhanced performance of the fund which implies that high portfolio turnover ratios does not necessarily improve the fund performance consistently over a long time period.

Cremers et al. (2016) examined the relation between indexing and active management in the mutual fund industry. Explicit indexing and closet indexing by active funds are associated with countries' regulatory and financial market environments. They found that actively managed funds charge lower fees when they face more competitive pressure from low-cost explicitly indexed funds. A quasi-natural experiment using the exogenous variation in indexed funds generated by the passage of pension laws supports a causal interpretation of the results. Moreover, the average alpha generated by active management was higher in countries with more explicit indexing and lower in countries with more closet indexing. The evidence of their research suggested that explicit indexing improves competition in the mutual fund industry.

A study by Hada et al. (2016) analyzed the performance of Index based or Passively managed and Actively managed diversified equity mutual fund schemes in India from 2014 to 2015 on various parameters like Tracking error, Sharp ratio, Treynor ratio and standard deviation. The authors focused their study to find out which strategy of the two plays more profitable in a volatile market. They argued that while actively managed mutual fund schemes are charging higher management fees and has high transaction costs, is it worth full for an investor to bear high cost for an expectation of obtaining higher returns or another option is to stay Passive in a volatile market. The results of the study revealed that actively managed mutual fund schemes generated better returns as compared to passively managed schemes.

Kaur and Kaushik (2016) analyzed whether performance of mutual funds in India could be attributed to organizational culture which could exist due to ownership pattern and background of sponsor. The authors utilized the data of growth oriented mutual fund schemes for the period 2005-2013. They compared performance and risk strategy of mutual funds having different ownership and sponsor background by applying portfolio approach and regression method. The results

provided that performance and risk strategy has been significantly different among mutual funds with different type of ownership and sponsor background. Foreign-owned mutual funds performed significantly better than domestic mutual funds.

Significance of portfolio turnover on mutual fund return was investigated by Manek (2016). His research would provide an indication to investors on how to invest in funds based on management style. Her study covered open ended diversified growth oriented equity funds in India. Through this study she found that Portfolio turnover has a statistically significant effect on scheme returns. It is weakly but positively correlated. That is, with higher portfolio turnover, there is a possibility that manager will be able to outperform the index.

Clare et al. (2015) studied the relationship between hedge fund performance and size of UK mutual funds. Their results indicate that there is a strong, negative relationship between hedge fund performance and size. In addition, they also found that rather than dissipating during the two recent periods of financial crisis, other things equal, investors would have been better off with smaller hedge funds than with large ones during these crisis periods.

Bansal and Taneja (2014) evaluated the performance of Large Cap Equity and Debt Mutual Fund Schemes in India. Their research methodology tools included Standard Deviation, Sharpe ratio, Bata, Alpha, R-squared and Treynor ratio. The results of their study concluded that out of all equity mutual fund schemes, UTI opportunities fund was the best as it has lowest standard deviation, lowest beta, highest value of alpha, highest Sharpe ratio and highest Treynor ratio. In case of debt mutual fund scheme UTI short term Income fund has not performed well as it has highest beta and lowest Sharpe Ratio.

Bogle (2014) attempt to estimate the drag on mutual fund returns caused by “all-in” investment expenses, including not only expense ratios but also fund transaction costs, sales loads, and cash drag. The all-in costs incurred by mutual funds-expense ratios plus the other fund costs are numerous and substantial in the case of actively managed funds but far less numerous and less substantial for index funds. Compared with costly actively managed funds, over time, low-cost index funds create extra wealth of 65% for retirement plan investors. His results indicated that in the short term the impact of costs may appear modest, but over the long run, investment costs become immensely damaging to an investor’s standard of living.

Choudhary and Chawla (2014) attempt to analyze the performance of the growth oriented equity diversified schemes in India during the period 2005-2013 on the basis of return and risk evaluation. The analysis was achieved by assessing various financial tests like Average Return, Sharpe Ratio, Treynor Ratio, Standard Deviation, Beta and Coefficient of Determination (R2). The analysis of their research depicts that majority of funds selected for study have outperformed under Sharpe Ratio as well as Treynor Ratio.

Sumana and Shivaraj (2014) focused their study on the performance evaluation of actively managed mutual funds in India during the period 2010-13. They analyzed risk adjusted returns of mutual funds and also absolute returns. Their study was focused on finding the performance of selected actively managed mutual funds using different performance measures like Sharpe`s, Jensen`s Alpha and Information ratio. Using these measures, they have attempted to find out if the fund managers have outperformed the benchmark for a given risk class. The results revealed that the returns varied with the frequency of measurement. This showed that time is an important dimension in the performance of the fund.

Ranparia (2013) in his review identified the performance indicators of mutual funds in India. He analyzed the impact of these performance indicators on mutual fund’s performance. His study also draws attention to the contradictions in the literature in the area of examining these performance indicators which have been identified as per the available literature as performance persistence, turnover, expense ratio, asset size, load fee, investment style, mutual fund managers and the ownership style of the mutual funds. Through the review of papers he found that each performance indicator affects the return of the mutual fund independently. Expense ratio, portfolio turnover and asset size affects the performance of mutual funds positively.

Panwar and Madhumathi (2006) used sample of public-sector sponsored & private-sector sponsored mutual funds in India of varied net assets to investigate the differences in characteristics of assets held, portfolio diversification, and variable effects of diversification on investment performance for the period May, 2002 to May, 2005. The study found that public-sector sponsored funds do not differ significantly from private-sector sponsored funds in terms of mean returns. However, there is a significant difference between public-sector sponsored mutual funds and private-sector sponsored mutual funds in terms of average standard deviation, average variance and average coefficient of variation(COV).The study also found that there is a statistical difference between sponsorship classes in terms of e-SDAR (excess standard deviation adjusted returns) as a performance measure. When residual variance (RV) is used as the measure of mutual fund portfolio diversification characteristic, there is a statistical difference between public-sector sponsored mutual funds and private-sector sponsored mutual funds for the study period.

Berkowitz and Qiu (2002) compared the performance of mutual funds managed by publicly-traded management companies with those

managed by private management companies. They found that publicly-traded management companies invest in riskier assets and charge higher management fees relative to the funds managed by private management companies. However, at the same time, the risk-adjusted returns of the mutual funds managed by publicly-traded management companies do not appear to outperform those of the mutual funds managed by private management companies. Their findings were consistent with both the risk reduction and agency cost arguments that have been made by them in the literature.

Research Methodology

Objectives of The Study

1. To identify the reasons responsible for the variation in the performance of the equity oriented mutual fund schemes in India.
2. To measure the annualized returns of equity mutual fund schemes launched during the period of study.
3. To analyze the impact of identified factors on the performance of the schemes.

Hypothesis

H_1: There is no relationship between the fund size and mean return of equity based mutual funds schemes.

H_2: There is no relationship between the expense ratio and mean return of equity based mutual fund schemes.

H_3: There is no relationship between the portfolio turnover ratio and mean return of equity based mutual fund schemes.

H_4: There is no relationship between the risk level and mean return of equity based mutual fund schemes.

H_5: There is no difference between the mean return and investment strategy (active or passive) of equity based mutual fund schemes.

H_6: There is no difference between the mean return and type of equity based mutual fund schemes.

H_7: There is a no difference between the mean return and ownership of equity based mutual fund schemes.

Sampling Plan

Universe

The sample universe for the present study is the mutual fund industry in India which consists of 43 mutual fund companies operating in India.

Sampling Unit

As a sample unit researcher considered top 10 asset management companies which hold around 78 percent of the asset under management of mutual fund industry in India as of December 2015.

Sample Size

As a sample size 31 mutual funds schemes considered from top 10 fund houses launched during the period 2008-2010. For reference consider table #3**.**

Sampling Technique

For selecting the sample size, researcher has opted judgmental sampling technique:

Data Collection

To fulfill the objectives of present study secondary data is required. The outcome of the research depends on the quality and relevance of the data collected. Hence the selection of source of data is very important.

Type of Data

The present study is quantitative in nature and secondary data is used for the purpose of analysis.

Data Analysis & Tools

The data collected has been analyzed with the help of statistical techniques like Correlation Analysis, Wilcoxon Rank Sum Test and ANOVA. SPSS version 23.0 and Microsoft Excel 2010 are used for the purpose of analysis of data.

Time Period of Study

The study covers a period of 8 years i.e. from April 2008 to December 2015. This period covers both bullish as well as bearish phase of Indian stock market.

Data Analysis And Interpretation

Fund Size

H_{01}:

There is no relationship between the fund size and mean return of equity based mutual funds schemes.

To test the null hypothesis correlation method between Average AUM (fund size) & CAGR has been applied on the following data **table #4**.

Analysis

Researcher has applied Two-Tailed Correlation Calculation method between Average AUM & CAGR, the calculated value is 0.236, which is identical in both parametric regions. As a positive correlation has been found between the fund size and CAGR Return, the null hypothesis is rejected which leads to the acceptance of alternative hypothesis. For reference consider table # 5 & 6.

Conclusion

From the above analysis Correlation between Assets Under Management & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that, the large funds generates higher returns. For reference consider figure # 2. Schemes with large asset under management can take benefit of a downfall in the market by utilizing the funds to buy stocks at a low price. They can also serve the redemption by investors by utilizing the funds. On the other hand smaller funds can perform better when market is in bull phase. But in a situation of bear phase in the market they do not enjoy the above discussed benefits for funds with large asset under management. Thus the return generated by schemes has shown a positive relationship with the fund size.

Expense Ratio

H_{02}

There is no relationship between the expense ratio and mean return of equity based mutual fund schemes..

In this segment correlation method between Expense Ratio & CAGR has been applied on the following data table # 7.

Analysis

Researcher has applied Two-Tailed Correlation Calculation method between Expense Ratio & CAGR, the calculated value is -0.123, which is identical in both parametrical regions. As a negative correlation has been found between Expense Ratio and CAGR Return, the null hypothesis is rejected which leads to the acceptance of alternative hypothesis. For reference consider table # 8 & 9.

Conclusion

From the above analysis Correlation between Expense Ratio & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that, the schemes with higher expense ratio generates lower returns. For reference consider figure # 3. Stock market has seen many up's and down's during the period 2008 to 2015. In such a situation a fund manager frequently buy and sell securities to generate higher returns. This increases the portfolio turnover ratio and thus the expense ratio also. A negative correlation between the expense ratio and annualized return shows that the fund managers were unable to utilize their skills to outperform the market.

Portfolio Turnover Ratio

H_{03}

There is no relationship between the portfolio turnover ratio and mean return of equity based mutual fund schemes.

In this segment correlation method between Portfolio Turnover Ratio & CAGR has been applied on the following data table # 10:

Analysis

Researcher has applied Two-Tailed Correlation Calculation method between Portfolio Turnover Ratio & CAGR, the calculated value is -0.353, which is identical in both parametric regions. As a Negative Correlation has been found between the Portfolio Turnover Ratio and CAGR Return, hence the null hypothesis is rejected which leads to the acceptance of alternative hypothesis. For reference consider table # 11 & 12.

Conclusion

From the above analysis Correlation between Portfolio Turnover Ratio & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that, the schemes with lower portfolio turnover ratio generates higher returns. For reference consider figure # 4. In a volatile market the active managers frequently buy and sell stocks and modify their portfolio to outperform the benchmark index returns. A negative correlation between portfolio turnover ratio and return shows that the highly active strategy of fund manager has failed to generate high returns for the investors. Frequent buying and selling of schemes is a common strategy in a bear market and also when the market is recovering.

Risk Level

H_{04}

There is no relationship between the risk level and mean return of equity based mutual fund schemes.

In this segment correlation method between Standard Deviation (Risk Level) & CAGR has been applied on the following data table # 13:

Analysis

Researcher has applied Two-Tailed Correlation Calculation method between Risk Level & CAGR, the calculated value is 0.200, which is identical in both parametric regions. As a Positive Correlation has been found between Risk Level and CAGR Return, hence the null hypothesis is rejected which leads to the acceptance of alternative hypothesis. For reference consider table # 14 & 15.

Conclusion

From the above analysis Correlation between Risk Level & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that, the schemes with higher risk level generates higher returns. For reference consider figure # 5. The risk and return of the portfolio depends on the risk and return of the individual stocks. A high standard deviation shows a more risky portfolio. Expectation of return increases if a portfolio has higher risk. A positive correlation between the risk level measured in terms of standard deviation and return of schemes shows that fund managers has picked up right stocks and has combined them in a proportion in form of portfolio that has delivered superior returns. Fund managers who have taken higher risk to beat the market returns have been successful in their strategy.

Investment Strategy

H_{05}:$\mu_1 = \mu_2$:

There is no difference between the mean return and investment strategy (active or passive) of equity based mutual fund schemes.

In this segment researcher has applied Wilcoxon Rank Sum Test between Investment Strategy (Actively / Passively Managed) & CAGR on the following data table # 16:

Analysis

Researcher has applied Wilcoxon Rank Sum Test Calculation method between Investment Strategy (Actively & Passively Managed) & CAGR Return, the calculated value is 49.500, and the Asymptotic & Exact significance value are 0.393 & 0.408 respectively, which leads to rejection of null hypothesis and acceptance of alternative hypothesis. It means that there is a difference between the mean return and investment strategy. Actively managed funds have performed better as compared to passively managed equity based mutual fund schemes. For reference consider table # 17, 18 & 19.

Calculation

From the above analysis Wilcoxon Rank Sum test between Investment Strategy & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that the actively managed

schemes generated higher returns as compared to passively managed schemes. A bear phase in the stock market gives a chance to the fund managers of actively managed schemes to outperform the market by buying the potential stocks at a low price and thus reconstructing their portfolios. As the market re-enters in the bull phase the funds generates a higher return as compared to passively managed funds in which the performance of fund relies on the index to which the fund replicates. Thus active managers were able to generate superior returns as compared to passive fund managers.

Type Of Scheme

H_{06}:μ_1= μ_2:

There is no difference between the mean return and type of equity based mutual fund schemes.

In this segment researcher has applied ANOVA Test between Type of Scheme & CAGR on the following data table # 16:

Analysis

Researcher has applied One-Way ANOVA Single Factor test method between Scheme Type & CAGR, the calculated value is 2.782, which is more than the F-Distribution tabular value of 2.44 at (7,23), which leads to the rejection of Null Hypothesis and acceptance of alternative hypothesis. For reference consider table # 20, 21 & 22.

Conclusion

From the above analysis table of One-Way ANOVA between Scheme Type & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that the return varies among different type of schemes. For reference consider figure # 6. Small companies have more potential to generate higher returns as compared to large companies due to high growth potential. If an active fund manager can identify undervalued small cap stocks the performance of fund will definitely beat the other type of schemes. In a bear market these stocks become more attractive due to correction in their values. A high return from small cap fund shows that the fund managers have correctively picked up the undervalued small cap stocks. During the period of study BSE Sensex has generated an annualized return of 15.29 per cent while BSE Small Cap Index has generated a return of 18.15 per cent in the same period.

Ownership

H_{07}:μ_1= μ_2:

There is no difference between the mean return and ownership of equity based mutual fund schemes.

In this segment researcher has applied ANOVA test between Ownership (Fund House) & CAGR on the following data table# 16:

Analysis

Researcher has applied One-Way ANOVA Single Factor test method between Ownership & CAGR, the calculated value is 3.410, which is more than the F-Distribution tabular value of 0.252 at (28,2), which leads to the rejection of Null Hypothesis and acceptance of alternative hypothesis. For reference consider table # 23, 24 & 25.

Conclusion

From the above Analysis table of One-Way ANOVA between Ownership & Return of respective 31 Equity Based Mutual Funds Schemes, result shows that the return varies among schemes owned by different fund houses. For reference consider figure # 7. The performance of a fund not only depends on quantitative parameters like asset under management, expense ratio, portfolio turnover ratio etc. but also depend on qualitative parameters like effective management and experience of fund managers which differs among various ownership of AMC's. In a bull run the experience of a fund manager may not be visualized, but in a bear phase it depends on the experience of fund manager that how it protects the fund from market downfall and redemption pressure.

Results

Table 26

Sr. No.	Parameters	Hypothesis	Test Applied	Calculated Value	Result
1.	Fund Size	There is no Relationship between the Assets Under Management and Mean Return of Equity based Mutual Fund Schemes	Correlation Analysis	0.236	Rejected
2.	Expense Ratio	There is no Relationship between the Expense Ratio and Mean Return of Equity based Mutual Fund Schemes	Correlation Analysis	-0.123	Rejected
3.	Portfolio Turnover Ratio	There is no Relationship between the Portfolio Turnover Ratio and Mean	Correlation Analysis	-0.353	Rejected

		Return of Equity based Mutual Fund Schemes			
4.	Risk Level	There is no Relationship between the Risk Level of Schemes and Mean Return of Equity based Mutual Fund Schemes	Correlation Analysis	0.200	Rejected
5.	Investment Strategy	There is no difference between the mean return of actively and passively managed equity based mutual fund schemes.	Wilcoxon Rank Sum Test	0.408	Rejected
6.	Type of Scheme	There is no difference between the mean returns of the various types of equity based mutual fund schemes.	ANOVA	2.782	Rejected
7.	Ownership	There is no difference between the mean returns of Equity based Mutual Fund Schemes owned by various fund houses.	ANOVA	3.410	Rejected

Findings

1. Through the analysis of collected data it was find out that during the period of study funds with large asset under management performs better as compared to smaller funds as the ability of the fund manager to take benefits of downfall in the market increases with an increase in the asset size.
2. A lower expense ratio results in more money left for the investors. So funds with lower expense ratio must result in better performance. The same has been found through testing of hypothesis as a negative relation was found between expense ratio and return of the schemes.
3. To outperform the market equity fund managers frequently buy and sell stocks which increases the portfolio turnover ratio. Although the results shows that the schemes with higher portfolio turnover ratio fails to generate higher returns. A negative correlation was found between portfolio turnover ratio and return of the schemes.
4. Riskier funds outperform less risky funds and thus fulfill the expectations of optimistic investors who can take more risk with an expectation of high return. A positive correlation was found between risk level and return of the schemes.
5. Active fund managers have justified their investment skills as Actively managed schemes continue to dominate Passive schemes by delivering better returns. Mean return generated by Actively managed funds was found higher as compared to mean return generated by Passively managed funds.
6. It was also found that the return also varies among various types of schemes during the given period of study. Small Cap and Equity Linked Saving Schemes generates higher returns as compared to other type of equity oriented schemes. Diversified schemes failed to serve their purpose and generate far less returns as compared to best performing schemes.
7. A significant relation is found between the ownership of the funds and their performance. Return of schemes owned by various fund houses vary with each other. Schemes owned by AXIS Mutual Fund, ICICI Mutual fund and UTI Mutual Fund outperform the schemes owned by other fund houses.

Conclusion

With the introduction of variety of schemes launched by various fund houses to meet varied customer requirements, Indian mutual fund industry has witnessed a double digit growth rate during last two decades. The popularity of equity schemes among retail investors has increased many folds. As the market is flooded with large number of equity oriented schemes investors often found confused while selecting the schemes to invest. Different schemes provide varying returns in different time intervals. There are various quantitative and qualitative parameters or performance indicators which causes variations in the performance of equity oriented schemes and based on which the performance of schemes can be analyzed. Although past performance is never guaranteed in a mutual fund scheme, still the present study has made an attempt to give investors a platform with multiple factor analysis while selecting a mutual fund scheme to invest based on its past performance. Based on review of literature, expert opinion and own knowledge the study has identified four quantitative and three qualitative performance indicators to analyze the performance of equity oriented schemes.

All the seven parameters selected were found to affect the performance of selected schemes. The results were at par with the previous researches done. Similar study can be extended by considering more performance indicators for equity

oriented schemes or for other type of mutual fund schemes like exchange traded funds, fund of funds, income or debt oriented schemes.

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Table 1
Year Wise Asset Under Management of Mutual Fund Industry in India

Year	Amount(Rs. Billion)	Change(Rs. Billion)
2000	1130.05	-
2001	905.87	-224.18
2002	1005.94	100.07
2003	1092.99	87.05
2004	1396.16	303.17
2005	1496.00	99.84
2006	2318.62	822.62
2007	3262.92	944.3
2008	5051.52	1788.6
2009	4173.00	-878.52
2010	6780.79	2607.79
2011	6647.91	-132.88
2012	8166.57	1518.66
2013	9051.20	884.63
2014	11886.90	2835.7
2015	13534.43	1647.53
2016	16987.44	3453.01
2017	22421.11	5433.67
2018	23659.98	1238.87
2019	26868.25	3208.27

Source:
https://www.amfiindia.com/research-information/aum-data/average-aum

Table 2
No. of Accounts and Average Ticket Size Across Different Scheme Types

	No. of Accounts (%)	Average Ticket Size (Rs)
Liquid/Money Market	2.4	2,451,499
Debt Oriented	5.4	1,463,260
Equity Oriented	72.4	125,379
ETF/FoFs	1.6	1,087,280
Solution Oriented Schemes	6.4	31,230
Index Funds	0.4	182,139
Hybrid Schemes	11.4	355,231

Source: AMFI Folio and Ticket Size, 2019

Table 3
Sampling Unit and Sample Size

Sr. No.	AMC	No. of Schemes
1	Axis Mutual Fund	2
2	Birla Mutual Fund	6
3	DSP Blackrock Mutual Fund	2
4	Franklin Mutual Fund	1
5	HDFC Mutual Fund	2
6	ICICI Mutual Fund	5
7	Kotak Mahindra Mutual Fund	2
8	Reliance Mutual Fund	7
9	SBI Mutual Fund	2
10	UTI Mutual Fund	2
Total		**31**

Table 4
Assets Under Management & CAGR Return

Sr. No.	Scheme Name	Average AUM (In Rs. Million)	CAGR (%)
1	Reliance Index Fund-Sensex Plan	32.63	4.81
2	Birla Sun Life Latin America Equity Fund	34.65	-4.88

3	Birla Sun Life Commodity Equities Fund	95.63	10.04
4	ICICI Prudential Nifty Next 50 Index Fund	142.65	10.59
5	Reliance Index Fund-Nifty Plan	573.27	5.53
6	Reliance R*Shares Banking ETF	802.48	18.32
7	ICICI Prudential R.I.G.H.T	809.33	19.01
8	Birla Sun Life India Reforms Fund	1088.80	5.51
9	DSP Black Rock Natural Resources And New Energy Fund	1210.31	7.98
10	Birla Sun Life Enhanced Arbitrage Fund	1259.60	7.19
11	Reliance Equity Linked Saving Scheme	1333.73	12.77
12	Kotak Infrastructure & Economic Reform Fund	1364.80	5.53
13	Birla Sun Life Pure Value Fund	1506.06	19.48
14	UTI Long Term Advantage Fund	1587.19	11.51
15	Reliance Quant Plus Fund	1991.24	8.36
16	Franklin Equity Asian Fund	2202.13	6.22
17	ICICI Prudential Select Large Cap Fund	2481.94	12.31
18	Birla Sun Life Special Situations Fund	2596.16	7.84
19	SBI Small And Midcap Fund	2895.17	21.68
20	ICICI Prudential Banking And Financial Services Fund	2931.14	18.39
21	SBI PSU Fund	3647.32	-1.7
22	UTI Transportation And Logistics Fund	4681.44	17.27
23	DSP Black Rock Focus 25 Fund	5316.22	9.89
24	Reliance Arbitrage Advantage Fund	6824.75	8.79
25	HDFC Small And Mid-Cap Fund	7829.45	12.77
26	Reliance Small Cap Fund	8150.98	21.27
27	Kotak Select Focus Fund	9267.44	13.72
28	Axis Equity Fund	9771.40	11.23
29	HDFC Infrastructure Fund	11638.66	6.17
30	Axis Long Term Equity Fund	17954.45	20.46
31	ICICI Prudential Focused Equity Fund	41591.10	14.76

Source: https://www.mutualfundindia.com/Mf/Performance/ReturnCalculator

Table 5
Descriptive Statistics For Assets Under Management

	Mean	Std. Deviation	N
AvgAUM	4955.2297	7955.36074	31
CAGR_Return	11.0587	6.47577	31

Table 6
Correlations Statistical Test Result

		Avg. AUM	CAGR_Return
AvgAUM	Pearson Correlation	1	**.236**
	Sig. (2-tailed)		.202
	N	31	31
CAGR_Return	Pearson Correlation	**.236**	1
	Sig. (2-tailed)	.202	
	N	31	31

Table 7
Expense Ratio & CAGR Return

S. No.	Scheme Name	Expense Ratio	CAGR (%)
1	Reliance R*Shares Banking ETF	0.20	18.32
2	ICICI Prudential Nifty Next 50 Index Fund	0.81	10.59
3	Reliance Index Fund-Sensex Plan	0.84	4.81
4	Reliance Small Cap Fund	0.84	21.27
5	Birla Sun Life Enhanced Arbitrage Fund	0.90	7.19

6	Birla Sun Life India Reforms Fund	0.90	5.51
7	Reliance Equity Linked Saving Scheme	0.98	12.77
8	ICICI Prudential Select Large Cap Fund	1.01	12.31
9	Birla Sun Life Commodity Equities Fund	1.73	10.04
10	DSP BLACK ROCK Focus 25 Fund	1.90	9.89
11	Kotak Select Focus Fund	1.97	13.72
12	Axis Long Term Equity Fund	2.00	20.46
13	Kotak Infrastructure & Economic Reform Fund	2.03	5.53
14	Reliance Arbitrage Advantage Fund	2.10	8.79
15	Axis Equity Fund	2.11	11.23
16	Reliance Index Fund-Nifty Plan	2.22	5.53
17	HDFC Small Cap Fund	2.34	12.77
18	ICICI Prudential R.I.G.H.T	2.37	19.01
19	SBI Small and Mid-Cap Fund	2.37	21.68
20	ICICI Prudential Focused Equity Fund	2.54	14.76
21	SBI PSU Fund	2.57	-1.7
22	Reliance Quant Plus Fund	2.63	8.36
23	ICICI Prudential Banking and Financial Services Fund	2.67	18.39
24	DSP BLACK ROCK Natural Resources and New Energy Fund	2.73	7.98
25	Birla Sun Life Latin America Equity Fund	2.82	-4.88
26	UTI Transportation and Logistics Fund	2.87	17.27
27	Birla Sun Life Special Situations Fund	2.90	7.84
28	UTI Long Term Advantage Fund Series	2.93	11.51
29	Birla Sun Life Pure Value Fund	2.95	19.48
30	Franklin Equity Asian Fund	2.97	6.22
31	HDFC Infrastructure Fund	3.01	6.17

Source: https://www.mutualfundindia.com/Mf/Performance/ReturnCalculator

Table 8

Descriptive Statistics For Expense Ratio

	Mean	Std. Deviation	N
Expense_Ratio	2.0390	0.82154	31
CAGR_Return	11.0587	6.47577	31

Table 9

Correlations Statistical Test Result

		Expense_Ratio	CAGR_Return
Expense_ Ratio	Pearson Correlation	1	-0.123
	Sig. (2-tailed)		.510
	N	31	31
CAGR_Return	Pearson Correlation	-0.123	1
	Sig. (2-tailed)	.510	
	N	31	31

Table 10
Portfolio Turnover Ratio & Cagr Return

S. No.	Scheme Name	Portfolio Turnover	CAGR (%)
1	Birla Sun Life Commodity Equities Fund	0.03	10.04
2	Reliance Index Fund-Nifty Plan	0.13	5.53
3	ICICI Prudential R.I.G.H.T	0.17	19.01
4	HDFC Small Cap Fund	0.19	12.77
5	UTI Long Term Advantage Fund Series	0.21	11.51
6	Reliance Equity Linked Saving Scheme	0.24	12.77
7	HDFC Infrastructure Fund	0.3	6.17
8	Birla Sun Life Latin America Equity Fund	0.32	-4.88
9	Kotak Select Focus Fund	0.33	13.72
10	UTI Transportation and Logistics Fund	0.36	17.27
11	Birla Sun Life Special Situations Fund	0.39	7.84
12	Franklin Equity Asian Fund	0.39	6.22
13	Reliance Index Fund-Sensex Plan	0.4	4.81
14	ICICI Prudential Banking and Financial Services Fund	0.41	18.39
15	Axis Long Term Equity Fund	0.42	20.46
16	Birla Sun Life India Reforms Fund	0.46	5.51
17	SBI PSU Fund	0.51	-1.7
18	Axis Equity Fund	0.56	11.23
19	DSP BLACK ROCK Focus 25 Fund	0.57	9.89
20	Reliance Small Cap Fund	0.59	21.27
21	Kotak Infrastructure & Economic Reform Fund	0.61	5.53
22	SBI Small and Mid-Cap Fund	0.62	21.68
23	Reliance R*Shares Banking ETF	0.69	18.32
24	Reliance Quant Plus Fund	1.07	8.36
25	DSP BLACK ROCK Natural Resources and New Energy Fund	1.12	7.98
26	ICICI Prudential Select Large Cap Fund	1.19	12.31
27	ICICI Prudential Nifty Next 50 Index Fund	1.22	10.59
28	ICICI Prudential Focused Equity Fund	1.46	14.76
29	Birla Sun Life Pure Value Fund	1.54	19.48
30	Birla Sun Life Enhanced Arbitrage Fund	11.69	7.19
31	Reliance Arbitrage Advantage Fund	14.01	8.79

Source: https://www.mutualfundindia.com/Mf/Performance/ReturnCalculator

Table 11
Descriptive Statistics for Portfolio Turnover Ratio

	Mean	Std. Deviation	N
Port_TrnOvr	1.3613	3.10597	31
CAGR_Return	11.0587	6.47577	31

Table 12
Correlations Statistical Test Result

		Port_TrnOvr	CAGR_Return
Port_TrnOvr	Pearson Correlation	1	**-0.353**
	Sig. (2-tailed)		0.052
	N	31	31
CAGR_Return	Pearson Correlation	**-0.353**	1
	Sig. (2-tailed)	0.052	
	N	31	31

Table 13
Standard Deviation & Cagr Return

Sr. No.	Scheme Name	Standard Deviation (%)	CAGR (%)
1	Reliance Arbitrage Advantage Fund	0.19	8.79
2	Birla Sun Life Enhanced Arbitrage Fund	0.56	7.19
3	Reliance Equity Linked Saving Scheme	2.49	12.77

4	Reliance Index Fund-Sensex Plan	2.81	4.81
5	Reliance Index Fund-Nifty Plan	2.95	5.53
6	Reliance Quant Plus Fund	2.96	8.36
7	Franklin Equity Asian Fund	3.25	6.22
8	Reliance Small Cap Fund	3.39	21.27
9	HDFC Small Cap Fund	3.85	12.77
10	Reliance R*Shares Banking ETF	4.76	18.32
11	HDFC Infrastructure Fund	8.13	6.17
12	Birla Sun Life Latin America Equity Fund	13.13	-4.88
13	ICICI Prudential R.I.G.H.T	14.11	19.01
14	Axis Long Term Equity Fund	14.85	20.46
15	Axis Equity Fund	14.94	11.23
16	Birla Sun Life Commodity Equities Fund	15.00	10.04
17	UTI Long Term Advantage Fund Series	15.10	11.51
18	UTI Transportation and Logistics Fund	15.78	17.27
19	DSP BLACK ROCK Focus 25 Fund	15.84	9.89
20	Kotak Select Focus Fund	16.11	13.72
21	SBI Small and Mid-Cap Fund	17.31	21.68
22	ICICI Prudential Select Large Cap Fund	17.47	12.31
23	ICICI Prudential Nifty Next 50 Index Fund	19.49	10.59
24	DSP BLACK ROCK Natural Resources and New Energy Fund	20.18	7.98
25	Kotak Infrastructure & Economic Reform Fund	20.72	5.53
26	SBI PSU Fund	21.09	-1.7
27	ICICI Prudential Focused Equity Fund	21.77	14.76
28	Birla Sun Life Pure Value Fund	22.18	19.48
29	Birla Sun Life Special Situations Fund	22.41	7.84
30	Birla Sun Life India Reforms Fund	24.57	5.51
31	ICICI Prudential Banking and Financial Services Fund	30.69	18.39

Source: ***https://www.mutualfundindia.com/Mf/Performance/ReturnCalculator***

Table 14
Descriptive Statistics for Risk Level

	Mean	Std. Deviation	N
Risk_Level	13.1639	8.35263	31
CAGR_Return	11.0587	6.47577	31

Table 15
Correlations Statistical Test Result

		Risk_Level	CAGR_Return
Risk_Level	Pearson Correlation	1	**0.200**
	Sig. (2-tailed)		0.281
	N	31	31
CAGR_Return	Pearson Correlation	**0.200**	1
	Sig. (2-tailed)	0.281	
	N	31	31

Table 16
Investment Strategy, Ownership & Scheme Type with CAGR Return

S. No.	Scheme Name	Investment Strategy	Ownership	Scheme Type	CAGR (%)
1	Axis Equity Fund	Actively Managed	Axis	Diversified	11.23
2	Axis Long Term Equity Fund	Actively Managed	Axis	ELSS	20.46
3	Birla Sun Life Special Situations Fund	Actively Managed	Birla	Diversified	7.84

4	Birla Sun Life Commodity Equities Fund	Actively Managed	Birla	Sectorial	10.04
5	Birla Sun Life Pure Value Fund	Actively Managed	Birla	Diversified	19.48
6	Birla Sun Life Enhanced Arbitrage Fund	Actively Managed	Birla	Arbitrage	7.19
7	Birla Sun Life India Reforms Fund	Actively Managed	Birla	Diversified	5.51
8	Birla Sun Life Latin America Equity Fund	Actively Managed	Birla	FOF	-4.88
9	DSP BLACK ROCK Focus 25 Fund	Actively Managed	DSP Black Rock	Large Cap	9.89
10	DSP BLACK ROCK Natural Resources and New Energy Fund	Actively Managed	DSP Black Rock	Sectorial	7.98
11	Franklin Equity Asian Fund	Actively Managed	Franklin	Diversified	6.22
12	HDFC Infrastructure Fund	Actively Managed	HDFC	Sectorial	6.17
13	HDFC Small Cap Fund	Actively Managed	HDFC	Small Cap	12.77
14	ICICI Prudential Focused Equity Fund	Actively Managed	ICICI	Large Cap	14.76
15	ICICI Prudential Select Large Cap Fund	Actively Managed	ICICI	Large Cap	12.31
16	ICICI Prudential Banking and Financial Services Fund	Actively Managed	ICICI	Sectorial	18.39
17	ICICI Prudential R.I.G.H.T	Actively Managed	ICICI	ELSS	19.01
18	Kotak Select Focus Fund	Actively Managed	Kotak	Diversified	13.72
19	Kotak Infrastructure & Economic Reform Fund	Actively Managed	Kotak	Sectorial	5.53
20	Reliance Quant Plus Fund	Actively Managed	Reliance	Large Cap	8.36
21	Reliance Small Cap Fund	Actively Managed	Reliance	Small Cap	21.27
22	Reliance Arbitrage Advantage Fund	Actively Managed	Reliance	Arbitrage	8.79
23	Reliance Equity Linked Saving Scheme	Actively Managed	Reliance	ELSS	12.77
24	SBI PSU Fund	Actively Managed	SBI	Diversified	-1.7
25	SBI Small and Mid-Cap Fund	Actively Managed	SBI	Small Cap	21.68
26	UTI Transportation and Logistics Fund	Actively Managed	UTI	Sectorial	17.27
27	UTI Long Term Advantage Fund	Actively Managed	UTI	ELSS	11.51
28	ICICI Prudential Nifty Next 50 Index Fund	Passively Managed	ICICI	Index Fund	10.59
29	Reliance Index Fund-Nifty Plan	Passively Managed	Reliance	Index Fund	5.53
30	Reliance Index Fund-Sensex Plan	Passively Managed	Reliance	Index Fund	4.81
31	Reliance R*Shares Banking ETF	Passively Managed	Reliance	Index Fund	18.32

Source: https://www.mutualfundindia.com/Mf/Performance/ReturnCalculator

Table 17
Average Return Based on Investment Strategy

Sr. No.	Investment Strategy	Average CAGR (%)
1	Actively Managed	11.24
2	Passively Managed	9.81

Table 18
Descriptive Statistics For Investment Strategy

Invest_Strgy	N	Mean Rank	Sum of Ranks
Act_F_CAGR	27	16.54	446.50
Pass_F_CAGR	4	12.38	49.50

Table 19
Wilcoxon Rank Sum Test Result

Mann-Whitney U	39.500
Wilcoxon W	**49.500**
Z	-0.855
Asymp. Sig. (2-tailed)	.393
Exact Sig. [2*(1-tailed Sig.)]	.408

Table 20
Average Return Based on Type of Schemes

Sr. No.	Scheme Type	Average CAGR
1	Small Cap	18.57
2	Equity Linked Saving Scheme (ELSS)	15.93
3	Large Cap	11.33
4	Sectorial	10.90
5	Index Fund	9.81
6	Diversified	8.90
7	Arbitrage	7.99
8	Fund of Funds	-4.88

Table 21
Descriptive Statistics for Scheme Type w.r.t CAGR Return

Scheme_Code	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	2	7.9900	1.13137	.80000	-2.1750	18.1550	7.19	8.79
2	7	8.9000	6.74235	2.54837	2.6644	15.1356	-1.70	19.48
3	4	15.9375	4.45455	2.22728	8.8493	23.0257	11.51	20.46
4	1	-4.8800	.	.	.	.	-4.88	-4.88
5	4	9.8125	6.22754	3.11377	-.0969	19.7219	4.81	18.32
6	4	11.3300	2.80593	1.40297	6.8651	15.7949	8.36	14.76
7	6	10.8967	5.60630	2.28876	5.0132	16.7801	5.53	18.39
8	3	18.5733	5.03001	2.90408	6.0781	31.0686	12.77	21.68
Total	31	11.0587	6.47577	1.16308	8.6834	13.4340	-4.88	21.68

Table 22
ANOVA Test Result

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	576.780	7	82.397	**2.782**	.030
Within Groups	681.286	23	29.621		
Total	1258.066	30			

Table 23
Average Return of Schemes of Various Ownership

Sr. No.	Ownership	Average CAGR (%)
1	AXIS	15.85
2	ICICI Prudential	15.01
3	UTI	14.39
4	Reliance	11.41
5	SBI	9.99

6	Kotak Mahindra	9.63
7	HDFC	9.47
8	DSP Black Rock	8.94
9	Birla Sun Life	7.53
10	Franklin Templeton	6.22

Table 24
Descriptive Statistics Owner_Code

Owner_ Code	CAGR_ Return_ Value	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
2	-4.88	1	2.00	.	.	.	.	2	2
9	-1.70	1	9.00	.	.	.	.	9	9
8	4.81	1	8.00	.	.	.	.	8	8
2	5.51	1	2.00	.	.	.	.	2	2
7	5.53	2	7.50	.707	.500	1.15	13.85	7	8
5	6.17	1	5.00	3.	.	.	.	5	5
4	6.22	1	4.00	.	.	.	.	4	4
2	7.19	1	2.00	.	.	.	.	2	2
2	7.84	1	2.00	.	.	.	.	2	2
3	7.98	1	3.00	.	.	.	.	3	3
8	8.36	1	8.00	.	.	.	.	8	8
8	8.79	1	8.00	.	.	.	.	8	8
3	9.89	1	3.00	.	.	.	.	3	3
2	10.04	1	2.00	.	.	.	.	2	2
6	10.59	1	6.00	.	.	.	.	6	6
1	11.23	1	1.00	.	.	.	.	1	1
10	11.51	1	10.00	.	.	.	.	10	10
6	12.31	1	6.00	.	.	.	.	6	6
8	12.77	2	6.50	2.121	1.500	-12.56	25.56	5	8
7	13.72	1	7.00	.	.	.	.	7	7
6	14.76	1	6.00	.	.	.	.	6	6
10	17.27	1	10.00	.	.	.	.	10	10
8	18.32	1	8.00	.	.	.	.	8	8
6	18.39	1	6.00	.	.	.	.	6	6
6	19.01	1	6.00	.	.	.	.	6	6
2	19.48	1	2.00	.	.	.	.	2	2
1	20.46	1	1.00	.	.	.	.	1	1
8	21.27	1	8.00	.	.	.	.	8	8
9	21.68	1	9.00	.	.	.	.	9	9
Total		31	5.55	2.850	.512	4.50	6.59	1	10

Table 25
ANOVA Test Result

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	238.677	28	8.524	**3.410**	.252
Within Groups	5.000	2	2.500		
Total	243.677	30			

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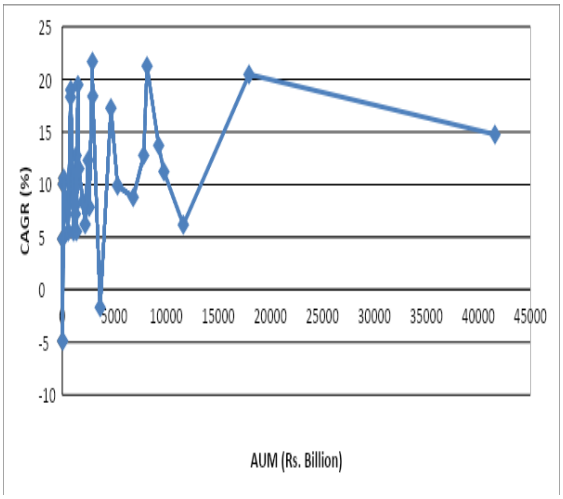

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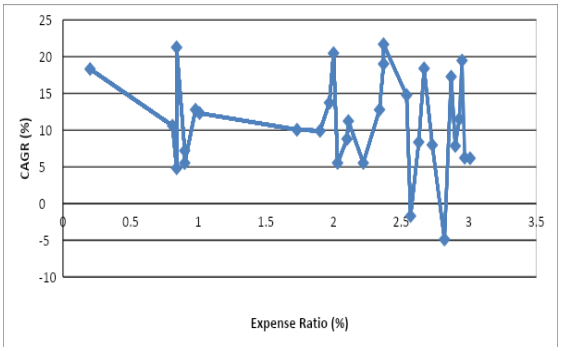

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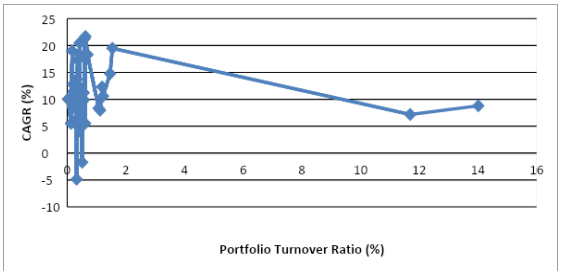

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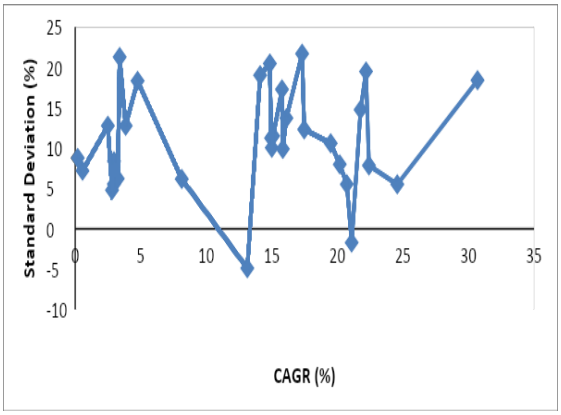

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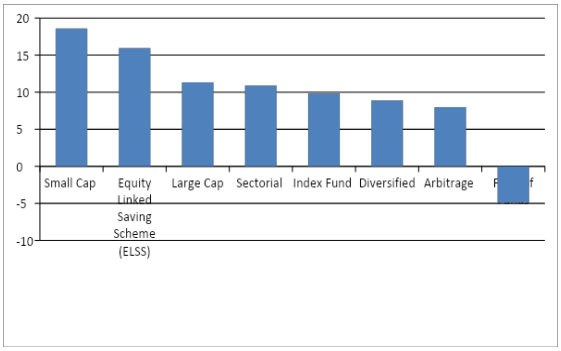

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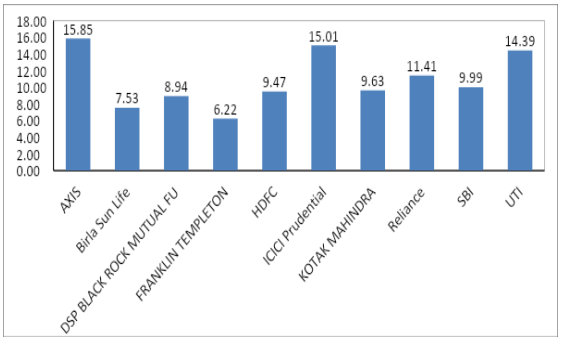

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