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## MUTUAL FUND SELECTION PROCESS - WITH REFERENCE TO EQUITY FUNDS

### Article Particulars

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### Abstract

*This study aims to bring out the selection process of the best equity fund. Four popular funds – Birla advantage fund, HDFC equity fund, ICICI Prudential dynamic plan, Sundaram BNP Paribas growth fund – are considered for the study. As Sundaram Paribas had highest Absolute return among the four funds, its growth potential was analyzed with Sharpe, Treynor and Jensen Ratio. These ratios confirm its growth potential, hence Sundaram Paribas Growth Fund is selected as the best among the four.*

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### Introduction

Small investors face a lot of problem in the stock market. Limited resources, lack of professional advice, lack of information, etc. Mutual funds have come as a much needed help to these investors. It is a special type of institutional device or an investment vehicle through which the investors pool their savings which are to be invested under the guidance of a team of experts in wide variety of portfolios of corporate securities in such a way, so as to minimize risk while ensuring safety and steady return on investment. It forms an important part of the capital market, providing the benefits of a diversified portfolio and expert fund management to a large number, particularly small investors. Hence the study is undertaken.

### Methodology

The study covers a period of 3 years from 2014 to 2017. NAV of the schemes are considered for estimating the performance of schemes. Secondary data is collected from websites.

### Tools for Analysis : Net Asset Value (Nav)

It is calculated simply by dividing the net asset value of the fund by the number of units. In other words, if the fund is dissolved or liquidated, by selling off all the assets in the fund, this is the amount that the shareholders would collectively own.

## Beta

It describes the relationship between the stock's return and the index returns. Beta of more than 1 will rise more than the market and also fall more than market. Similarly, a low-beta fund will rise less than the market on the way up and lose less on the way down.

$$\beta = \frac{n\sum xy - (\sum x)(\sum y)}{n\sum x^2 - (\sum x)^2}$$

Where,

n – Number of days

x – Returns of the index

y – Returns of the fund

## Alpha

It indicates that the stock return is independent of the market return. If the portfolio is well diversified, the alpha value would turn out to be zero. A passive fund has an alpha of zero. Positive alpha implies that a fund has performed better than expected

$$\alpha = y - \beta x$$

Where,

y – Mean value of returns of the fund

x – Mean value of returns of the index

$\beta$  – Beta value of the fund

## Correlation Co-Efficient

It measures the nature and the extent of relationship between the stock market index returns and a fund's return in a particular period.

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2} \sqrt{n\sum y^2 - (\sum y)^2}}$$

## Co-Efficient of Determination

The square of correlation of co-efficient is the co-efficient of determination. It gives the percentage variation in the stock's return explained by the variation in the market return.  $r^2$

## Treynor's Ratio

The Treynor Ratio, helps analyze returns in relation to the market risk of the fund. Higher the Treynor Ratio, the better the performance under analysis. It is a ratio that helps to determine the excess return generated as the difference between the fund's return and the risk free return.

$$T = \frac{R - RFR}{B}$$

Where,

R – Return on investment.

RFR – Risk Free Return

**Sharpe's Ratio**

Sharpe's ratio is similar to treynor's ratio the difference being, instead of beta here we take standard deviation. As standard deviation represents the total risk experienced by the fund. A higher Sharpe's ratio is better

$$S = \frac{R-RFR}{\sigma}$$

**Return**

A return is a measurement of how much an investment has increased or decreased in value over any given time period.

**Formula**

$$\frac{(P1-p0)}{P0}$$

**Jensen Ratio (JR)**

A risk-adjusted performance measure that represents the average return on a portfolio over and above the predicted value

$$\text{Jensen Ratio (JR)} = \frac{\alpha}{\beta}$$

**Data Analysis**

**Table : 1 Equity Fund - comparison of Return**

Company Name and Fund		Absolute return	Mean return	Standard Deviation	Variance
HDFC	Equity	0.136557	0.000897	0.018978	0.0003601
	Fund – Growth				
Birla Advantage		-0.02593	0.01695	1.020131	1.0406672
	Fund – Growth				
ICICI Prudential		0.082544	0.000628	0.019227	0.0003696
Dynamic	Plan -				
	Growth				
SUNDARAM		0.362075	0.001909	0.024218	0.000586
BNP	Paribas				
	Growth				

The above table indicates that sundaram BNP Paribas has highest absolute return. Hence it is selected among the four, for further analysis.

**Table: 2 Sundaram BNP Paribas Fund (Growth)**

DATE	S&P CNX NIFTY	RETUR N (X)	NAV	RETURN (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY	(Y-Y1)	(Y-Y) <sup>2</sup>
1-jan-14	2087.5		34.5129						
3-nov-14	2630.0	25.9874	43.6832	26.57064	675.345	705.9992	690.502	15.62798424	244.2339
1-Feb-15	2971.5	12.98454	51.9849	19.00433	168.598	361.1646	246.7626	8.061670825	64.99054
1-Jun-15	2962.25	-0.31297	53.2689	2.469948	-0.09794	6.100643	-0.77301	-8.47271235	71.78685
3-Oct-15	3569.6	20.503	61.1365	14.76959	420.3728	218.1409	302.8209	3.826933155	14.64542
1-Feb-16	4137.2	15.90094	70.6645	15.5848	252.8399	242.8859	247.813	4.642137592	21.54944
1-Jun-16	4297.05	3.863724	75.7267	7.16371	14.92837	51.31874	27.6786	-3.7789501	14.28046
1-Oct-16	5068.95	17.96349	88.6473	17.06215	322.6869	291.1168	306.4956	6.119485488	37.4481
1-Feb-17	5317.25	4.89845	94.3535	6.43697	23.99482	41.43458	31.53118	-4.50569048	20.30125
2-Jun-17	4739.6	-10.8637	84.3726	-10.5782	118.0199	111.8983	114.9184	-21.5208583	463.1473
<b>Total</b>		<b>90.92488</b>		<b>98.48394</b>	<b>1996.884</b>	<b>2030.06</b>	<b>1967.749</b>	<b>3.72651E-09</b>	<b>952.3833</b>

**Calculation of Above Table**

Beta	Alpha	Standard Deviation	Coefficient of determination	Sharpe ratio (SR)	Treynor Ratio (TR)	Jensen Ratio (JR)
0.9022	1.82595	10.2869	0.9599	8.65022	98.62995	2.0261

**Conclusion**

It is inferred as that alpha value is greater than beta value so it seems to know that value of equity fund is always positive in the share market. By the Sharpe ratio, the Sundram BNP Paribas fund gained the lowest rate of return (8.65022), therefore the invest value is also Low; By the Jensen ratio, expected market return (2.0261) is also seems to be positive at low value of the market investment.; By the treynor ratio, without any diversible risk and portfolio risk, gained the return of invesment of (98.62995). It always having High Growth Rate in the Share market, for future also.

**Bibliography and Reference****Books**

1. "Security Analysis and portfolio Management" by Donald Fischer & Ronald Jordan, 6th edition published by prentice Hall 1995.

**Web Sites**

1. www.amfi .com
2. Www. Money control.com
3. www.historical nifty.yahoofinancial.com
4. www.SUNDARAM BNP Paribas. in
5. www.sharekan.com

**Journal**

1. Author by kannan, & Nedunchez Indian "A comparative study on performance of private mutual funds"Economic panorama"
2. Amith Singh, "Mutual funds performance-Comparative analysis" ICFAI.