

PERFORMANCE EVALUATION OF MID CAP SCHEMES OF MUTUAL FUNDS

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ABSTRACT

In this paper, the Performance of twenty open-ended equity mid cap schemes related to private sector mutual funds are taken for evaluation. The period of the study covers the period from 1st April 2016 to 31st March 2021. To evaluate the performance of the selected mutual fund schemes, monthly returns are compared with Benchmark- S&P BSE MidCap Index return. Risk Free Rate (Rf) has been taken as average fixed deposit rate of State bank of India. Further, various statistical tools like average, standard deviation, beta, coefficient of determination and the risk adjusted performance measures suggested by Jensen (1968), Treynor (1965) and Sharpe (1966), are employed to evaluate the performance for the above selected period of 5 years.

Keywords: S&PBSE MidCap Index, Equity Schemes, Private Sector Mutual Funds, Open-Ended, Jensen, Treynor and Sharpe.

Introduction

A Mutual Fund is an institution which is set-up a trust that pools the savings of a number of investors who share different financial goals to different persons. The money so collected, is then invested in capital market instruments such as debentures, shares and other securities based on the objective of the mutual fund schemes. Mutual Funds work on the principle of "Do not put all eggs in one basket" i.e. Diversification. Diversification is a device that reduces the risk because all stocks have different degrees of risk i.e. they may not move in the same direction in the same proportion at the same time. Mutual funds issue units to the investors in accordance with the amount of money invested by them. Investors of mutual funds are known as unit holders. The profits or losses are shared by the investors in proportion to their investment in that mutual fund.

Review of Literature

Mutual fund industry in India started in 1963 with the formation of Unit Trust of India (UTI) and the existing of a mutual fund industry in India is for over more than 56 years, there have been only a few studies, which examined the performance of Indian mutual funds using standard methodology for Mid cap funds. A brief review of these studies is now presented below:

Vaid [1994] looked at the performance in terms of the ability of the mutual fund to attract more investors and higher fund mobilization. It showed the popularity of the mutual fund as it is perceived to pay superior returns to the investors. She concluded that even for equity-oriented funds, investment is more in fixed income securities rather than in equities. **Kale and Uma [1995]** evaluated the performance of 77 mutual fund schemes managed by eight mutual funds. The rates of return were compared with the return of the BSE National Index over the sample period to evaluate the performance of the scheme with the market. The study also examined the accounting and disclosure policies followed by the above mutual funds. **Sahadevan and Raju [1996]** have carried out their study on mutual funds. Their study has focus on data presentation on expenses and other related aspects, which were generally covered in annual reports of the mutual funds. **Agarwal [1996]** considered various conceptual aspects related to mutual funds. The study has covered data of UTI's equity, debt and balanced funds. This study also traces the historical background of mutual fund industry in the USA and UK. The study covered operational aspects of mutual fund management including the regulatory framework. The related

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chapters also covered data on NAV, market prices, national index, etc., some of the funds in operation in India, without any financial performance evaluation of equity-oriented funds. **Khurana [1996]** reported opposite relationship between probability of managerial replacement and fund performance by taking growth rate in a fund's asset base its portfolio returns as two separate measures of performance. **Sadhak [1997]** tried to trace the historical background of mutual fund industry. It has presented accurately the marketing and investment strategies followed by mutual fund houses of India. It contained statistical information about growth of mutual fund industry in terms of funds available for investment and investors' number of accounts holding. **Rao and Venkateswaralu [1998]** checked the market (investing) timing abilities of fund managers of UTI using its nine closed ended schemes. The data set comprised daily closing prices of the schemes from their respective listing dates to March 1998. They employed both the Henriksson-Merton and Treynor-Mazuy models and reported that UTI's fund managers were not able to time the market in general. **Jayadev M [1998]** evaluated the performance of 62 mutual funds schemes using monthly NAV data for varying period 1987-1995. **Gupta and Sehgal [2000]** has wider and comprehensive view. They evaluated investment performance of 80 mutual fund schemes of the Indian mutual fund market over the period 1992-96. In addition, they tested several related propositions regarding fund diversification, consistency of performance, parameter stationary over time, performance in relation to fund objectives and risk-return relationship and reported that mutual fund industry had performed reasonably well during the study period. However, there is a lack of adequate diversification. They also found evidence to support consistency of performance. Finally, a significant and positive risk return relationship was measured by the study when standard deviation was used a basis for risk measurement. **Mishra [2001]** evaluated performance for the period from April 1992 to December 1996. The sample size was 24 public sector sponsored mutual funds. The performance was evaluated in terms of rate of return, Sharpe, Treynor and Jensen's measures of performance. The study also considered beta's instability issues. Conclusion of the study was uncheerful performance of PSU mutual funds in India, in general. **G. Sethu [2001]** used in his study weekly NAV data for 18 open-ended growth schemes in India for the period April 1995-July 1999. The 91-day treasury auction rate was used as the risk free rate. His study used three alternatives indices for equity market viz. BSE Sensitive Index, NSE Nifty and S&P CNX 500. Conclusion of the study was that the fund portfolios are not adequately diversified; the excess returns after adjusting for systematic risk is zero and there is lack of market timing in portfolios. **Singh and Singh** have highlighted the facts that mutual funds in India have not attained equal status as their counterparts in other developed countries. The study emphasized on the gradual and slow growth of mutual funds industry in India by giving an exclusive attention to the UTI as it was through to be the pioneers in the field of mutual funds in India. The offshore mutual funds, private mutual funds, money market funds, has been critically analyzed in this study.

Research Gap

In the above literature no studies have made an attempt to make a comparative analysis of Mutual fund returns of Mid cap funds using Benchmarks i.e. S&P BSE Mid cap Index and also the Risk-free rate taken as average Interest rate of fixed deposit rate of state bank of India during the selected period of this study. In India retail investors hardly understand the performance measures tools like Sharpe, Treynor, Jensen models. Still very few studies have made an attempt to calculate the return on mutual funds which can be easily understandable by the retail investors.

Objectives of the Study

- To Evaluate the Performance of sample Mid cap schemes.
- To compare schemes' return and risk with benchmark i.e., S&P BSE Mid cap Index.
- To appraise the performance of mutual funds with regard to risk-return adjustment, the model suggested by Sharpe, Treynor and Jensen.

Limitations of the Study

For the purpose of performance evaluation, those mid cap schemes have been selected which are in operation during 5 years i.e. 1st April 2016 to 31st March 2021. Only open-ended, growth option equity schemes of Private Sector Mutual Funds have been considered for this purpose. Performance evaluation of all schemes is not possible due to unavailability of data.

Scope for Further Research

As evaluating the performance of Mutual Fund is an ongoing process and a never-ending task. This study has taken only open-ended schemes for its consideration and thus, a similar study can be done on Close-ended schemes. As in the present study an attempt has been made to compare the

selected Mid cap schemes with one bench mark i.e. S&P BSE Mid cap Index, so same can be made with various other benchmarks and different Risk-free returns which is taken as fixed deposit rate of state bank of India in the present study. The number of sample schemes too can be increased, which might provide some more variations in the result. Also, many private sectors mutual fund exist in the industry, in the present study only twenty schemes have been taken, many are yet to be evaluated.

Research Methodology

- **Benchmark Index**

For this study, S&P BSE Mid cap Index has been used as a proxy for market index. Hence it would cover the majority percentage of different scheme portfolios and therefore is expected to provide better performance benchmark.

- **Period of Study**

The growth-oriented schemes, which have been floated by the Private Sector Mutual Funds during the period 1st April, 2016 to 31st March, 2021 are considered for the purpose of the study. Monthly Net Asset Value (NAV) as declared by the relevant mutual funds during the above period has been used for this purpose.

- **Data**

Study examines twenty open-ended equity schemes (Direct Scheme) and twenty open-ended equity schemes (Regular Scheme) with growth option being launched by Private Sector Mutual Funds. These schemes have been selected on the basis of regular data availability during the period of 1st April 2016 to 31st March 2021. Monthly Net Asset Value (NAV) data have been used of the above period. NAV for the study is collected from AMFI (Association of Mutual Funds in India) and selected mutual funds' websites.

- **Statistical Tools**

For the purpose of the performance evaluation various tools are used to measure the performance which are as Average Return, Standard Deviation, Beta, Sharpe, Treynor and Jensen.

- **Direct Scheme**

Direct scheme is a scheme in which money is invested in mutual fund company directly by investors using mutual fund own website or application.

- **Regular Scheme**

Regular scheme is a scheme in which money is invested in mutual fund company through broker.

Analysis and Interpretation

Table 1: List of Mutual Funds Schemes Studied

Name of the Equity Scheme Selected
Aditya Birla Sun Life Mid Capfund
Axis Mid Capfund
Baroda Mid-Cap Fund
Bnp Paribas Mid Capfund
DSP Mid Capfund
Edelweiss Mid Capfund
Franklinindia prima Fund
HDFC Mid-Cap Opportunity Fund
ICICI Prudential Mid Capfund
Invesco India Mid Cap Fund
Kotakemerging Mid Cap Fund
L & T Mid Cap Fund
Motilal Oswal Mid Cap 30fund
Nippon Indiagrowth Fund
Pgim India Mid Cap Opportunities Fund
Quant Mid Cap Fund
SBI Magnum Mid Cap Fund
Sundaram Mid Cap Fund
Tata Midcap Growth Fund
Taurus Discovery (Midcap) Fund

Table 2 shows the average return earned by the various schemes.

Direct Scheme

In the sample schemes selected for the study, it is observed that Fifteen out of Twenty schemes had shown the better return as compared to **S&P BSE Mid Cap Index** (0.012907). **Kotak Emerging Equity Fund** (0.016943) has outperformed all the other sample schemes and the benchmarks, followed by **Axis Mid Cap Fund** (0.016733) and **PGIM India Midcap Opportunity fund** (0.016472). **Aditya Birla Sunlife Mid cap Fund** (0.011818) has shown the worst performance in the sample schemes.

Regular Scheme

In the sample schemes selected for the study, it is observed that thirteen out of twenty schemes had shown the better return as compared to **S&P BSE Mid Cap Index** (0.012907). **Kotak Emerging Equity Fund** (0.015865) has outperformed all the other sample schemes and the benchmarks, followed by **Axis Mid cap Fund** (0.015733) and **PGIM India Mid cap opportunity Fund** (0.015315). **Motilal Oswal Midcap 30 fund** (0.011036) has shown the worst performance in the sample schemes.

Table 2: Average Monthly Return Earned by the Schemes

Schemes	Average Return	
	Direct Scheme	Regular Scheme
Aditya Birla Sun Life Mid Cap Fund	0.011818	0.011056
Axis Mid Cap Fund	0.016733	0.015733
Baroda Mid-Cap Fund	0.013408	0.012539
BNP Paribas Mid Cap Fund	0.014538	0.013240
DSP Mid Cap Fund	0.015368	0.014624
Edelweiss Mid Cap Fund	0.015965	0.014979
Franklin India Prima Fund	0.011917	0.011128
HDFC Mid-Cap Opportunity Fund	0.014647	0.013837
ICICI Prudential Mid Cap Fund	0.014110	0.013250
Invesco India Mid Cap Fund	0.015925	0.014588
Kotak Emerging Mid Cap Fund	0.016943	0.015865
L & T Mid Cap Fund	0.015255	0.014406
Motilal Oswal Mid Cap 30 Fund	0.012091	0.011036
Nippon India Growth Fund	0.015485	0.014878
PGIM India Mid Cap Opportunities Fund	0.016472	0.015315
Quant Mid Cap Fund	0.012852	0.012229
SBI Magnum Mid Cap Fund	0.013452	0.012600
Sundaram Mid Cap Fund	0.012149	0.011557
Tata Midcap Growth Fund	0.015041	0.014226
Taurus Discovery (Midcap) Fund	0.015075	0.014700

Table 3 shows the standard deviation of selected schemes. It is the most common expression to measure risk of the fund return. Higher the value of standard deviation of the fund returns, greater will be the total risk carried by the fund.

Direct Scheme

It is observed that the maximum deviation of funds return is shown by **SBI Magnum Mid Cap Fund**(0.064953) followed by **Sundaram Mid Cap Fund**(0.062933) and **HDFC Midcap Opportunity Fund** (0.062867) whereas **Axis Mid Cap Fund** (0.049007) was least risky scheme with lowest standard deviation on the other hand Standard Deviation of benchmark S&P BSE Mid Cap Index is (0.063943). It could be seen here that nineteen out of twenty schemes selected for study shows less standard deviation than S&P BSE Mid Cap Index.

Regular Scheme

It is observed that the maximum deviation of funds return is shown by **SBI Magnum Mid Cap Fund**(0.064901) followed by **Sundaram Mid Cap Fund**(0.062868) and **PGIM India Midcap Opportunity Fund**(0.062855) whereas **Axis Mid Cap Fund** (0.049671) was least risky scheme with lowest standard deviation on the other hand Standard Deviation of benchmark S&P BSE Mid Cap Index is (0.078961). It could be seen here that all twenty schemes selected for study shows less standard deviation than S&P BSE Mid Cap Index.

Table 3: Standard Deviation

Schemes	Standard Deviation	
	Direct Scheme	Regular Scheme
Aditya Birla Sun Life Mid Cap Fund	0.062426	0.062566
Axis Mid Cap Fund	0.049007	0.049671
Baroda Mid-Cap Fund	0.057980	0.055600
BNP Paribas Mid Cap Fund	0.059807	0.059411
DSP Mid Cap Fund	0.057467	0.057427
Edelweiss Mid Cap Fund	0.062171	0.062119
Franklin India Prima Fund	0.060588	0.060359
HDFC Mid-Cap Opportunity Fund	0.062867	0.061865
ICICI Prudential Mid Cap Fund	0.062659	0.062514
Invesco India Mid Cap Fund	0.062280	0.056822
Kotak Emerging Mid Cap Fund	0.061668	0.061941
L & T Mid Cap Fund	0.058689	0.058652
Motilal Oswal Mid Cap 30 Fund	0.062481	0.062469
Nippon India Growth Fund	0.062594	0.062433
PGIM India Mid Cap Opportunities Fund	0.061688	0.062855
Quant Mid Cap Fund	0.052831	0.052900
SBI Magnum Mid Cap Fund	0.064953	0.064901
Sundaram Mid Cap Fund	0.062933	0.062868
Tata Midcap Growth Fund	0.061512	0.062086
Taurus Discovery (Midcap) Fund	0.056481	0.056418

Risk - Return Classification of Sample Schemes

In order to undertake further analysis, sample schemes have been classified into the following four categories on the basis of their return and risk characteristics:

- **High Return and High Risk:** This category includes all those schemes whose returns as well as standard deviations are higher than that of the market.
- **High Return and Low Risk:** This category comprises those schemes whose returns are more than the market but their standard deviations are lower than that of the market.
- **Low return and High Risk:** The final category includes all those schemes whose returns have been found to be lower than that of the market but their standard deviations are higher than that of the market.

Categorizations of Schemes Table 4 presents the risk return grid of Mutual Funds schemes

Direct Scheme

After classification of the sample schemes into risk return category

01 scheme falls in category 1st i.e. **High Return High Risk**

Further **14 schemes** fall in 2nd category i.e. **High return and low risk**. These 14 schemes fulfil one basic objective of Mutual Fund i.e. High Return and Low Risk compared to the capital market.

Next **5schemes** fall in 3rd category i.e. **Low Return and Low Risk** and also,

No scheme falls in 4th category i.e. **Low Return and High Risk**.

Table 4 (a): Risk Return Grid of Mutual Funds scheme (Direct Schemes) compared to S&P BSE Mid Cap Index

Category 1 High Return, High Risk	Category 2 High Return, Low Risk
SBI Magnum Midcap fund	Axis Mid cap fund Baroda Mid cap fund BNP Paribas Mid cap fund DSP Mid cap fund Edelweiss Mid cap fund HDFC Midcap Opportunity fund ICICI Prudential Midcap fund Invesco India Mid cap fund

	Kotak Emerging equity fund L&T Mid cap fund Nippon India Growth Fund PGIM India Midcap Opportunity fund TATA Midcap Growth Fund Taurus Discovery (Midcap) Fund
Category 3 Low Return, Low Risk Aditya Birla Sunlife Midcap fund Franklin India Prima fund Motilal Oswal Midcap 30 fund Quant Mid cap fund Sundaram Mid cap fund	Category 4 Low Return, High Risk No Scheme

Regular Scheme

After classification of the sample schemes into risk return category

No scheme falls in category 1st i. e. **High Return High Risk**

Further **13 schemes** fall in 2nd category i.e. **High return and low risk**. These 13 schemes fulfil one basic objective of Mutual Fund i.e. High Return and Low Risk compared to the capital market.

Next **06 schemes** fall in 3rd category i.e. **Low Return and Low Risk**, and also,

01 scheme falls in 4th category i.e. **Low Return and High Risk**.

Table 4 (b): Risk Return Grid of Mutual Funds Schemes (Regular Scheme) compared to S&P BSE Mid Cap Index

Category 1 High Return, High Risk No Scheme	Category 2 High Return, Low Risk Axis Mid cap fund BNP Paribas Mid cap fund DSP Mid cap fund Edelweiss Mid cap fund HDFC Midcap Opportunity fund ICICI Prudential Midcap fund Invesco India Mid cap fund Kotak Emerging equity fund L&T Mid cap fund Nippon India Growth Fund PGIM India Midcap Opportunity fund TATA Midcap Growth Fund Taurus Discovery (Midcap) Fund
Category 3 Low Return, Low Risk Aditya Birla Sunlife Midcap fund Baroda Mid cap fund Franklin India Prima fund Motilal Oswal Midcap 30 fund Quant Midcap Fund Sundaram Mid cap fund	Category 4 Low Return, High Risk SBI Magnum Mid cap fund

Direct Scheme

Table 5 presents the systematic risk of the sample schemes. Considered for the purpose of this study all of the schemes have beta less than 1 (i.e. market beta) implying thereby that all these schemes selected for the study hold portfolios that were less risky than the market portfolio. The best beta value was shown by **Quant Mid Cap Fund** (0.716445) and the worst was shown by **SBI Magnum Mid cap Fund** (0.971346).

Regular Scheme

Table 5 presents the systematic risk of the sample schemes. Considered for the purpose of this study all of the schemes have beta less than 1 (i.e. market beta) implying thereby that all these schemes selected for the study hold portfolios that were less risky than the market portfolio. The best beta value was shown by **Quant Mid Cap Fund** (0.723877) and the worst was shown by **SBI Magnum Mid cap** (0.978841).

Table 5: BETA

Schemes	Beta	
	Direct Scheme	Regular Scheme
Aditya Birla Sun Life Mid Cap Fund	0.957593	0.959661
Axis Mid Cap Fund	0.725489	0.734329
Baroda Mid-Cap Fund	0.795658	0.733868
BNP Paribas Mid Cap Fund	0.896839	0.896454
DSP Mid Cap Fund	0.845360	0.844887
Edelweiss Mid Cap Fund	0.944586	0.943526
Franklin India Prima Fund	0.852499	0.850888
HDFC Mid-Cap Opportunity Fund	0.962051	0.848913
ICICI Prudential Mid Cap Fund	0.946751	0.944642
Invesco India Mid Cap Fund	0.857943	0.866608
Kotak Emerging Mid Cap Fund	0.941062	0.945250
L & T Mid Cap Fund	0.889315	0.888705
Motilal Oswal Mid Cap 30 Fund	0.913932	0.912488
Nippon India Growth Fund	0.905032	0.903614
PGIM India Mid Cap Opportunities Fund	0.908401	0.936341
Quant Mid Cap Fund	0.716445	0.723877
SBI Magnum Mid Cap Fund	0.971346	0.978841
Sundaram Mid Cap Fund	0.955462	0.953476
Tata Midcap Growth Fund	0.926078	0.933012
Taurus Discovery (Midcap) Fund	0.855038	0.849776

Direct Scheme

Table 1.6 depicts value of Sharpe's reward to variability ratio. It is an excess return earned over risk free return per unit of risk involved, i.e. per unit of standard deviation. Positive value of the index shows good performance it could be seen that 17 sample schemes have recorded better Sharpe index and 3 sample schemes have recorded lower Sharp index than the S&P BSE Mid Cap Index (0.119749). **Aditya Birla Sunlife Mid Cap Fund** have shown the worst sharp ratio (0.105220) and **Axis Mid Cap Fund** (0.234320) have shown the best Sharpe ratio among the selected schemes. This indicates Nearly 85 percent schemes have outperformed the S&P BSE Mid Cap index. This implies that the funds decision for diversified portfolio in a falling market has proved successful to some extent in earning higher excess returns per unit of risk as compared to the market.

Regular Scheme

Table 1.6 depicts value of Sharpe's reward to variability ratio. It is an excess return earned over risk free return per unit of risk involved, i.e. per unit of standard deviation. Positive value of the index shows good performance it could be seen that 15 sample schemes have recorded better Sharpe index and 5 sample schemes have recorded lower Sharpe index than the S&P BSE Mid Cap Index (0.119749). **Motilal Oswal Mid Cap Fund** have shown the worst sharp ratio (0.092621) and **Axis Mid Cap Fund** (0.211046) have shown the best Sharpe ratio among the selected schemes. This indicates Nearly 75 percent schemes have outperformed the S&P BSE Mid Cap index. This implies that the funds decision for diversified portfolio in a falling market has proved successful to some extent in earning higher excess returns per unit of risk as compared to the market. The Sharpe index is important from small investor point of view who seek diversification through mutual funds, i.e. mutual funds are supposed to protect small investors against vagaries of stock markets and the fund managers of these schemes has done well to protect them.

Table 6: Sharpe of the Schemes

Schemes	Sharpe	
	Direct Scheme	Regular Scheme
Aditya Birla Sun Life Mid Cap Fund	0.105220	0.092804
Axis Mid Cap Fund	0.234320	0.211046
Baroda Mid-Cap Fund	0.140697	0.131093
BNP Paribas Mid Cap Fund	0.155305	0.134485
DSP Mid Cap Fund	0.176073	0.163237
Edelweiss Mid Cap Fund	0.172346	0.156619
Franklin India Prima Fund	0.110036	0.097384
HDFC Mid-Cap Opportunity Fund	0.149468	0.138795

ICICI Prudential Mid Cap Fund	0.141397	0.127976
Invesco India Mid Cap Fund	0.189676	0.164333
Kotak Emerging Mid Cap Fund	0.189619	0.171378
L & T Mid Cap Fund	0.170475	0.156111
Motilal Oswal Mid Cap 30 Fund	0.109497	0.092621
Nippon India Growth Fund	0.163511	0.154214
Pgim India Mid Cap Opportunities Fund	0.181918	0.160121
Quant Mid Cap Fund	0.143891	0.131919
SBI Magnum Mid Cap Fund	0.126282	0.113156
Sundaram Mid Cap Fund	0.109617	0.100326
Tata Midcap Growth Fund	0.159170	0.144575
Taurus Discovery (Midcap) Fund	0.173945	0.167492

Direct Scheme

Table 7 shows Treynor of the scheme, it is the excess return over risk free return per unit of systematic risk i.e. beta. Here, all the schemes recorded positive value indicating thereby that the schemes provided adequate returns as against the level of risk involved in the investment. **Axis Mid Cap Fund** shows the best Treynor ratio among all the selected schemes followed by **Invesco India Mid Cap Fund** and **Kotak Emerging Equity Fund** whereas **Aditya Birla Sunlife Mid Cap Fund** has shown the worst performance. A higher Treynor Index as compared to market indicates that investor who invested in mutual fund to form well diversified portfolio did receive adequate return per unit of systematic risk undertaken.

Regular Scheme

Table 7 shows Treynor of the scheme, it is the excess return over risk free return per unit of systematic risk i.e. beta. Here, all the schemes recorded positive value indicating thereby that the schemes provided adequate returns as against the level of risk involved in the investment. **Axis Mid Cap Fund** shows the best Treynor ratio among all the selected schemes followed by **Kotak Emerging Equity Fund** and **Taurus Discovery (Midcap) Fund** whereas **Aditya Birla Sunlife Mid Cap Fund** has shown the worst performance. A higher Treynor Index as compared to market indicates that investor who invested in mutual fund to form well diversified portfolio did receive adequate return per unit of systematic risk undertaken.

Table 7: Treynor of the Schemes

Schemes	Treynor	
	Direct Scheme	Regular Scheme
Aditya Birla Sun Life Mid Cap Fund	0.007690	0.006050
Axis Mid Cap Fund	0.005588	0.014276
Baroda Mid-Cap Fund	0.006772	0.009932
BNP Paribas Mid Cap Fund	0.002832	0.008913
DSP Mid Cap Fund	0.016163	0.011095
Edelweiss Mid Cap Fund	0.007694	0.010311
Franklin India Prima Fund	0.010148	0.006908
HDFC Mid-Cap Opportunity Fund	0.008873	0.010115
ICICI Prudential Mid Cap Fund	0.008801	0.008469
Invesco India Mid Cap Fund	0.003633	0.010775
Kotak Emerging Mid Cap Fund	0.006289	0.011230
L & T Mid Cap Fund	0.005412	0.010303
Motilal Oswal Mid Cap 30 Fund	0.011733	0.006341
Nippon India Growth Fund	0.010391	0.010655
PGIM India Mid Cap Opportunities Fund	0.011395	0.010749
Quant Mid Cap Fund	0.006868	0.009641
SBI Magnum Mid Cap Fund	0.010035	0.007509
Sundaram Mid Cap Fund	0.014345	0.006615
Tata Midcap Growth Fund	0.013108	0.009559
Taurus Discovery (Midcap) Fund	0.002906	0.011120

Direct Scheme

Table 8 shows the Jensen's measures. It is the regression of excess return of the schemes with excess return of the market, acting as dependent and independent variables respectively. Higher positive value of alpha posted by the schemes indicates its better performance. The analysis of the table reveals that all schemes have negative value. Highest value of Jensen's Measure is shown in **Axis MidCap Fund** followed by **Kotak Emerging Equity Fund** and **PGIM India Midcap Opportunity Fund**. Lowest Jensen's measure found in the case of **Aditya Birla Sunlife Mid cap Fund**. Higher value of Jensen's measures indicates good market timing ability of fund managers as regard investment in the securities.

Regular Scheme

Table 8 shows the Jensen's measures. It is the regression of excess return of the schemes with excess return of the market, acting as dependent and independent variables respectively. Higher positive value of alpha posted by the schemes indicates its better performance. The analysis of the table reveals that 11 schemes have positive Jensen's Measures and 9 schemes have negative value. Highest value of Jensen's Measure is shown in **Axis MidCap Fund** followed by **Kotak Emerging Equity Fund** and **Taurus Discovery (MidCap) Fund**. Lowest Jensen's measure found again in the case of **Aditya Birla Sunlife Mid cap Fund**. Higher value of Jensen's measures indicates good market timing ability of fund managers as regard investment in the securities.

Table 8: Jensen of the Schemes

Schemes	Jenson	
	Direct Scheme	Regular Scheme
Aditya Birla Sun Life Mid Cap Fund	-0.000764	-0.001542
Axis Mid Cap Fund	0.005928	0.004860
Baroda Mid-Cap Fund	0.002042	0.001669
BNP Paribas Mid Cap Fund	0.002421	0.001226
DSP Mid Cap Fund	0.003645	0.002905
Edelweiss Mid Cap Fund	0.003482	0.002504
Franklin India Prima Fund	0.000139	-0.000637
HDFC Mid-Cap Opportunity Fund	0.002030	0.002086
ICICI Prudential Mid Cap Fund	0.001610	0.000767
Invesco India Mid Cap Fund	0.004106	0.002709
Kotak Emerging Mid Cap Fund	0.004488	0.003377
L & T Mid Cap Fund	0.003195	0.002351
Motilal Oswal Mid Cap 30 Fund	-0.000157	-0.001201
Nippon India Growth Fund	0.003305	0.002709
Pgim India Mid Cap Opportunities Fund	0.004266	0.002895
Quant Mid Cap Fund	0.002116	0.001436
SBI Magnum Mid Cap Fund	0.000765	-0.000145
Sundaram Mid Cap Fund	-0.000418	-0.000994
Tata Midcap Growth Fund	0.002700	0.001786
Taurus Discovery (Midcap) Fund	0.003277	0.002943

Table 9 shows the ranking of the scheme according to Average Return and Standard Deviation where the scheme with the highest value is ranked 1 in Average Return and rank 1 in Standard Deviation with the lowest value.

Table 9: Ranking of the Schemes according to Average Return (AR) and Standard Deviation (SD)

Schemes	Direct Scheme		Regular Scheme	
	AR	SD	AR	SD
Aditya Birla Sun Life Mid Cap Fund	20	14	19	17
Axis Mid Cap Fund	02	01	02	01
Baroda Mid-Cap Fund	15	06	15	03
BNP Paribas Mid Cap Fund	12	08	13	08
DSP Mid Cap Fund	07	05	07	06
Edelweiss Mid Cap Fund	04	13	04	13
Franklin India Prima Fund	19	09	18	09
HDFC Mid-Cap Opportunity Fund	11	18	11	10

ICICI Prudential Mid Cap Fund	13	17	12	16
Invesco India Mid Cap Fund	05	03	08	05
Kotak Emerging Mid Cap Fund	01	11	01	11
L & T Mid Cap Fund	08	07	09	07
Motilal Oswal Mid Cap 30 Fund	18	15	20	15
Nippon India Growth Fund	06	16	05	16
PGIM India Mid Cap Opportunities Fund	03	12	03	18
Quant Mid Cap Fund	16	02	16	02
SBI Magnum Mid Cap Fund	14	20	14	20
Sundaram Mid Cap Fund	17	19	17	19
Tata Midcap Growth Fund	10	10	10	12
Taurus Discovery (Midcap) Fund	09	04	06	04

Table 10 shows the ranking of the scheme according to Sharpe, Treynor and Jensen Measures, where the scheme with the highest value is ranked 1 in all the measures.

Table 10 (a): Ranking of the Schemes according to Sharpe, Treynor and Jensen Measures

Schemes	Direct Scheme		
	Sharpe	Treynor	Jenson
Aditya Birla Sun Life Mid Cap Fund	20	20	20
Axis Mid Cap Fund	01	01	01
Baroda Mid-Cap Fund	15	13	13
BNP Paribas Mid Cap Fund	11	12	11
DSP Mid Cap Fund	05	05	05
Edelweiss Mid Cap Fund	07	07	06
Franklin India Prima Fund	17	17	17
HDFC Mid-Cap Opportunity Fund	12	14	14
ICICI Prudential Mid Cap Fund	14	15	15
Invesco India Mid Cap Fund	02	02	04
Kotak Emerging Mid Cap Fund	03	03	02
L & T Mid Cap Fund	08	09	09
Motilal Oswal Mid Cap 30 Fund	19	18	18
Nippon India Growth Fund	09	08	07
PGIM India Mid Cap Opportunities Fund	04	04	03
Quant Mid Cap Fund	13	10	12
SBI Magnum Mid Cap Fund	16	16	16
Sundaram Mid Cap Fund	18	19	19
Tata Midcap Growth Fund	10	11	10
Taurus Discovery (Midcap) Fund	06	06	08

Table 10 (b): Ranking of the Schemes according to Sharpe, Treynor and Jensen Measures

Schemes	Regular Scheme		
	Sharpe	Treynor	Jenson
Aditya Birla Sun Life Mid Cap Fund	19	20	20
Axis Mid Cap Fund	01	01	01
Baroda Mid-Cap Fund	14	11	12
BNP Paribas Mid Cap Fund	12	14	14
DSP Mid Cap Fund	05	04	04
Edelweiss Mid Cap Fund	07	08	08
Franklin India Prima Fund	18	17	17
HDFC Mid-Cap Opportunity Fund	11	10	10
ICICI Prudential Mid Cap Fund	15	15	15
Invesco India Mid Cap Fund	04	05	07
Kotak Emerging Mid Cap Fund	02	02	02
L & T Mid Cap Fund	08	09	09
Motilal Oswal Mid Cap 30 Fund	20	19	19

Nippon India Growth Fund	09	07	06
PGIM India Mid Cap Opportunities Fund	06	06	05
Quant Mid Cap Fund	13	12	13
SBI Magnum Mid Cap Fund	16	16	16
Sundaram Mid Cap Fund	17	18	18
Tata Midcap Growth Fund	10	13	11
Taurus Discovery (Midcap) Fund	03	03	03

Table 11 shows the Overall Performance Ranking of the mutual funds is evaluated under different methods in terms of S&P BSE Mid cap Index, it cannot be expressed that a single scheme will outperform others under all methods. When some schemes perform better under some methods and some other schemes perform better under some other methods, selecting a single scheme as the best scheme will become difficult. To overcome this, the overall performance ranking of the schemes that include Average Return, Standard Deviation, Sharpe, Treynor and Jenson. Schemes are ranked according to their performance, as the scheme with highest value is given Rank 1, except in Standard Deviation. Finally, the scheme with the lowest average rank becomes the best scheme.

Table 11(a): Overall Performance Ranking (Direct Scheme)

Schemes	Overall Performance Ranking
Aditya Birla Sun Life Mid Cap Fund	20
Axis Mid Cap Fund	01
Baroda Mid-Cap Fund	13
BNP Paribas Mid Cap Fund	12
DSP Mid Cap Fund	05
Edelweiss Mid Cap Fund	07
Franklin India Prima Fund	16
HDFC Mid-Cap Opportunity Fund	14
ICICI Prudential Mid Cap Fund	15
Invesco India Mid Cap Fund	02
Kotak Emerging Mid Cap Fund	03
L & T Mid Cap Fund	08
Motilal Oswal Mid Cap 30 Fund	18
Nippon India Growth Fund	09
PGIM India Mid Cap Opportunities Fund	04
Quant Mid Cap Fund	11
SBI Magnum Mid Cap Fund	17
Sundaram Mid Cap Fund	19
Tata Midcap Growth Fund	10
Taurus Discovery (Midcap) Fund	06

Table 11(b): Overall Performance Ranking (Regular Scheme)

Schemes	Overall Performance Ranking
Aditya Birla Sun Life Mid Cap Fund	20
Axis Mid Cap Fund	01
Baroda Mid-Cap Fund	11
BNP Paribas Mid Cap Fund	14
DSP Mid Cap Fund	04
Edelweiss Mid Cap Fund	07
Franklin India Prima Fund	16
HDFC Mid-Cap Opportunity Fund	10
ICICI Prudential Mid Cap Fund	15
Invesco India Mid Cap Fund	05
Kotak Emerging Mid Cap Fund	02
L & T Mid Cap Fund	09
Motilal Oswal Mid Cap 30 Fund	19
Nippon India Growth Fund	08

PGIM India Mid Cap Opportunities Fund	06
Quant Mid Cap Fund	12
SBI Magnum Mid Cap Fund	17
Sundaram Mid Cap Fund	18
Tata Midcap Growth Fund	13
Taurus Discovery (Midcap) Fund	03

Conclusion

Out of the total schemes studied, 15 schemes in direct schemes as well as in regular scheme showed an average return higher than in comparison to the market return. **Kotak Emerging Equity Fund** had shown the best average return whereas **Aditya Birla Sun Life Mid Cap Fund** showed the worst performance indirect scheme and **Motilal Oswal Midcap 30 Fund** showed the worst performance in regular scheme. Mutual funds are supposed to protect small investors against vagaries of stock market and the fund managers of these schemes have done their best to protect them but some fund managers fail to do this. Based on benchmarks **Axis Mid Cap Fund** was the least risky and **SBI Magnum Mid Cap Fund** was the most risky fund in both direct and regular scheme. Based on the overall performance ranking of the schemes it can be seen that **Axis MidCap Fund** has shown the best performance and has outperformed in all the other schemes and the benchmark taken for the study in both direct and regular scheme.

References

1. Vaid S, (1994), "Mutual Funds operation in India", Rishi Publication, Varanasi, India. Page No. 101-119.
2. Shome, Sujan (1994), "A Study of Performance of Indian Mutual Funds", Unpublished Thesis, Jhanshi University.
3. Adhikari, Umesh and Bhosale, Meenal (1994), "Risk Return Analysis of Mutual Fund Growth Schemes". *Indian Management*, August 1994.
4. Kale, Sunita and Uma, S. (1995), A study on the evaluation of the Performance of Mutual Funds in India, National Bank Institute, Pune.
5. Sahadevan and Raju MT, (1996), "Mutual Funds Data, Interpretation and Analysis", Prentice hall of India.
6. Agarwal P.R. (1996), "Mutual funds-A Comprehensive Approach", Orient Law house, Delhi.
7. Khurana, Ajay (1996), "Top Management Turnover – An Empirical Investigation of Mutual Fund Managers", *Journal of Financial Economics*.
8. Sadhak H, (1997) "Mutual Fund Investment and Market Practices in India", Sage Publication India.
9. Rao K.V. and Venkateshwarlu, K. (1998), "Market Timing Abilities of Fund Managers-A case Study of Unit Trust of India", A paper presented at the Second Capital Market Conference Organised by UTI Institute Capital Market, Mumbai.
10. Jayadev M. (1998), "Performance Evaluation of Portfolio Managers: An Empirical Evidence on Indian Mutual Funds", *Applied Finance* Vol.5, No.2, July.
11. Gupta, O.P. and Sehagal S. (2000), "Investment Performance of Mutual Funds: The Indian Experience", In *Indian Capital Markets: Trends and Dimensions* edited by UMA Shashikant and Arumugam, Tata McGraw Hill, New Delhi.
12. Mishra B, (2001), "A study of Mutual Funds in India", un published Research paper under the aegis of Faculty of Management Studies, University of Delhi.
13. Sethu, G. (2001), "The Mutual Fund Puzzle" in *Indian Capital Markets: Modern perspective and Empirical Evidence*, Allied Publishers Mumbai.
14. Singh, H.K. and Singh, Meera, 'Mutual funds and Indian capital market, performance and profitability'.
15. KumarVikas (2010) *Mutual Funds in India: Growth and Performance*. ERT Publication, Pvt.Ltd., Varanasi,

Websites

16. www.bseindia.com
17. www.amfi.com
18. www.sbi.co.in
19. www.sbimf.com
20. www.online.inimf.com
21. www.hdfcfund.com
22. www.investopedia.com
23. www.mutualfundindia.com
24. www.lfcs.com
25. www.axismf.com
26. www.mutualfund.adityabirlacapital.com
27. www.barodamf.com
28. www.bnpparibasmf.in
29. www.dspim.com
30. www.edelweissmf.com
31. www.franklintemplatonindia.com
32. www.icicipruamc.com
33. www.invescomutualfund.com
34. www.kotakmf.com
35. www.motilalswalmf.com
36. www.mf.nipponindiaim.com
37. www.pgimindiamf.com
38. www.quantmutual.com
39. www.sundarammutual.com
40. www.tatamutualfund.com
41. www.taurusmutualfund.com

