

## **PERFORMANCE EVALUATION OF LARGE AND MID-CAP FUNDS OF SELECT COMPANIES IN INDIA**

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### **ABSTRACT**

*Sound investments are based on simple, powerful and logical truths and investing without evaluation of a particular fund is like playing stud poker without looking the cards. Therefore there is a need to evaluate the select funds by calculating risk, return and risk-adjusted through Treynor's Index; Sharpe's Index; Jensen's Differential Index; Eugene Fama's Decomposition Net Selectivity Index and Modigliani and Modiglian's risk-adjusted performance measure (M2) models. The mid-cap funds are more volatile than large-cap funds. Investment in mid-cap funds is the most suitable avenue for Investors with high-risk tolerance in Birla Sun life Front Equity Fund Growth.*

**KEYWORDS:** *Performance, Interpretations, Data Analysis, Tolerance*

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### **INTRODUCTION**

Mid-caps are those that they lie between large-caps and small caps in terms of company size. Mid-cap funds are advised for investors with high-risk tolerance than large-cap investors. During a bull phase, the mid-cap stock may outperform their large-cap counterparts Mid-cap stocks are more volatile than large-cap funds.

The present paper deals with data analysis and interpretation of Large and Mid Cap Funds, by adopting the following framework for analysis and interpretation of data

- Return related analysis and its interpretation
- Risk related analysis and its interpretation
- Risk-adjusted return analysis and its interpretation

### **Performance Evaluation Methods**

#### **Return Related Analysis and its Interpretation**

For the purpose of carrying out return related analysis and interpretations, average holding period return (HPR i.e., 6.69%) for the study period had been compared with the average return on the chosen benchmark index. If the average return is found to be greater than the respective average return on the benchmark index, the said fund is to be considered as experiencing superior return than the underlying index and vice-versa.

### Risk Related Analysis and its Interpretation

Risk refers to variability in returns; the variation in return signifies risk associated with a portfolio. The risk gets measured in terms of standard deviation ( $\sigma$ ), beta ( $\beta$ ) and coefficient of determination ( $R^2$ ) Evaluation of riskiness of select schemes these three variables are measured and suitable interpretation is drawn thereupon. The details are furnished below.

- Total Risk analysis and interpretation( $\sigma$ )
- Systematic Risk analysis and interpretation ( $\beta$ )
- Analysis and interpretation of coefficient of determination ( $R^2$ ).

### Risk-Adjusted Return Analysis and its Interpretation

Risk and Return are the two variables required for performance evaluation of the portfolio. Portfolio evaluation is said to be complete if the comprehensive evaluation is based on both the return and risk. Thus, risk-adjusted return analysis is required for evaluating portfolio performance.

- In the lexicon of mutual fund performance evaluation, there are several risk-adjusted performance models evolved and implemented from time to time. The following five (5) models are used for evaluating the performance of mutual funds.
- Treynor's Index
- Sharpe's Index
- Jensen's Differential Index
- Eugene Fama's Decomposition Net Selectivity Index
- Modigliani and Modiglian's risk-adjusted performance measure (M2)

## RESEARCH METHODOLOGY

As per AMFI, there are 63 Asset Management Companies (AMCs) are operated in India during March 2019. They are as follows

### Number of Asset Management Companies

Table 1

S.No	AMCs Name	S.No	AMCs Name
1	AIG Global Investment Mutual Fund	33	JP Morgan Mutual Fund
2	Alliance Capital MF	34	Kotak Mahindra MF
3	Anagram Wellington MF	35	L&T Mutual Fund
4	Apple Mutual Fund	36	Lotus Mutual Fund
5	AXIS Mutual Fund	37	LIC Mutual Fund
6	Benchmark Mutual Fund	38	Mirae Asset Mutual Fund
7	BOI AXA Mutual Fund	39	Mahindra MF
8	Birla Sun Life Mutual Fund	40	Morgan Stanley MF
10	Baroda Pioneer MF	42	Motilal Oswal MF
11	CRB Mutual Fund	43	Pioneer ITI Mutual Fund
12	Deutsche Mutual Fund	44	Pinbridge Mutual Fund

**Table 1: Contd.,**

13	DSP Blackrock MF	45	Principal Mutual Fund
14	Dundee Mutual Fund	46	Quantum Mutual Fund
15	Edelweiss Mutual Fund	47	Reliance Capital MF
16	Escorts Mutual Fund	48	Sahara Mutual Fund
17	Fidelity Mutual Fund	49	SBI Mutual Fund
18	First India Mutual Fund	50	Shriram Mutual Fund
19	Fortis Mutual Funds	51	SREI Mutual Fund
20	Franklin Templeton MF	52	Sun F&C Mutual Fund
21	Goldman Sachs Mutual Fund	53	Sundaram MF
22	HB Mutual Fund	54	Tata Mutual Fund
23	HDFC Mutual Fund	55	Taurus Mutual Fund
24	HSBC Mutual Fund	56	UTI Mutual Fund
25	ICICI Prudential MF	57	Union KBC Mutual Fund
26	IDFC Mutual Fund	58	PPFAS
27	IL&FS Mutual Fund	59	DHFL Pramerica MF
28	ING Mutual Fund	60	IIFCL
29	ITC Classic Thread. MF	61	IDBI
30	Invesco MF	62	INDIABULLS
31	Jardine Fleming MF	63	IIFL
32	JM Mutual Fund		

**Source:** AMFI

Above shown AMC's are public and private sector asset management companies. Of the total 63 Asset Management Companies (AMCs), the researcher has purposively selected Five AMC's which are operating all types of cap schemes. Furthermore, the researcher has selected each type of cap schemes floated by each chosen AMC's.

### Sampling

Based on the Value research journal and AMFI, there are 63 Asset Management Companies (AMCs) that are in existence during the study period, Out of this, in the first stage, Five (05) mutual fund Asset Management Companies are purposively selected as these Asset Management Companies are found operating Growth funds categorized into Large Cap, Large & Mid Cap, Multi-Cap and Mid & Small Cap funds. At the second stage, these five Asset Management Companies are found operating all types of cap funds. In all, there are 49 Cap schemes being floated by these five AMC's Out of 49 schemes, researcher has purposively selected one (01) scheme from each type of Cap fund from each AMC depending upon the existence of given scheme both at the beginning of the study period and at the end of the study period as well as on the basis of availability of required secondary data.

### Period of the Study

The present study aims to carry out the evaluation of chosen schemes from 2008-09 to 2016-2017. Hence, the study covers a period of 9 financial years. The rationale behind choosing nine years duration as a period of study is to cover bearish phase, bullish phase and consolidation phase as exhibited by the values of respective benchmark indices used in the study.

Category-Wise and Sample Schemes According to AMCs

Table 2

Name of the AMC	Categories And No. of Schemes (In Nos.)									
	Large Cap		Large and Mid Cap		Multi Cap		Mid and Small Cap		Grand Total	
	Cap		Cap		Cap		Cap		Cap	
	Total Scheme	Sample Scheme	Total Scheme	Sample Scheme	Total Scheme	Sample Scheme	Total Scheme	Sample Scheme	Total Scheme	Sample Scheme
Birla Sun Life Asset Management Company Limited	2	1	5	1	3	1	5	1	15	04
DSP BlackRock Investment Managers Private Limited	2	1	2	1	2	1	2	1	08	04
ICICI Prudential Mutual Fund	1	1	3	1	1	1	1	1	06	04
Kotak Mahindra Asset Management Company Limited	3	1	3	1	1	1	2	1	09	04
Tata Asset Management Limited	3	1	3	1	3	1	2	1	11	04
<b>TOTAL</b>	<b>11</b>	<b>5</b>	<b>16</b>	<b>5</b>	<b>10</b>	<b>5</b>	<b>12</b>	<b>5</b>	<b>49</b>	<b>20</b>

Source: Compiled by the Researcher

From the table 2, it can be inferred that in above-mentioned growth funds are considered as the universe is 49 schemes operated by respective AMCs with category-wise, of those, 20 schemes were selected as sample scheme which denotes 41% of the universe.

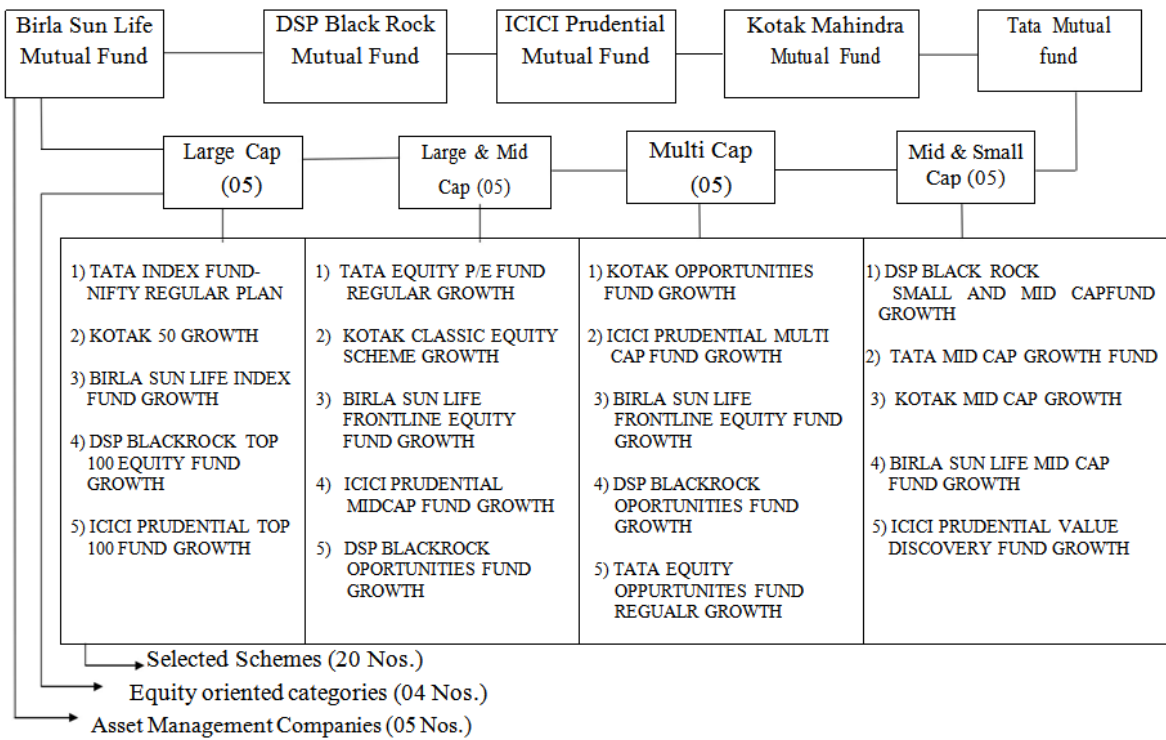


Figure 1: Sampling Design of the Study

**Table 3: Return for Select Schemes of Large and Mid Cap Funds and Bench-Mark Values for the Study Period 2008-09 to 2016-17.(Values in Percentages)**

Year	CNX NIFTY	TATA EQUITY P/E FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORTUNITIES FUND GROWTH
2008-09	-38.97	-35.86	-30.97	-32.43	-55.64	-35.78
2009-10	87.58	105.89	84.97	92.38	132.73	86.37
2010-11	1.92	8.15	2.44	10.31	-4.51	12.32
2011-12	-9.26	-2.99	-1.78	-7.54	-3.74	-9.63
2012-13	7.22	-1.91	11.11	13.96	0.76	7.61
2013-14	13.69	21.39	16.53	22.07	29.06	19.75
2014-15	34.73	61.12	34.77	40.66	75.28	47.44
2015-16	-8.05	-10	-10.25	-5.99	-7.83	-3.63
2016-17	24.2	43.5	24.27	24.21	32.99	31.97
AVERAGE	12.56	21.03	14.57	17.51	22.12	17.38
DEVIATION		8.47	2.01	4.95	9.56	4.82
OVER/UNDER		OVER	OVER	OVER	OVER	OVER
RANK		2	5	3	1	4

**Source: Compiled from NAV Records of Respective AMC's.**

Above table reveals information of the holding period returns of select schemes as well as bench mark index. Average returns for the holding period are calculated on the basis of Net Asset Value (NAV) for the study period 2008-09 to 2016-19. Among the select schemes ICICI Prudential Mid Cap Fund Growth has performed well over the select counterpart schemes, recording an average return of 22.12 percent, whereas the benchmark index CNX Nifty recorded an average return of 12.56 percent, ICICI Prudential Mid Cap Fund Growth earned more than 9.56 percent over the benchmark index. Tata Pure Equity (P/E) Fund regular growth fund registered an average return of 21.03 percent during the study period, ranked 2<sup>nd</sup> among the select schemes. Birla SunLife Front Line Equity Fund-Growth with an average return of 17.51 Percent ranked 3<sup>rd</sup>, DSP Black rock opportunities Fund-Growth with an average return of 17.38

Percent ranked 4<sup>th</sup> and the Last rank(5<sup>th</sup> rank) is assigned to Kotak Classic equity Scheme with an average return of 14.57 Percent. It is astonishing to note from the above table that the average rate of returns of all schemes registered excessive returns than the CNX Nifty Index.

### **Risk Related Analysis and its Interpretation**

**Table 4: Standard Deviation (  $\sigma$  ) of Select Schemes of Large and Mid Cap Funds and Benchmark Values**

PARTICULARS	CNX NIFTY	TATA EQUITY P/E FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSPBLACKROCK OPORTUNITIES FUND GROWTH
Avg. Std. Deviation ( $\sigma$ )	35.27	42.99	35.28	35.26	54.78	35.35
Deviation		7.72	0.01	-0.01	19.51	0.08
Riskness		High Risk	Less Risk	Less Risk	High Risk	Average Risk
Rank		4	2	1	5	3

Source: Compiled from NAV Records of Respective AMCs.

Above table provides the information about the resultant average standard deviation of select schemes and standard deviation of benchmark index, CNX Nifty. From the above table, it can be inferred that Birla Sun Life Front Line Equity Fund growth has less risk as compared to counterpart schemes and ranked number one (1). A meager difference of 0.01 below the benchmark index has been noticed, indicating low risk. Kotak Classic Equity Scheme Growth has registered less risk after Birla Sun Life Equity fund growth, yielding consistent returns over the counterpart schemes. DSP Black Rock Opportunities Fund registered a minute difference of 0.08 per cent over the benchmark index. Hence, it is advisable for Tata Pure Equity Fund and ICICI Prudential Mid Cap Fund to minimize the risk by selecting superior stocks and diversifying the Portfolios.

**Table 5: Return Versus Standard Deviation (  $\sigma$  ) of Select Schemes of Large Mid Cap Funds**

Name of the Scheme	ARP	SDP	Deviation		Situation
			AR <sub>p</sub>	SD <sub>p</sub>	
TATA EQUITY P/E FUND REGULAR GROWTH	21.03	42.99	8.47	7.72	AR <sub>p</sub> > AR <sub>m</sub> : SD <sub>p</sub> > SD <sub>m</sub>
KOTAK CLASSIC EQUITY SCHEME GROWTH	14.57	32.75	2.01	-2.52	AR <sub>p</sub> > AR <sub>m</sub> : SD <sub>p</sub> < SD <sub>m</sub>
BIRLASUN LIFE FRONTLINE EQUITY FUND GROWTH	17.51	35.26	4.95	-0.01	AR <sub>p</sub> > AR <sub>m</sub> : SD <sub>p</sub> < SD <sub>m</sub>
ICICI PRUDENTIAL MIDCAP FUND GROWTH	22.12	54.78	9.56	19.51	AR <sub>p</sub> > AR <sub>m</sub> : SD <sub>p</sub> > SD <sub>m</sub>
DSP BLACKROCK OPORTUNITIES FUND GROWTH	17.38	35.35	4.82	0.08	AR <sub>p</sub> > AR <sub>m</sub> : SD <sub>p</sub> > SD <sub>m</sub>
CNXNIFTY	12.56	35.27			

Source: Compiled from NAV Records of Respective AMCs.

Table 5 depicts the information about average returns of the portfolio and the average standard deviation of portfolios of Large and Mid Cap Funds. Above table also provides information about the deviation between the average return of the portfolio and average return of the market index as well as the standard deviation of the portfolio as compared to the standard deviation of the market. The comparison between ARP and ARm, SDP and SDm result in the relative performance of sample schemes. It is noticed from the above table that actual returns of the portfolios of select schemes are excessive than average returns of the market. The select scheme has been categorized and interpretive as follows.

### **ARp > ARm: SDp < SDm**

Kotak Classic Equity scheme Growth Fund and Birla Sun Life Front Line Equity Fund growth provided higher returns than the market with lower risk compared to the market index, this indicates the favorable performance of schemes in relation to return and risk. It can be inferred that both return and risk are balanced equally.

### **ARp > ARm: SDp > SDm**

Tata Equity (P/E) Fund regular growth, ICICI Prudential Mid Cap Fund Growth and DSP Black Rock opportunities fund growth provided higher returns than the market with higher risk compared to the market index, this indicates that return and risk are imbalanced, thus there is no risk-return trade-off.

**Table 6: Systematic Risk (Beta) for Select Schemes of Large and Mid Cap Funds**

PARTICULARS	SCN	TATA EQUITY PE FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORTUNITIES FUND GROWTH
Beta	1.00	1.19	0.92	1.00	1.53	0.99
Deviation		0.19	0.18	0.00	0.53	-0.01
Rank		2	5	3	1	4

**Source: Compiled from NAV Records of Respective AMCs.**

Table 6 provides information about the systematic risk of large and mid-cap funds for the study period 2008-2009 to 2016-2017. It is generally known fact that higher the value of beta, higher will be the responsiveness of a given fund to the changes in the market index and vice-versa. A fund having higher beta may do well in a general up-trend, whereas may not do so during the down-trend. Hence, a fund with lower beta may not exhibit attractive performance but it may save investors from extreme losses during the downward trend. A beta value of 1.0 of a fund implies neither over responsiveness nor the under-responsiveness to the changes of the market. A beta value of greater than 1.00 shows more than proportionate responsiveness to the changes in the market. A beta value of less than 1.00 shows less than proportionate responsiveness. Following points are noticed from the above table

- Birla Sun Life Frontline Equity Fund-Growth has maintained standard beta value i.e., one (1), which shows neither over responsiveness nor the under-responsiveness to the changes in the market.
- DSP Black Rock opportunities Fund and Kotak classic Equity scheme maintained a beta value of less than one(1),

implying less than proportionate responsiveness to the changes in the market.

- Tata Equity (P/E) Fund regular growth and ICICI Prudential Mid Cap growth fund recorded the beta value of more than one (1), implying more than proportionate responsiveness to the changes in the market.

**Table 7: Coefficient of Determination ( $R^2$ ) for Select Schemes of Large and Mid Cap Funds**

PARTICULARS	CNX NIFTY 500	TATA EQUITY PE FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORTUNITIES FUND GROWTH
Coefficient of Determination ( $R^2$ )	1.00	0.96	0.99	0.99	0.97	0.98
Deviation		-0.04	-0.01	-0.01	-0.03	-0.02
Rank		2	1.5	1.5	4	3

Table 7 shows the information about the average value of  $R^2$  of each select schemes for the study period. The term  $R^2$  value explains the percentage of returns explained by the index. Higher the value of  $R^2$  will be the percentage of return explained by the index and lower will be the unexplained return. A high R-squared between 0.85 to 1.00 indicates the fund's performance pattern has been in line with the index. A fund with a low R-squared (0.70 (or) less does not act much like the index. From the above analysis, it can be inferred that all funds of select schemes are performed well and are in line with the index and are considered as adequately diversified portfolios as their average values are falling above 0.85.

#### Risk-Adjusted Return Analysis and its Interpretation

**Table 8: Treynor's Values of Select Schemes of Large and Mid Cap Funds and Bench Mark Value**

PARTICULARS	CNX NIFTY	TATA EQUITY PE FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORTUNITIES FUND GROWTH
Average	5.87	12.02	8.52	10.86	10.11	10.77
Deviation		6.15	2.65	4.99	4.24	4.9
Over/Under		Over	Over	Over	Over	Over
Rank		1	5	2	4	3

Source: Compiled from NAV Records of Respective AMCs.

Table 8 provides the average values of Treynor's Index for the select schemes and the underlying benchmark index for the study period. Further, it is inferred that all the select schemes of large and mid-cap funds over performed as compared to benchmark index.



Tata Equity (P/E) fund regular growth outperformed its counterpart schemes, registering an excess return of 104.77 percent over the benchmark index. Hence, all the funds of select schemes have succeeded in generating an excess return incommensurate with their systematic risk

( $\beta$ ) as compared to benchmark index, implying fund managers success in incorporating appropriate changes in the composition of their portfolios in times of volatility.

**Table 9: Sharpe's Value for Select Schemes of Large and Mid Cap Funds and Benchmark Values**

PARTICULARS	CNX NIFTY	TATA EQUITY PE FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORUNITIES FUND GROWTH
Average Value	0.17	0.33	0.24	0.31	0.28	0.30
Deviation		0.16	0.07	0.14	0.11	0.13
Over/Under		Over	Over	Over	Over	Over
Rank		1	5	2	4	3

**Source: Compiled from NAV Records of Respective AMCs.**

Table 9 summarizes the average values of Sharpe's Index for both select schemes of Large and Mid Cap funds and the underlying benchmark index for the study period. It is observed from the above table that all select schemes of Large and Mid-Cap funds over performed as compared to the average performance of bench mark index. Variability of returns is properly managed by the respective fund managers of AMCs.

Tata Equity (P/E) Fund regular growth outperformed its counterpart schemes with an average value of 0.33. Birla Sun Life Frontline Equity Fund-Growth ranked 2<sup>nd</sup>, DSP Black Rock opportunities fund growth ranked 3<sup>rd</sup> thus, there is a deviation of 0.01 percent between these two funds. ICICI Prudential Mid Cap Fund Growth ranked 4<sup>th</sup>, and the last rank (5<sup>th</sup> rank) is assigned to Kotak Classic Equity Scheme Growth.

Hence, all the select schemes have succeeded in generating adequate excess returns commensurate with total risk ( $\sigma$ ) as compared to benchmark index. Fund managers of all select schemes of large and mid-cap funds have succeeded in incorporating appropriate changes in the composition of their portfolio to fluctuating changes of the market.

**Table 10: Jensen's Alpha (A) for Select Schemes of the Large and Mid Cap Funds**

PARTICULARS	CNX NIFTY	TATA EQUITY P/E FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAPFUND GROWTH	DSP BLACKROCK OPPORTUNITIES FUND GROWTH
Alpha	0	-2.76	2.02	-0.76	3.92	-8.03
Over/Under		Under	Over	Under	Over	Under
Rank		4	2	3	1	5

Source: Compiled from NAV Records of Respective AMCs.

Table 10 provides the information about values of alpha ( $\alpha$ ) for each select scheme for the study period. Jensen's measure attempts to measure the differential return between the actual return earned on a portfolio and the return expected from the portfolio at a given level of risk. The CAPM model is used to calculate the expected return on a portfolio and the return earned from the portfolio is a measure of the excess return or differential return that has been earned over and above what is mandated for its level of systematic risk. The differential return gives an indication of the portfolio manager's predictive ability (or) managerial skills.

A Positive alpha implies superior returns due to superior management skills and negative alpha implies inferior management skills as compared to the market. ICICI Prudential Mid Cap growth and Kotak classic Equity scheme growth over performed both in relation to index and its counterparts as their alpha values are positive.

It is observed from the above table that out of 5 select schemes, 3 schemes Viz., Tata Equity (P/E) Fund Regular Growth, Birla Sun Life Frontline Equity Fund growth, and DSP Black Rock opportunities fund growth have shown negative values indicates underperformance.

Hence, three schemes have failed to generate an adequate excess return incommensurate with differential risk as compared to benchmark index.

**Table 11: Fama's Value of Net Selectivity for Select Schemes of the Large and Mid-Cap Funds**

PARTICULARS	TATA EQUITY P/E FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAPFUND GROWTH	DSP BLACK ROCK OPPURTUNITES FUND GROWTH
Average	0.56	0.00	-8.53	-0.02	-3.13
Over/Under	Over	Equal	Under	Under	Under
Rank	1	2	5	3	4

Source: Compiled from NAV Records of Respective AMCs.

Table 11 summarizes the values of Fama's Net selectivity of select schemes of the Large and Mid Cap category of AMCs for the study period. From the above table, it is clear that Kotak classic Equity Scheme Growth possesses the highest positive value of net selectivity 0.56 percent both in relation to underlying Index and its counterpart schemes. The performance of Tata Equity (P/E) fund regular growth, ICICI Prudential Mid Cap fund growth, DSP Black Rock opportunities fund growth is at the low ebb with negative net selectivity of -3.13 percent, -8.53 percent and -0.02 percent respectively. Hence, the fund managers of these three schemes are required to sharpen their stock selection ability by engaging themselves in tracing out suitable investment pattern to be incorporated into their portfolio from time to time.

**Table 12: Modiglian's and Modiglaini Risk – Adjusted Returns for Select Schemes of Large and Mid Cap Funds**

PARTICULARS	CNX NIFTY	TATA EQUITY P/E FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORTUNITIES FUND GROWTH
Average	0.18	7.28	2.28	5.13	6.63	4.99
Deviation		7.10	2.10	4.95	6.45	4.81
Over/Under		Over	Over	Over	Over	Over
Rank		1	5	3	2	4

Source: Compiled from NAV Records of Respective AMCs.

The table 12 depicts Modigliani and Modigliani risk-adjusted performance ( $M^2$ ) index of select schemes of the large and mid-cap category of AMCs during the study period.

It is clear from the above table that, all the schemes performed well as they possess positive  $M^2$  values. Tata Equity (P/E) fund regular growth has the highest value of 7.28 percent, followed by ICICI prudential mid-cap fund growth of 6.63 percent, Birla sun life frontline equity fund growth of 5.13 percent, DSP Black Rock opportunities fund growth of 4.99 percent, Kotak Classic Equity Scheme Growth of 2.28 percent.

Hence, it is concluded that all fund managers acted strategically for better performance of the funds in incorporating appropriate changes in the composition of their portfolio to the variability of the market.

**Table 13: Overall Ranking of Select Large and Mid Cap Funds**

Parameter	TATA EQUITY P/E FUND REGULAR GROWTH	KOTAK CLASSIC EQUITY SCHEME GROWTH	BIRLA SUN LIFE FRONTLINE EQUITY FUND GROWTH	ICICI PRUDENTIAL MIDCAP FUND GROWTH	DSP BLACKROCK OPORTUNITIES FUND GROWTH	Total
Return	2	5	3	1	4	15
Rank	4	2	1	5	3	15
Treynor's	1	5	2	4	3	15
Sharpe's	1	5	2	4	3	15
Jensen's	4	2	3	1	5	15
Fama's	4	1	2	5	3	15
M-squared (M <sup>2</sup> )	1	5	3	2	4	15
Total	17	25	16	22	25	105
Rank	2	4.5	1	3	4.5	

Above table indicates the overall ranking of all chosen Large and Mid Cap Schemes during the study period. From the above table, it is evident that Birla Sun Life Frontline Equity Fund

Growth ranked 1<sup>st</sup>, followed by Tata Equity (P/E) fund regular growth ranked 2<sup>nd</sup>, ICICI Prudential Mid Cap fund growth ranked 3<sup>rd</sup> where as Kotak Classic Equity Scheme Growth and DSP black rock opportunities fund growth overall performance stood equally. Fund managers of these two AMCs need to expertise in developing and implementing strategies to overcome their inferior stock selection skill.

**Table 14: Hypothesis Testing of Large and Mid-Cap Funds****(a) Descriptive Statistics of Select Large and Mid-Cap Funds**

	Mean	Std. Deviation	N
C1	4.00	5.050	9
C2	6.00	7.297	9
C3	3.67	4.690	9
C4	5.22	6.476	9
C5	6.00	7.159	9

**(b) Multiple Co-Relation of Select Large and Mid-Cap Funds**

	C1	C2	C3	C4	C5
R1	1.00				
R2	-0.70	1.00			
R3	0.40	0.00	1.00		
R4	0.40	0.00	1.00	1.00	
R5	0.30	-0.20	-0.60	-0.60	1.00
R6	-0.90	0.90	-0.30	-0.30	-0.10
R7	0.90	-0.60	0.70	0.70	0.00

From table 14 it can be inferred that there is 70 percent negative co-relation is observed from Tata Equity (P/E) Fund Regular Growth with regard to financial dimension, further a negative co-relation of 90 percent is noticed with regard to Investment dimension, indicates poor stock selection skills of the fund managers 70 percent positive co-relation is noticed in Birla Sun Life Equity indicates proper selection of stocks. Negative co-relation of 60 percent is noticed between the actual returns and Expected returns of Tata Equity (P/E) Fund Regular Growth and Birla Sun Life Equity Fund. It is suggested to Fund Managers of Tata Equity (P/E) Fund Regular Growth to invest in superior stocks and diversify the Investment Commensurate with the changes in the stock market.

## CONCLUSIONS

It can be CONCLUDED that the mid-cap funds are more volatile than large-cap funds. Investment in mid-cap funds is the most suitable avenue for Investors with high-risk tolerance. All the select schemes of large and mid-cap funds showed more than proportionate responsiveness to the changes in the market performed well and are in line with the index and all considered as adequately diversified portfolios. Select schemes, of Large and mid-cap funds, have succeeded in generating excess returns incommensurate with their systematic risk ( $\beta$ ) as compared to Bench Mark Index.

Tata Equity (P/E) Fund Regular Growth showed negative co-relation with regard to both Investment and Financial Dimension. Analysis and Interpretation of performance Evaluation of Large and mid-cap Funds result that **Birla Sun life Front Equity Fund-Growth** ranked number one, dominated the market due to high returns and diversification of portfolios.

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