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COMPARITIVE STUDY OF RISK WEIGHTED RETURNS OF SELECTED ACTIVE MUTUAL FUND SCHEMES

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ABSTRACT
The objective of this study is to measure the performance of selected active mutual funds, to calculate the volatility of selected mutual fund schemes and tocompare the risk weighted performance of selected mutual fund schemes. The secondary data is taken from 20 mutual fund schemes for 10 years under the three categories based on large, mid cap and small cap fund. This analysis is done with the tools of monthly return, volatility scaled return and downside volatility scaled return and also using the model that is Single index model and Fama French model. The results show that in order to assess the volatilityand downside volatility return on that large cap, mid cap, and small cap funds for chosen schemes, the best performance of providing a highest return of selected active mutual funds for monthly return should be measured. Finally, to comparing the risk weighted performance for the helps of those Single index model and Fama French Model for the selected funds.

Keywords – Volatility, Downside Volatility, Risk Weighted, Single Index Model, FamaFrench Model.

1. INTRODUCTION

Professional fund managers invest the money raised through mutual fund schemes in stocks, bonds, etc. in accordance with the investment goal of the plan. The measurement of mutual fund performance for the specific year and chosen schemes is the primary emphasis of this study. In such situation, determine the volatility for the mutual funds you've chosen under total volatility return and downside volatility return. This calculation is based on how market volatility suggests changes in the market over a specific time period, with downside volatility already having a negative sign. This volatility is how return and risk are calculated for these specific schemes. The comparison of the downside volatility return, scaled return of volatility, and unscaled alpha return is the key final consideration. Two of the models used in this analysis are the single index model and the fama french three factor models. In this calculation, the success of stock funds on the equity market is heavily weighted. Mutual fund initiatives known as equity funds invest primarily in equity markets. According to the current SEBI Mutual Fund category, equity mutual funds must spend at least 65% of their total assets in stocks and equity-related goods. These funds have the capacity to generate income by investing in the securities of companies with various market capitalizations.

Investments made through large cap stock plans are made in firms with market capitalizations ranging from 1 to 100. Comparing various equity mutual fund kinds, large-cap equity fundsare thought to be the least hazardous options. Equity funds for mid-cap corporations make investments in firms with market capitalizations between 101 and 250. These funds areregarded as riskier than large-cap equity funds but less hazardous than small-cap equity funds.But, compared to large-cap equities, mid-cap stocks often have a higher potential for growth. Companies that rank higher than 250 in terms of market capitalization are the focus of small cap equity schemes. Compared to large- or mid-cap equity funds, these funds are thought tobe the riskiest, but they also have the greatest potential for returns.

2. REVIEW OF LITERATURE

(F. Fama and r. French 1996) According to prior studies, business factors like size, earnings/price, cash flow/price, book-to-market equity, historical sales growth, long-term past return, and short-term past return are all related to the average returns on common stocks. These average return patterns are referred to as anomalies because the CAPM doesn't seem to be able to explain them. The anomalies disappear in a three-factor model, with the exception of the persistence of short-term returns. Our results are consistent with rational ICAPM or APT asset pricing, but we also consider the possibility of irrational pricing and data problems.

(Carhart 1997) This study prove that common characteristics of stock returns andinvesting costs nearly entirely account for persistence in the mean and risk-adjusted returns of equity mutual funds using a sample free of survivor bias. The severe underperformance of mutual funds with the worst returns is the only notable persistence that cannot be explained. The evidence does not point to the existence of qualified or experienced mutual fund portfoliomanagers.

(Ang, Chen And Xing 2001) When demonstrate that investment costs and commoncharacteristics in stock returns virtually completely account for persistence in the mean and risk-adjusted returns of equity mutual funds using a sample that is free of survivor bias. Severe underperformance of mutual funds with the poorest returns is the only notable persistence that cannot be explained. The available information does not suggest the existence of qualified or professional mutual fund portfolio managers.

(Lewellen And Nagel 2006) The conditional CAPM endures throughout time, and the failure of the unconditional CAPM may be explained by the time-variation in risk and expected returns. On the other hand, we argue that significant asset-pricing anomalies like momentum and the value premium would need implausibly huge variance in betas and the equity premium. A straightforward new test of the conditional CAPM that does not require conditioning information and uses direct estimates of conditional alphas and betas from short-window regressions.

(Cremers And Petajisto 2009) We provide Active Share, a new indicator for active portfolio management that shows the percentage of holdings in the portfolio that are different from those in the benchmark index. We examine the Active Share for domestic equitiesmutual fund's development over time as well as characteristics like size, expenses, andturnover. The top Active Share funds outperform their benchmarks by a wide margin, both before and after expenses, and they have excellent performance persistence.

(F.Fama and R. French 2010) The overall portfolio of actively managed US stock mutual funds is comparable to the market portfolio, but investor returns are lower due to the high expenses of active management. Few funds provide expected returns that are benchmark-adjusted and sufficient to cover costs. There is evidence of worse and better performance at the extreme tails of the cross-section of mutual fund estimates when the costs in fund expense ratios are eliminated.

(Boguth, et al. 2011) Unconditional alphas are distorted when conditional beta changes along with the market risk premium (market timing) or volatility (volatility timing). When an empiricist determines risk using data that investors do not have ex ante, such as a realized beta, an extra bias (over conditioning) may occur. We demonstrate that correcting market and volatility timing biases without over conditioning is made possible by including actual betas into instrumental variable estimators. Over conditioned alphas might overestimate their abilitiesby up to 2.5 times. We provide an explanation for the over conditioning and momentum volatility-timing biases.

(F. Fama and D. Macbeth 2012) The average return and risk for common stocks traded on the New York Stock Exchange are linked in this article. We cannot dispute the assertion made by these models that the price of common stock reflects the desire of risk- averse investors to have portfolios that are "efficient" in terms of expected value and return dispersion. The concept of a "efficient capital market" refers to a market where securities prices accurately represent all available information. Regression coefficients and residuals are consistent with this concept.

(F.Fama And R.French 2014) The performance of a five-factor model exceeds a three- factor model by attempting to account for size, value, profitability, and investment patterns in average stock returns. The five component model's weakness is its inability to account for the
low average returns on small stocks, whose returns behave similarly to those of companies with poor profitability but high spending. The specification of the variables has no impact on the performance of the model. The FF three component model is made ineffective for describing average returns in the sample under examination with the addition of profitability and investment factors.

(Doshi, Elkamhi And Simutin 2015) By value weighting the portfolio, a closet indexer is more likely to fulfill a value-weighted investment benchmark. I would like to provide a straightforward metric for measuring active management: the aggregated, absolute difference between a fund's real weights and value weights. Our proxy successfully predicts fund flows, asset growth, factor-adjusted performance, and value added when compared to existing metrics of skill. Its predictive ability is independent of other indicators' and robust to taking into account volatility timing, past performance, and trading style.

(Cremers, et al. 2015) The link between indexing and active management in the worldwide mutual fund sector. Active funds' explicit and covert indexing practices are influenced by the regulatory and financial market environments of different countries. According to our research, actively managed funds become more active and demand lower fees when low-cost explicitly indexed funds compete with them more. A causal interpretation of the findings is supported by a quasi-natural

experiment using exogenous change in indexed funds brought about by the passage of pension legislation. Overall, our data suggests that explicit indexing boosts the mutual fund industry's level of competition.

(Moreira And Muir 2016) Massive alphas, a big increase in factor Sharpe ratios, and huge utility gains for mean-variance investors are all produced by managed portfolios that take less risk when volatility is high. The market, value, momentum, profitability, return on equity, and investment factors in equities as well as the currency carry trade have all been recorded. Since changes in factor volatility are not matched by comparable changes in projected returns, volatility timing increases Sharpe ratios.

(Cederburg, et al. 2019) These evaluate the worth of volatility-managed portfolios for real-time investors using a comprehensive collection of 103 equity strategies. In direct comparisons, volatility-managed portfolios do not consistently outperform their comparable unmanaged counterparts. In spanning regressions, the volatility-managed portfolios frequently show considerably positive alphas. The trading techniques suggested by these regressions, however, cannot be used in real time, and suitable out-of-sample versions typically produce returns with reduced confidence.

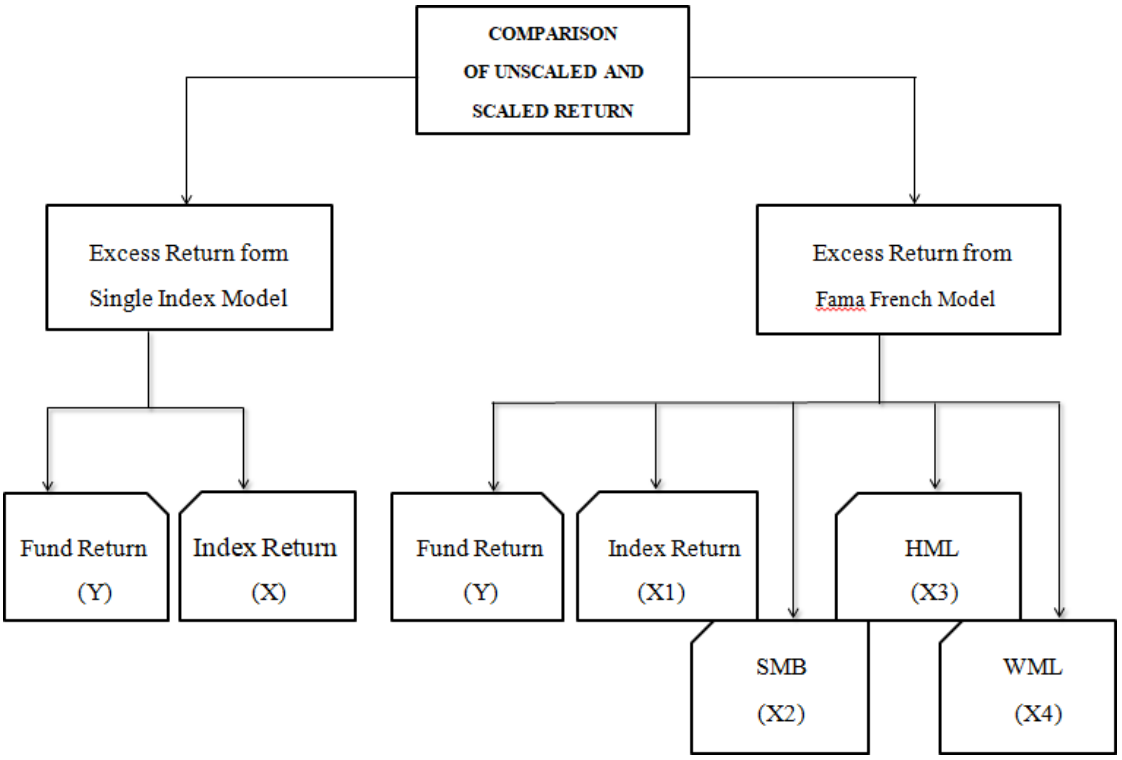
(Jensen 2019) Ignorance of a comprehensive understanding of the nature and measurement of "risk" has been the biggest obstacle in attempts to analyze the performance of a portfolio inthese two dimensions. As long as investors properly estimate the "riskiness" of varied assets, evidence shows that risk aversion predominates in the capital markets. This implies that "risky" assets must, on average, outperform less "risky" assets. As a result, it is important to take into account how different levels of risk affect portfolio returns when evaluating the "performance" of a portfolio.

(Clarke, Silva And Thorley 2020) Performance is enhanced by the capacity to control the inter-temporal risk of well-constructed multifactor portfolios. We look at the risk management of the best multifactor portfolio as well as five well-known factors: value,momentum, small size, low beta, and profitability. In the US equities market with big capitalizations, we performed empirical study. We discover that in the equity market, more active factors are better than fewer ones provided each sub-portfolio is factor-free, anchoredto the benchmark, and combined based on risk that can be predicted. Traditional risk-based explanations are disproved by this, and structural theories of time-varying projected returnsare put to the test. The risk and return comparison of the upside and downside volatility of the scaled and unscaled return in the performance of mutual funds is discussed in this literature.

3.0 METHODOLOGY

The essence of the methodology used in this study is presented in Figure (1) ascomparison analysis.

Figure No. 1 Comparison Analysis



This Figure No. 1 model compares the unscaled and scaled returns for the chosen funds. While scaled returns are risk-weighted when choosing mutual funds, unscaled returns are utilized to calculate alpha returns. This model's primary objective is to evaluate these two elements. The unscaled and scaled return is used to derive the single index model and fama French model. Initially, this **Single Index Model's** excess return is based on two distinct variables: (y) Fund Return and (X) Index Return. Second, the excess return from the **Fama French Three Factor Model** has two separate variables: (Y) the fund returns and (X) the index return, SMB, HML, and WML. These last three categories are based on the Fama French model. The contrast between these scaled and unscaled result from this investigation is discussed.

3.1 Model Used For the Study

3.1.1 Volatility Return:

The pace at which the price of securities rises or falls for a specific set of returns is referred to as volatility. The equation no. 1 is determined by calculating the standarddeviation of the annualized returns over a specific time period. It highlights the risk related to the fluctuating price of the security. It is a measurement of how quickly the value of assets or market indices changes, to put it simply.

Equation No. 1 Volatility Scaled-Return

$$\sigma_t^2 = \frac{22}{J_t} \sum_{j=1}^{J_t} (rj)^2$$

Where, *Jt* is the number of trading days in the month

Often, either the standard deviation or the variance is used to calculate volatility. In both cases, the price or return volatility increases as the value increases.

3.1.2 Downside Volatility Return:

Downside Volatility is the financial risk associated with losses. That is, it isthe risk of the actual return being below the expected return, or the uncertainty about the magnitude of that difference. Risk measures typically quantify the downside risk, whereas thestandard deviation an example of a deviation risk measure measures both the upside and downside risk.

Equation No.: 2 Downside Volatility Scaled-Returns

$$\sigma_{Down,t}^2 = \frac{22}{J_t} \sum_{j=1}^{J_t} (rj)^2 I\,[rj < 0]$$

Specifically, equation no. 2 is the downside risk it can be measured either with downside beta or by measuring lower semi-deviation. Downside volatility similarly to the way we estimated total volatility but considered only *negative* daily returns.

3.0.1 Single Index Model:

Given its systematic risk, the **Capital Asset Pricing Model (CAPM)** calculates the expected return on an investment. The CAPM is used to determine the cost of equity, or the required rate of return for equity holders. The CAPM, which connects asecurity's predicted return to its sensitivity to the market as a whole, is most frequently usedto evaluate the cost of equity.

The expected return by common shareholders, as determined by the capital asset pricing model (CAPM), is equal to the risk-free rate plus the product of beta and the equity risk premium (ERP).

$$\textit{Expected Return (Ke)} = rf + \beta\,(rm - rf)$$

Where:

- Ke → Expected Return on Investment
- rf → Risk-Free Rate

- β → Beta
- (rm – rf) → Equity Risk Premium (ERP)

3.0.2 Fama French Model:

A formula to calculate the rate of return on an investment in stocks is knownas the Fama-French three factor model. It was created in 1992 by Eugene Fama and Kenneth French, who were at the time professors at the University of Chicago. It is based on the fact that value shares frequently beat growth shares, and small-cap shares frequently outperform large-cap shares. The two economists built their three-factor model as an extension of the Capital Asset Pricing Model based on those facts (CAPM).

As opposed to the CAPM, which only measures market risk, the Fama-French A formula to calculate the rate of return on an investment in stocks is known as the Fama-French three factor model? It was created in 1992 by Eugene Fama and Kenneth French, who were at the time professors at the University of Chicago. It is based on the fact that value shares frequently beat growth shares, and small-cap shares frequently outperform large-cap shares. The two economists built their three-factor model as an extension of the Capital Asset PricingModel based on those facts (CAPM). The Fama-French Three Factor model incorporates size risk and value risk into the calculation rather than only measuring market risk as the CAPM does.

$$R = Rf + B1(Rm – Rf) + B2(SMB) + B3(HML) + a$$

Where,

B1, B2, B3 – The market coefficient for each factor of the model
Rm – Total market return
a – The investment‘s alpha

The market coefficients (B1, B2 and B3) set the Fama-French Three Factor model apart from its predecessor. In the CAPM, the return on investment is calculated using only one element and only one coefficient of risk.

3.1 Data

This study is based on 20 Actual mutual funds are selected on the basis of these Association of Mutual Funds in India on which Net Asset Value (NAV) are available on 01/02/2013. The NAV of selected Mutual fund schemes are collected for thisadvisorkhoj.com website. Based on the market capitalization value the funds are categorizedinto Large Cap, Mid Cap and Small Cap mutual fund. The market capitalization of all funds is taken from AMFI website.

3.2 Period of Study

The study's 10-year data collection period runs from 2013 through 2022. The study period for each fund runs from the year of listing to December 31, 2022. Data on historical NAV and benchmark indices was gathered beginning with **01/02/2013 to 31/12/2022.**

3.3 Selected Funds

This is based on used these kind of funds. In that funds are given below:

Large Cap Funds: INDEX BENCHMARK - NIFTY 100

- Axis Blue chip Large Cap Direct fund
- Baroda BNP Paribas Large Cap Direct Fund
- Baroda BNP Paribas Large Cap Regular Fund

- Mahindra Manulife Pragati Yojana Large Cap Direct Fund
- Mahindra Manulife Pragati Yojana Large Cap Regular Fund
- Union Large Cap Direct Fund

Mid Cap Funds: INDEX BENCHMARK - NIFTY MIDCAP 150

- Baroda BNP Paribas Direct Mid Cap Fund
- Baroda BNP Paribas Regular Mid Cap Fund
- Mahindra Manulife Pragati Yojana Mid Cap Direct Fund
- Mahindra Manulife Pragati Yojana Mid Cap Regular Fund
- Mirae Asset Mid Cap Direct Fund
- Mirae Asset Mid Cap Regular Fund

Small Cap Funds: INDEX BENCHMARK - NIFTY SMALL CAP 100

- Canara Robeco Small Cap Direct Fund
- Canara Robeco Small Cap Regular Fund
- Edelweiss Small Cap Direct Fund
- Edelweiss Small Cap Regular Fund
- Invesco India Small Cap Direct Fund
- Invesco India Small Cap Regular Fund
- Tata Small Cap Direct Fund
- Tata Small Cap Regular Fund

4.1 RESULTS AND DISCUSSION

In the result determine the overall and downside volatility of the selected mutual fundsin order to evaluate how well they performed before comparing the returns of their scaled andunscaled counterparts. These key concepts will be the basis for this study's evaluation of mutual fund performance.

4.1.1 Calculating the Monthly and Volatility Return

Measure the average monthly return, average monthly total volatility return and downside volatility return. In that the same time, the alpha of single index model and fama French model also comparison in these table No. 1 is inferred that the Average monthly return and volatility return

Inference:

In the appendix the table no. 1 to calculate the average returns implies that large, mid, and small cap funds evaluate these specific chosen mutual fund schemes using the Single Index Model and the Fama French Three Factor Model to measure the performance of the average monthly return, average total volatility, average downside volatility, and the alpha unscaled return.

4.1.2 Comparing the Alpha Scaled and Unscaled Returns

To comparing the alpha unscaled return and risk weighted alpha of scaled return oftotal volatility and downside volatility: This comparison of the two models between the risksweighted alpha of total and downside volatility return as well as the unscaled return. In the appendix table No. 2 is inferred that the Comparison of alpha of scaled and unscaled returns.

Inference:

It is inferred that these alpha unscaled and scaled return of the total volatility and downsidevolatility calculation of these single index mode and fama French model.

4.2 indings and Implications

Recently it was discovered Mutual funds, including large cap, mid cap, and small size funds, have recently been found to have decreased volatility and improved fund return. Investment experts who select Mid Cap and Small funds do so because they think the lowest volatility fund performance of these funds offers a reasonable return. However, investors should anticipate a very low level of return due to the substantial market volatility at the time. According to the findings of this study, the situation was actually flipped, with investors earning great returns despite making investments in funds with the highest volatility returns. The market environment that affects how well the selected mutual fund performs is evolving. Take notice of this if you want to invest in the mutual fund with the best and lowest volatility return, regardless of previous statistics.

4.2.1 To measure the performance of selected active mutualfunds:

This calculation is measure the performance of selected active mutual funds for these particular returns. In this Table No. 3 to measure the performance of mutual fund returns based on these market capital structure.

Inference:

In the given table no. 3 performances is based on the market capitalization like the highest return indicates the all direct fund under the large cap, mid cap and small cap funds. In the other side, is all about the fund which gets a lowest return indicates that the all regular cap funds under this large cap, mid cap and small cap funds categories.

4.2.2 To calculate the volatility of selected mutual funds inthese schemes:

In this volatility calculation of these selected mutual funds is based on the two broader categories they are total volatility return and downside volatility return. In appendix the Table No. 4 is calculating the total volatility return and downside volatility return.

Inference:

This table no. 4 calculation is based on these total volatility return and the downside volatility return. It is all about to measure the lowest total and downside volatility return of these large, mid and small cap schemes. This lowest volatility is making a highest return on investing the selected mutual funds.

4.2.3 To compare the scaled and unscaled return of selectedmutual fund schemes:

In the final finding, is all about to comparing the particular selected fund returns in the range of unscaled and scaled return for single index model and fama French model of this Table No. 5 this Comparison of the funds related to overall performance of these particular fundto these two models.

Inference:

It is assumed that the comparison of the Single Index Fund and the Fama French Three Factor Model reveals the scaled volatility and downside volatility return of the chosen funds, as well as the unscaled alpha return.

In that situation, the fund with the highest return had the lowest volatility risk at the time of investment, and if the fund's return was also the lowest, we received the largest returns from that specific fund. So, this is the circumstance that will alter the volatility condition in these chosen active mutual fund performances throughout the course of time. These two distinct models show that the returns on the various funds and the scaling volatility and downward volatility of this investment risk are different.

5. CONCLUSION

An investor must consider numerous statistical measures of the performance ofthe active mutual and look at the volatility return of the funds. The volatility return and downside volatility return are computed based on market performance.

Lastly, the Single Index Model and the Fama French Three Factor Model are used to compare the scaled and unscaled return for these specific mutual funds. So, the thesis center on the observation that, even if mutual fund investments by investors are declining, volatility is decreasing and investor volume is increasing. In addition, the performance of the funds chosen for this inquiry is in direct contrast with the criteria indicated.

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Name of the Fund	Average Monthly Return	Average Monthly Total Volatility Return	Average Monthly Downside Volatility Return	Alpha Return – Single Index Model	Alpha Return – Fama French Model
LARGE CAP FUNDS:					
Axis Blue chip Large Cap Direct Fund	0.0126	0.00143	0.00065	0.0002	0.0000
Baroda BNP Paribas Large Cap Direct Fund	0.0091	0.00180	0.00080	0.0001	-0.0004
Baroda BNP Paribas Large Cap Regular Fund	0.0082	0.00076	0.00018	6E-05	2E-05
Mahindra Manulife Pragati Yojana Large Cap Direct Fund	0.0132	0.00056	0.00022	0.00013	0.00016
Mahindra Manulife Pragati Yojana Large Cap Regular Fund	0.0116	0.00058	0.00023	5.9E-05	9E-05
Union Large Cap Direct Fund	0.0167	0.00066	0.00029	0.0003	0.0003
MID CAP FUNDS:					
Baroda BNP Paribas Direct Mid Cap Fund	0.0088	0.00063	0.00016	0.0004	0.0003
Baroda BNP Paribas Regular Mid Cap Fund	0.0076	0.00063	0.00017	0.0005	0.0004
Mahindra Manulife Pragati Yojana Mid Cap Direct Fund	0.0138	0.00132	0.00045	0.0005	-0.0329
Mahindra Manulife Pragati Yojana Mid Cap Regular Fund	0.0123	0.00123	0.00047	0.0004	0.0005
Mirae Asset Mid Cap Direct Fund	0.0220	0.00270	0.00090	0.0006	0.0006
Mirae Asset Mid Cap Regular Fund	0.0208	0.00270	0.00091	0.0007	0.0007
SMALL CAP FUNDS:					
Canara Robeco Small Cap Direct Fund	0.0232	0.00051	0.00020	0.0009	0.0010
Canara Robeco Small Cap Regular Fund	0.0217	0.00052	0.00020	0.0008	0.0009
Edelweiss Small Cap Direct Fund	0.0236	0.00126	0.00020	0.0009	0.0010
Edelweiss Small Cap Regular Fund	0.0223	0.00125	0.00020	0.0008	0.0009
Invesco India Small Cap Direct Fund	0.0191	0.00040	0.00019	0.0006	0.0007
Invesco India Small Cap Regular Fund	0.0177	0.00050	0.00016	0.0007	0.0006

Tata Small Cap Direct Fund	0.0210	0.00040	0.00015	0.0008	0.0010
Tata Small Cap Regular Fund	0.0194	0.00020	0.00010	0.0007	0.0009

APPENDIX

TABLE NO.1: CALCULATING THE MONTHLY AND VOLATILITY RETURN

TABLE NO.2: COMPARING THE ALPHA SCALED AND UNSCALED RETURN

Name of the Fund	**SINGLE INDEX MODEL**			**FAMA FRENCH MODEL**		
	Alpha Unscaled Return	**Risk Weighted Alpha – Total Volatility Return**	**Risk Weighted Alpha – Downside Volatility Return**	**Alpha Return – Fama French Model**	**Risk Weighted Alpha – Total Volatility Return**	**Risk Weighted Alpha – Downside Volatility Return**
LARGE CAP FUNDS:						
Axis Blue chip Large Cap Direct fund	**0.0002**	0.2440	0.0070	**0.0000**	0.0036	0.0054
Baroda BNP Paribas Large Cap Direct Fund	**0.0001**	0.0292	-0.0271	**-0.0004**	-0.7473	-4.7866
Baroda BNP Paribas Large Cap Regular Fund	**6E-05**	-4E-03	-2E-01	**2E-05**	-6E-02	-5E-01
Mahindra Manulife Pragati Yojana Large Cap Direct Fund	**0.00013**	0.0154	0.0027	**0.00016**	0.0034	0.0450
Mahindra Manulife Pragati Yojana Large Cap Regular	**5.9E-05**	0.0043	0.0022	**9E-05**	0.0064	0.00113
Union Large Cap Direct Fund	**0.0003**	0.4161	1.4461	**0.0003**	0.3505	1.0918
MID CAP FUNDS:						
Baroda BNP Paribas Direct Mid Cap Fund	**0.0004**	1.0258	2.0898	**0.0003**	0.4835	0.7281
Baroda BNP Paribas Regular Mid Cap Fund	**0.0005**	0.9408	1.9121	**0.0004**	0.0705	2.2638

Mahindra Manulife Pragati Yojana Mid Cap Direct Fund	**0.0005**	0.0035	0.0012	**-0.0329**	-0.0053	0.00001
Mahindra Manulife Pragati Yojana Mid Cap Regular Fund	**0.0004**	0.0027	0.0001	**0.0005**	0.0004	0.0051
Mirae Asset Mid Cap Direct Fund	**0.0006**	0.0035	0.0024	**0.0006**	0.0022	0.0124
Mirae Asset Mid Cap Regular Fund	**0.0007**	0.3394	0.8335	**0.0007**	0.3666	1.1123
SMALL CAP FUNDS:						
Canara Robeco Small Cap Direct Fund	**0.0009**	0.4407	2.3025	**0.0010**	0.4026	2.6908
Canara Robeco Small Cap Regular Fund	**0.0008**	0.6287	2.3487	**0.0009**	0.0802	2.5480
Edelweiss Small Cap Direct Fund	**0.0009**	0.0564	1.6750	**0.0010**	0.2543	2.4532
Edelweiss Small Cap Regular Fund	**0.0008**	0.7409	2.8865	**0.0009**	0.6468	3.0345
Invesco India Small Cap Direct Fund	**0.0006**	0.0346	0.0024	**0.0007**	0.4230	3.2424
Invesco India Small Cap Regular Fund	**0.0007**	0.5948	1.4520	**0.0006**	0.5663	2.3649
Tata Small Cap Direct Fund	**0.0008**	1.8934	10.7926	**0.0010**	1.8134	10.2049
Tata Small Cap Regular Fund	**0.0007**	1.7763	9.6000	**0.0009**	1.6544	9.5140

TABLE NO.3: MEASURE THE PERFORMANCE OF SELECTED ACTIVE MUTUAL FUNDS

Fund Name	**Highest Return Fund**	**Average Monthly**	**Lowest Return Fund**	**Average Monthly**
Large Cap Funds	Union Large Cap Direct Fund	0.0167	Baroda BNP Paribas Large Cap Regular Fund	0.0082
Mid Cap Funds	Mirae Asset Mid Cap Direct Fund	0.0220	Baroda BNP Paribas Large Cap Regular Fund	0.0076
Small Cap Funds	Edelweiss Small CapDirect Fund	.0236	Invesco India Small CapRegular Fund	0.0177

TABLE NO.4: CALCULATE THE VOLATILITY OF SELECTED MUTUAL FUNDS IN THESE SCHEMES

European Economic Letters
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Name of the Fund		Lowest Volatility Return	Average Volatility Return	Highest Volatility Return	Average Volatility Return
Large Cap Funds	TVR	Mahindra Manulife Large Cap Direct Fund	0.00056	Baroda BNP Paribas Large Cap Direct Fund	0.00180
	DVR	Baroda BNP Paribas Large Cap Regular	0.00018	Baroda BNP Paribas Large Cap Direct Fund	0.00080
Mid Cap Funds	TVR	Baroda BNP Paribas Mid Cap Direct Fund	0.00063	Mirae Asset Mid Cap Regular Fund	0.00270
	DVR	Baroda BNP Paribas Mid Cap Direct Fund	0.00016	Mirae Asset Mid Cap Regular Fund	0.00091
Small Cap Funds	TVR	Tata Small Cap Regular Fund	0.00020	Edelweiss Small Cap Direct Fund	0.00126
	DVR	Tata Small Cap Regular Fund	0.00010	Tata Small Cap Direct Fund	0.00020

TABLE NO.5: COMPARE THE SCALED AND UNSCALED RETURN OF SELECTED MUTUAL FUND SCHEMES

Fund Name	Return Range	Unscaled Alpha Value	Risk Range	Scaled Volatility Return	Scaled Downside Volatility Return
SINGLE INDEX MODEL					
Large Cap Fund	High	Union Large CapDirect Fund	Low	Baroda BNP Paribas Large Cap Regular Fund	Baroda BNP Paribas Large Cap Regular Fund
	Low	Mahindra Manulife LargeCap Direct Fund	High	Union Large CapDirect Fund	Union Large CapDirect Fund
Mid Cap Fund	High	Mirae Asset MidCap Regular Fund	Low	Mahindra ManulifeMid Cap Regular Fund	Mahindra ManulifeMid Cap Regular Fund
	Low	Mahindra Manulife Mid Cap Regular Fund	High	Baroda BNP Paribas Mid Cap Direct Fund	Baroda BNP Paribas Mid Cap Direct Fund
Small Cap Fund	High	Canara Robecco Small Cap DirectFund	Low	Invesco India Small Cap DirectFund	Invesco India Small Cap DirectFund
	Low	Invesco India Small Cap Direct Fund	High	Tata Small Cap Direct Fund	Tata Small Cap Direct Fund
FAMA FRENCH THREE FACTOR MODEL					
Large Cap Fund	High	Union Large CapDirect Fund	Low	Baroda BNP Paribas Large CapDirect Fund	Baroda BNP Paribas Large CapDirect Fund
	Low	Baroda BNP Paribas LargeCap Direct Fund	High	Union Large CapDirect Fund	Union Large CapDirect Fund
Mid	High	Mirae Asset MidCap Regular Fund	Low	Mahindra Manulife Mid Cap Direct Fund	Mahindra Manulife Mid Cap Direct Fund

Cap Fund	Low	Mahindra Manulife Mid Cap Direct Fund	High	Baroda BNP Paribas Mid Cap Direct Fund	Baroda BNP Paribas Mid Cap Regular Fund
Small Cap Fund	High	Canara Robecco Small Cap Regular Fund	Low	Canara Robecco Small Cap Regular Fund	Invesco India Small Cap Regular Fund
	Low	Invesco India Small Cap Direct Fund	High	Tata Small Cap Direct Fund	Tata Small Cap Direct Fund