



# “RETURN AND RISK ANALYSIS OF MUTUAL FUNDS IN INDIA”

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## Abstract:

The research focuses on the risk and return parameter for five different types of mutual funds in India. Here in this paper we had included sharpe ratio with the help of the returns, standard deviation and risk free returns and also treynor ratio with the help of the returns, Beta, standard deviation and risk free return with the help of the NAVs.

**Keywords:** Sharpe, Treynor, Mutual fund

## 1. INTRODUCTION:

Risk is the probable measurement of uncertainty. When uncertainty is reduced to a number of possible results to alternative course of action, it is called risk. Risk is the possibility of loss or injury, the degree or probability of such loss. Risk is composed of the demand that brings in variations in return of income. The main forces contributing to risk are price and interest. All investments are risky, whether in stock or capital market or banking and financial sector, real estate, bullion gold etc. The mutual fund was introduced in Belgium in the year 1822. This investment shortly spread to Britain and France. Mutual funds are very popular in US in the year 1920s, particularly open end mutual funds. Mutual funds experienced a period of excellent growth after World War II, particularly in the 1980s and 1990s.

## 2. LITERATURE REVIEWS:

No	Author	Description	Conclusion
1	Prince v And Balcon l .	The small cap growth sector of mutual fund industry against risk-free rate and market returns over the ten years 1997-2006.	The results indicated that some excess returns have been generated however beyond a handful of the funds, it is impossible to rely upon a single benchmark as a reliable indicator of even past performance.
2	Abhay, k.	Sector funds reveal positive timing ability during recessions and negative timing ability during expansions.	When using the more appropriate industry specific benchmarks, only the utility sector demonstrates significant timing ability over both stages of the business cycle.
3	Sondhi And Jain.	Examined the market risk and performance of equity mutual funds in India.	The results of the study confirmed with the empirical evidence produced by fama (1992) that high beta funds (market risks) may not necessarily produced high returns.
4	Bodie k, And Marcus.	Define portfolio performance attribution.	The sector weights of the Fidelity simulated portfolios are identical to the multi-sector equity fund portfolios, this leaves security selection as the sole determinant of outperformance.
5	Himanshu, j	Considered 15 mutual fund schemes covering three categories i.e. equity, Hybrid and Debt funds.	The study made a comparative analysis of these three categories of funds and found that there is no significant difference in returns for various funds of the same category.
6	Prabakaran And Jayabal .	Evaluated the performance of mutual fund schemes.	The results of the study found that 13 schemes out of 23 schemes in terms of Sharpe ratio, 13 schemes had superior performance of Treynor ratio and 14 schemes had superior performance according to Jensen measure.
7	Agarwal .	Analyzed the Indian Mutual Fund Industry and attracting large investments from domestic and foreign investors.	To the investors in the form of safety, hedging, arbitrage, limited risk with better returns than any other long-term securities in attracting more investors towards mutual fund investments
8	Selvamet al .	Studied the risk and return relationship of Indian mutual fund schemes.	Returns were not significantly different from their market returns and very few number of sample schemes.
9	Garg .	Performance on the basis of return, standard deviation, beta as well as Treynor, Jensen and Sharpe indexes.	The results revealed that Reliance Regular Saving Scheme Fund had achieved the highest final score and Canara Robeco Infra had achieved the lowest final score in the one year category.

10	Gohar R, Ahmed S, Niazi U .	Had compared the performance of different types of mutual funds in Pakistan and concluded that equity funds outperform income funds.	The finding showed that within equity funds, broker backed category shows better performance than institutional funds and institutional funds are outperforming broker backed funds among income funds.
11	Krishnaprabha, S	Risk and return Analysis of Open-ended equity Linked Mutual Fund schemes in India.	The study also analyses the return and systematic risk associated with the selected open-ended equity mutual fund schemes and the same are classified under seven Investment Styles.
12	Jain .	The study has investigated the performance of equity founded mutual fund schemes in India, using CAPM.	The result clearly designate that over the period of last 15 years, the private sector mutual fund companies have outdone then the public sectors and by observing the performance of each and every mutual fund..
13	Dhanda , S.K.	Performance evaluation of selected pen ended schemes in terms of risk and return relationship by using rate of return, Beta, Standard Deviation, S harp Ratio and Treynor Ratio.	The finding of the study revealed that only three scheme have performed better than benchmark.
14	Prajapati, And Patel.	Performance evaluation of mutual fund schemes of Indian companies is carried out through relative performance index, risk-return analysis, Treynor's ratio.	The study found that that most of the mutual fund have given positive return during 2007 to 2011

### 3 RESEARCH METHODOLOGIES:

#### 3.1 RESEARCH GAP

As per literature review it was found that majority of researchers focused on performance of ADITYA BIRLA SUN LIFE, SBI BANK, AXIS BANK, HDFC BANK. As per the study conducted, focused on the performance of axis asset management company ltd and HDFC asset management company limited and also focused on their risk and return analysis of mutual fund.

#### 3.2 OBJECTIVES

- To analyze risk and return of select mutual fund in India.
- To analyze risk associated with selected sector funds.
- To measure the risk return relationship of selected sector fund schemes.
- To determine the correlation between selected sector Funds' return and benchmarks' return.

#### 3.3 RESEARCH DESIGN

Descriptive Research Design will be used in the study as this research is in depth study of risk and return of mutual fund in India.

### 3.4 DATA COLLECTION METHOD

This study is based secondary data. The secondary data was collected from various research paper, books, journal published reports of IRDA, annual reports of mutual fund companies and websites

### 3.5 SAMPLING PLAN AND TECHNIQUE

Non-probability convenience sampling method is used for selection of the mutual funds.

This is an empirical study. It has taken all the 5 India mutual funds as sample. The study period includes 5 financial years, viz. 2014-2015, 2015-2016, 2016-2017, 2017-18 and 2018-19. The data required were drawn from money control, Economics time money data base and annual reports of the respective companies.

1. Axis bluechip fund
2. Aditya birla sun life equity fund
3. Baroda multi cap fund
4. HDFC equity growth fund
5. SBI contra fund

### 3.6 Hypothesis

Hypothesis 1

H0: There is no difference between fund return and risk free return.

H1: There is a significant difference between fund returns and risk free return.

Hypothesis 2

H0: There is no difference between fund return and market return.

H1: There is a significant difference between fund returns and market return.

## 4. ANALYSIS AND INTERPRETATION:

### Return analysis of selected M.F.

COMAPANY/YEAR	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
<b>AXIS BLUE CHIP</b>	-0.0043	-1.22	0.14	0.03	0.07
<b>SBI CONTRA</b>	0.01	-0.028	-0.13	0.07	0.089
<b>HDFC EQUITY GROWTH FUND</b>	-0.02	0.03	0.13	-0.01	0.03
<b>BARODA MULTI</b>	-0.022	0.012	0.13	-0.04	0.039
<b>ADITYA BIRLA SUN LIFE EQUITY FUND</b>	0.02	0.11	0.12	-0.01	-0.04

**AXIS BLUE CHIP FUND****Sharpe**

YEAR	RETURN	SD	RF	SHARPE
2015	-0.00043	0.985	7.63	-7.747
2016	-0.01	0.95	6.85	-7.221
2017	0.13	0.58	6.34	-10.707
2018	0.03	0.75	7.05	-9.360
2019	0.07	0.791	6.11	-7.636
AVG	0.044	0.8112	6.796	-8.534

**Treynor**

YEAR	RETURN	BETA	RF	TREYNOR
2015	-0.00043	0.081	7.63	-94.20
2016	-0.01	-0.017	6.85	403.53
2017	0.13	0.104	6.34	-59.71
2018	0.03	0.122	7.05	-57.54
2019	0.07	0.08	6.11	-75.50
AVG	0.044	0.074	6.796	23.315

**SBI CONTRA FUND****Sharpe**

YEAR	RETURN	SD	RF	SHARPE
2015	0.01	0.94	7.63	-8.11
2016	-0.0028	0.94	6.85	-7.29
2017	-0.13	0.66	6.34	-9.80
2018	0.07	0.93	7.05	-7.51
2019	0.008	0.89	6.11	-6.86
AVG	-0.00896	0.872	6.80	-7.91

**Treynor**

YEAR	RETURN	BETA	RF	TREYNOR
2015	0.01	0.22	7.63	-34.64
2016	-0.0028	0.72	6.85	-9.52
2017	-0.13	0.83	6.34	-7.80
2018	0.07	0.84	7.05	-8.31
2019	0.008	0.83	6.11	-7.35
AVG	-0.00896	0.688	6.80	-13.52

**HDFC EQUITY GROWTH FUND****Sharpe**

YEAR	RETURN	SD	RF	SHARPE
2015	-0.02	1.14	7.63	-6.71
2016	0.03	1.21	6.85	-5.64
2017	0.13	0.85	6.34	-7.31
2018	-0.01	0.98	7.05	-7.20
2019	0.03	0.99	6.11	-6.14
AVG	0.032	1.034	6.796	-6.60

**Treynor**

YEAR	RETURN	BETA	RF	TREYNOR
2015	-0.02	0.08	7.63	-95.63
2016	0.03	0.19	6.85	-35.89
2017	0.13	0.11	6.34	-56.45
2018	-0.01	0.16	7.05	-44.13
2019	0.03	0.15	6.11	-40.53
AVG	0.032	0.138	6.796	-54.53

**BARODA MULTI CAP****Sharpe**

YEAR	RETURN	SD	RF	SHARPE
2015	-0.002	0.95	7.63	-8.03
2016	0.01	0.99	6.85	-6.91
2017	0.13	0.7	6.34	-8.87
2018	-0.05	0.85	7.05	-8.35
2019	0.04	0.78	6.11	-7.78
AVG	0.0256	0.854	6.7960	-7.99

**Treynor**

YEAR	RETURN	BETA	RF	TREYNOR
2015	-0.002	0.05	7.63	-152.64
2016	0.01	0.17	6.85	-40.24
2017	0.13	0.11	6.34	-56.45
2018	-0.05	0.15	7.05	-47.33
2019	0.04	-0.16	6.11	37.94
AVG	0.0256	0.064	6.7960	-51.75

**ADITYA BIRLA SUN LIFE EQUITY FUND****Sharpe**

YEAR	RETURN	SD	RF	SHARPE
2015	0.02	0.99	7.63	-7.69
2016	0.11	3.15	6.85	-2.14
2017	0.12	0.61	6.34	-10.20
2018	-0.01	0.87	7.05	-8.11
2019	0.04	0.93	6.11	-6.53
AVG	0.056	1.31	6.80	-6.93

**Treynor**

YEAR	RETURN	BETA	RF	TREYNOR
2015	0.02	0.05	7.63	-152.20
2016	0.11	0.33	6.85	-20.42
2017	0.12	-0.04	6.34	155.50
2018	-0.01	0.14	7.05	-50.43
2019	0.04	0.13	6.11	-46.69
AVG	0.056	0.122	6.80	-22.85

## 5. KEY FINDINGS:

**AVERAGE RETURN:** According to arithmetic mean Aditya birla sun life equity growth fund is yielding high average return (0.056) when compared other fund like axis blue chip fund (0.044), SBI contra fund (-0.0089), HDFC equity fund (0.032) and Baroda multi cap fund (0.0256).

**STANDARD DEVIATION:** Higher the standard deviation higher the risk. According to standard deviation axis blue chip fund (0.811) is having low risk. When compared to other funds like SBI contra fund (0.87) , HDFC equity fund (1.03), Baroda multi cap fund (0.85) and Aditya birla equity growth fund (1.33).

**BETA:** According to beta calculation SBI contra fund (0.68) is having high risk.

**SHARPE RATIO:** As per sharpe ratio the performance of HDFC equity fund (-6.60) is high when compared to other funds like axis blue chip fund (-8.53), SBI contra fund (-7.91), Baroda multi cap fund (-7.99), and Aditya birla equity growth fund (-6.93).

**TREYNOR RATIO:** According to treynor ratio axis blue chip fund (23.31) is yielding high return when compared to other funds like SBI contra fund (-13.52), HDFC equity fund (-54.53), Baroda multi cap fund (-51.75) and Aditya birla equity growth fund (-22.85).

## 6. CONCLUSION:

The study has analyzed risk return of selected mutual fund schemes in India. It is not necessary that diversification of securities in portfolio does not reduce the portfolio risk of a security. But the diversification can better be average the risk of a portfolio. Mutual funds mainly depend on capital market performance. If the market performance is good, it will give good returns and vice- versa. Return is risk premium for investing in highly fluctuated corporate securities. In this study five mutual fund schemes have been taken to analyze the risk and return, based on which the AXIS blue chip fund, SBI contra fund, HDFC Equity Fund, BARODA multi cap Fund and ADITYA birla equity growth fund under performed. The all other mutual fund schemes have to improve its level in the years to come both for the company and investors. The overall analysis finds the Private sector mutual fund schemes better than the public sector schemes and less risky as well.

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