



# A COMPARATIVE STUDY ON PERFORMANCE OF EQUITY, DEBT AND HYBRID MUTUAL FUNDS IN INDIA

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## ABSTRACT

The growth of the Mutual Fund Industry in India has created its edge in the personal finance industry in India and has opened up opportunities to investors in order to diversify the investments across assets. Mutual Fund industry plays a key role in the Indian Financial Sector. Investing in mutual fund has seen an upfront growth in India because of the nature of this instrument. Mutual fund is a type of financial intermediary that empowers million small as well as large investors across the country to participate and invest in capital market and derive benefits from it. The Average Assets Under Management (AAUM) of Indian Mutual Fund Industry for the month of February 2022 stood at Rs. 38,56,140 crore. The AUM size crossed Rs. 30 trillion (Rs.30 Lakh Crore) for the first time in November 2020. The Industry AUM stood at Rs.37.56 Trillion (Rs. 37.56 Lakh Crore) as on February 28, 2022. The total number of accounts (or folios as per mutual fund parlance) as on February 28, 2022 stood at 12.61 crore (126.1 million). This study helps to understand the comparative performance of Equity, Debt and Hybrid Mutual Fund schemes, measure the volatility and return relationship, risk and return analysis of selected mutual fund by various financial tools like: SD, Beta, Treynor, Sharpe, Jensen, Information ratio and correlation between fund and index return.

**Keywords:** Mutual Fund, Beta, Sharpe ratio, Jensen ratio, Treynor ratio, Information ratio, Performance evaluation, Investments, Risk & Return, Capital Market, Equity funds, Debt funds, Hybrid funds, NAV, AMC, SIP, AUM.

## 1. INTRODUCTION

### 1.1 ABOUT MUTUAL FUND

A mutual fund is a financial intermediary in capital market that pools collective investments in form of units from retail and corporate investors and maintain a portfolio of various schemes which invest those collective investments in equity and debt instruments on behalf of these investors. Mutual fund is expert entity which helps an investor invest in equity and debt instruments indirectly rather than taking risk of investing money directly in these instruments. A mutual fund is a collective reservoir or pool of funds which is managed by a qualified and expert Fund Manager. It is a trust that takes funds from a number of

investors who have a common investment goal and invests those funds in equities, bonds, money market instruments and other securities. The income generated from this combined portfolio is distributed proportionately amongst the investors after subtracting relevant expenses and levies, by calculating a scheme's 'Net Asset Value' or NAV.

### **1.2 ABOUT NAV**

A mutual fund unit has Net Asset Value per Unit (NAV) based on closing price of shares and bonds which are part of respective portfolio of mutual fund scheme. The NAV is the combined market value of the shares, bonds and securities held by a fund on any particular day in a portfolio of particular mutual fund scheme (as reduced by legitimate expenses and charges). NAV per Unit denotes the market value of all the shares/debentures/bonds or any other instrument in a mutual fund scheme on a given day, net of all expenses and liabilities plus income accrued, divided by the outstanding number of Units in the scheme.  $NAV = \text{Market Price of Securities} + \text{Other Assets} - \text{Total Liabilities} + \text{Units Outstanding as at the NAV date}$

## **2. LITERATURES REVIEW**

(Jayalakshmi.A & Fathima, 2021) concluded that the Indian Mutual Fund Industry started with the setup of UTI, and then the entry of Mutual Fund Companies sponsored by Nationalized Banks and Insurance Companies. With the entry of Private Sector Funds, the Mutual Fund Industry is offering wide range of fund families to the investors. There are various Categories of schemes offered by the Mutual Funds and among them the most popular one is Income Funds. The performance of the most of the Private Sector Mutual Funds is better compared to the Public Sector Mutual Funds.

(Bhansali & Nag, 2021) concluded that Axis Mutual Funds as a whole relatively performed better than SBI Mutual Funds. The conclusion has been drawn based on different performance evaluation technique like NAV, Average Return, Standard Deviation, Sharpe Ratio. The outcome from the evaluation will let the investor to invest in to the right categories of mutual fund.

(Pandey, 2021) carried out research on "Performance evaluation of debt mutual fund schemes in India" study makes a comparison between private and public sectors by selecting 44 debt mutual fund schemes based on daily NAV. To examine financial performance - Sharpe, Treynor, Jensen Alpha, R2 is used to measure the correlation of funds return with benchmark index return, and beta is used to measure volatility in funds return. the performance winning ratio of the public sector is more than the private sector (i.e., five times public and three times Private has outperformed). Hence, the public sector is more efficient in debt categories funds.

(Jain & Upadhyay, 2021) The results of study shown that there is a significant difference between Age and satisfaction related factors and with Annual Income also. For occupation and satisfaction related factors, except the factor 'Knowledge about new services', there is a significant difference. While checking for overall satisfaction of investors with individual satisfaction related factors it is found that except 'Knowledge about new services', there is satisfaction related factors show a significant difference with respect to Age, Annual Income and Occupation.

(Vasani & Rachchh, 2020) Found that very high volatility that earns higher long term returns from such investments than from a debt security or fixed deposit. It is rightly said that the mother of invention is problem. Here, in Investment decision investor expect safety of debt investment and return of equity. As a result of this new avenue of investment has emerged called hybrid security.

(Sahai & Kumar, 2020) carried out their study on the topic "Variation in mutual fund performance: A comparative study of selected equity schemes in India for the period 1995-2020". The paper investigates the performance of 34 open-ended, diversified equity schemes for the 25 years from 1995-2020. The performance has been evaluated in terms of return and risk analysis & risk adjusted performance measures such as Sharpe ratio, Treynor ratio and Jensen's Alpha. In the study Sharpe ratio and Treynor ratio were greater than 1 and Jensen's Alpha was positive for most schemes, which showed that the funds were providing higher returns.

(Sudha, Dharani, & Devika, 2020) analysed that SBI Magnum Blue Chip equity fund stood first rank and it is followed by Birla G-Sec Glit fund, LIC Nomura MF Index Fund stood last rank. In Standard Deviation, HDFC Top 200 equity fund secured first rank, Overnight fund secured last rank.

(Meera & D., 2020) carried out research on "A comparative study of performance of top 5 mutual funds in India" and found that Overall, all selected mutual fund companies have positive return during 2013 to 2018. ICICI mutual fund has performed well. Birla SL Intl. Equity A-Direct (G) and DWS Top Euroland Offshore Fund (G) mutual fund have lower level of risk compare to Franklin and DSP.

### 3. OBJECTIVES

- To analyse the fluctuation of return earned for each mutual fund scheme.
- To analyse the NAV performance of each mutual fund.
- To study a comparative performance analysis for the selected mutual funds for five years.
- To analyse the relation between risk and return of each fund.
- To find out best scheme for investment.
- To analyse the relation between fund return and index return.

### 4. DATA AND METHODOLOGY

**4.1 Research Design:** The study is descriptive in nature and secondary data is used in the study.

**4.2 Sources of Data:** Methods of data collection was secondary. Websites like www.moneycontrol.com has been used for collecting data for the study.

**4.3 Sampling Method:** Convenience Method is used

**4.4 Population:** All types of Mutual Fund Schemes

**4.5 Sampling Frame:** Equity Mutual Funds, Debt Mutual Funds and Hybrid Mutual Funds

**4.6 Sample Period:** The period of study was 5 years i.e., 2017 to 2021

**4.7 Sample Size:** Thirty-six mutual fund schemes have been selected for study.

### 5. HYPOTHESES

For all the three funds i.e., Equity, Debt and Hybrid with the help of tools listed for analysis:

- Relation between risk and return.
- Return over benchmark index.
- Relation between scheme return and index return.

### 6. TOOLS USED FOR DATA ANALYSIS

1. Descriptive statistics
2. Beta
3. Treynor Ratio
4. Jensen Ratio
5. Sharpe Ratio
6. Information Ratio
7. Correlation

### 7. RESULT AND DISCUSSION

#### 7.1 DESCRIPTIVE STATISTICS

##### 7.1.1 Equity Mutual Fund Descriptive Statistics

Time Horizon	N	Minimum	Maximum	Mean	Std. Deviation
1M	12	-1.53%	3.64%	1.6858%	1.39449%
3M	12	-1.83%	7.03%	2.6375%	2.99096%
6M	12	9.84%	14.96%	12.5825%	1.75760%
1Y	12	22.81%	72.17%	47.6767%	15.88428%
3Y	12	22.13%	42.60%	28.5858%	6.29687%
5Y	11	15.99%	26.59%	19.2718%	3.17516%

##### 7.1.2 Debt Mutual Fund Descriptive Statistics

Time Horizon	N	Minimum	Maximum	Mean	Std. Deviation
1M	12	-1.22%	0.34%	-0.2067%	0.58121%
3M	12	-0.48%	1.05%	0.4367%	0.57402%
6M	12	1.47%	2.56%	1.8008%	0.29767%
1Y	12	3.30%	6.95%	4.6025%	0.98021%
3Y	12	4.32%	10.02%	7.4725%	2.15845%
5Y	12	4.11%	8.25%	6.7975%	1.22964%

### 7.1.3 Hybrid Mutual Fund Descriptive Statistics

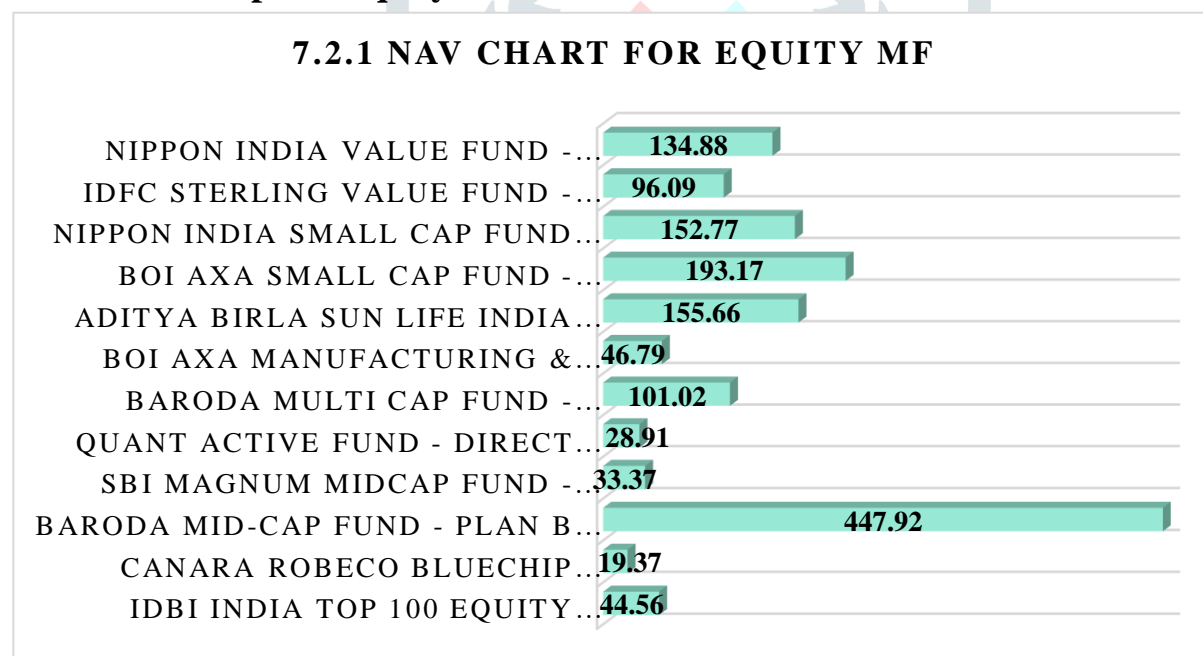
Time Horizon	N	Minimum	Maximum	Mean	Std. Deviation
1M	12	-1.68%	5.48%	0.6992%	1.73143%
3M	12	-3.34%	5.25%	0.9417%	1.87933%
6M	12	1.98%	9.67%	5.0417%	3.06056%
1Y	12	4.75%	53.24%	16.8258%	14.20797%
3Y	12	4.90%	26.93%	13.3025%	7.26641%
5Y	12	5.56%	18.68%	10.6133%	4.55371%

#### Interpretation:

The descriptive statistics shows the basic data presentation which includes minimum, maximum, mean and standard deviation for each Equity, Debt and Hybrid Mutual Fund schemes. As we observe that all schemes give negative returns during short term period and in long term i.e., @ 1 year all schemes perform well. The equity mutual fund performs better as compare to others. While debt mutual funds give less negative return as compare to others. If we throw light on volatility and return scenario then we came across that debt funds are less volatile with lower return as compare to equity and hybrid funds while, equity fund is highly volatile as compare to hybrid funds and that's why it accounts for higher avg. return as compared to hybrid funds.

## 7.2 NAV Graphs

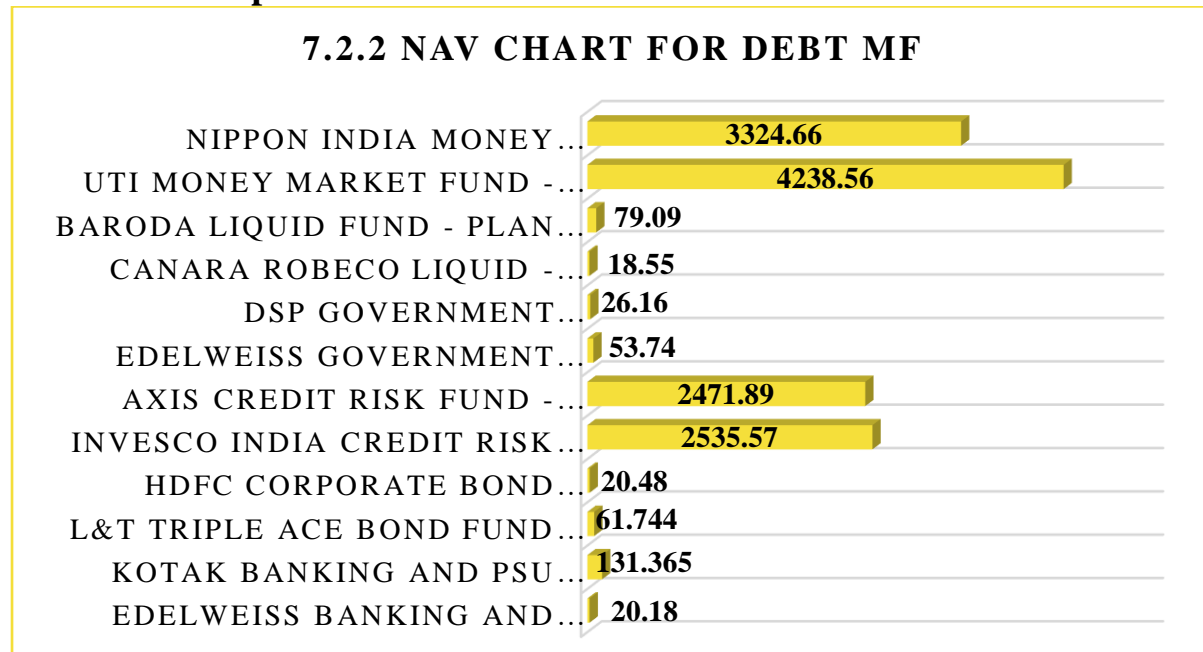
### 7.2.1 NAV Graph of Equity Mutual Fund



#### Interpretation:

As per observation it can be said that Baroda Mid-cap Fund has the highest NAV (447.92) as compare to others in selected Equity Mutual Fund Schemes. While Canara Robeco Blue-chip Equity Fund has the lowest (19.37) NAV in list of Equity Mutual Fund Scheme.

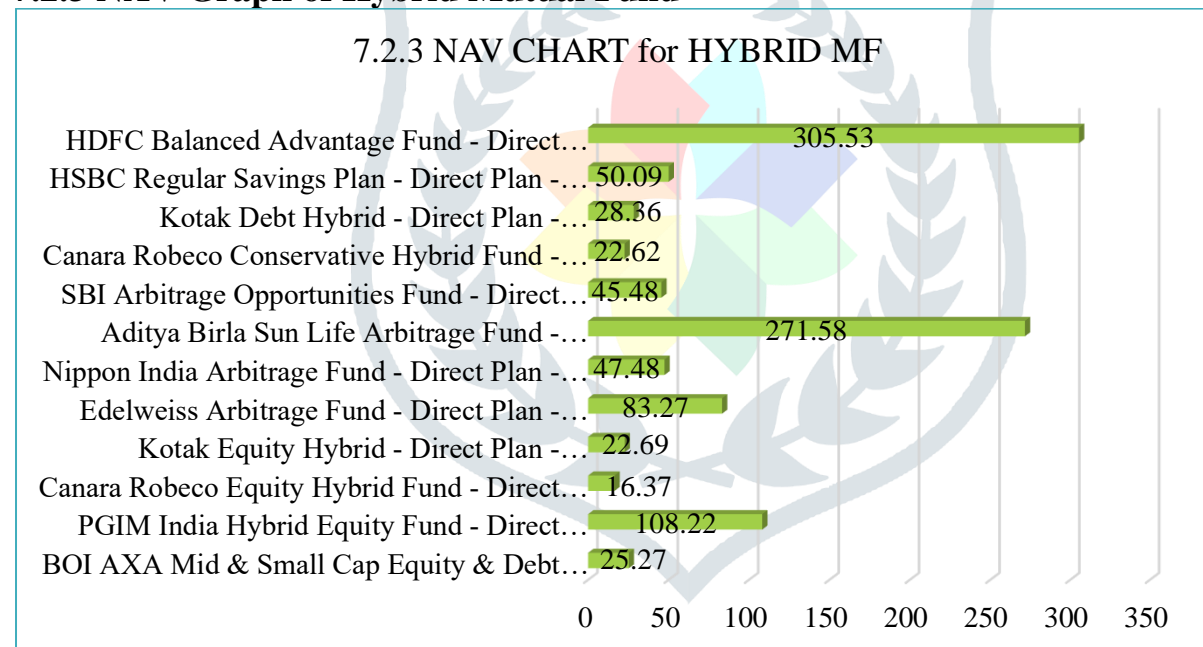
## 7.2.2 NAV Graph of Debt Mutual Fund



### Interpretation:

UTI Money Market Fund has the highest NAV (4238.56) as compare to others in selected Debt Mutual Fund Schemes. While Canara Robeco Liquid (D) Fund has the lowest (18.55) NAV in list of Debt Mutual Fund Scheme.

## 7.2.3 NAV Graph of Hybrid Mutual Fund



### Interpretation:

HDFC Balanced Advantage Fund has the highest NAV (305.53) as compare to others in selected Hybrid Mutual Fund Schemes. While Canara Robeco Equity Hybrid Fund has the lowest (16.37) NAV in list of Hybrid Mutual Fund Scheme.

## 7.3 Ratio Analysis

Rank	Treynor	Sharpe	Jensen	Information
<b>Equity MF</b>				
1	IDFC Sterling Value Fund-Direct Plan-Growth Value Fund	IDFC Sterling Value Fund-Direct Plan-Growth Value Fund	Nippon India Small Cap Fund -Direct Plan-Growth Small Cap Fund	Nippon India Small Cap Fund-Direct Plan-Growth Small Cap Fund
2	Nippon India Small Cap Fund-Direct	Nippon India Small Cap Fund-Direct	BOI AXA Small Cap Fund-Direct Plan-	IDFC Sterling Value Fund-Direct Plan-Growth Value Fund

	Plan-Growth Small Cap Fund	Plan-Growth Small Cap Fund	Growth Small Cap Fund	
3	SBI Magnum Midcap Fund-Direct Plan-Growth Midcap Fund	BOI AXA Manufacturing & Infrastructure Fund-Direct Plan-Growth Sectoral/Thematic	IDFC Sterling Value Fund-Direct Plan-Growth Value Fund	Quant Active Fund-Direct Plan-Growth Multi Cap Fund
<b>Debt MF</b>				
1	DSP Government Securities Fund-Direct Plan-Growth Gilt Fund	DSP Government Securities Fund-Direct Plan-Growth Gilt Fund	Axis Credit Risk Fund-Direct Plan-Growth Credit Risk Fund	Axis Credit Risk Fund-Direct Plan-Growth Credit-Risk Fund
2	Edelweiss Government Securities Fund - Direct Plan - Growth Gilt Fund	Edelweiss Government Securities Fund-Direct Plan-Growth Gilt Fund	Edelweiss Banking and PSU Debt Fund-Direct Plan-Growth Banking and PSU Fund	Edelweiss Banking and PSU Debt Fund-Direct Plan-Growth Banking and PSU Fund
3	L&T Triple Ace Bond Fund-Direct Plan-Growth Corporate Bond Fund	L&T Triple Ace Bond Fund-Direct Plan-Growth Corporate Bond Fund	L&T Triple Ace Bond Fund-Direct Plan-Growth Corporate Bond Fund	L&T Triple Ace Bond Fund-Direct Plan-Growth Corporate Bond Fund
<b>Hybrid MF</b>				
1	BOI AXA Mid & Small Cap Equity & Debt Fund-Direct Plan-Growth Aggressive- Hybrid Fund	HDFC Balanced Advantage Fund-Direct Plan-Growth Dynamic Asset Allocation or Balanced Advantage	BOI AXA Mid & Small Cap Equity & Debt Fund-Direct Plan-Growth Aggressive-Hybrid Fund	BOI AXA Mid & Small Cap Equity & Debt Fund-Direct Plan-Growth Aggressive-Hybrid Fund
2	HDFC Balanced Advantage Fund-Direct Plan-Growth Dynamic Asset Allocation or Balanced Advantage	BOI AXA Mid & Small Cap Equity & Debt Fund-Direct Plan-Growth Aggressive-Hybrid Fund	HDFC Balanced Advantage Fund-Direct Plan-Growth Dynamic Asset Allocation or Balanced Advantage	SBI Arbitrage Opportunities Fund-Direct Plan-Growth Arbitrage Fund
3	Kotak Equity Hybrid-Direct Plan-Growth Aggressive Hybrid Fund	Kotak Equity Hybrid-Direct Plan-Growth Aggressive Hybrid Fund	Kotak Equity Hybrid-Direct Plan-Growth Aggressive Hybrid Fund	Aditya Birla SunLife Arbitrage Fund-Direct Plan-Growth Arbitrage

**Interpretation:**

Above table shows the top 3 Equity, Debt and Hybrid Mutual Fund schemes according to all four ratios i.e., Treynor, Sharpe, Jensen and Information Ratios during selected 5 years according to our study.

**7.4 Hypotheses Analysis**

Hypothesis	Statements	Test Performed	Result	Ho is Accepted/ Rejected
H0 <sub>1</sub>	There is negative relation between risk and return of equity mutual funds.	Treynor	Positive	Rejected
H1 <sub>1</sub>	There is positive relation between risk and return of equity mutual funds.			
H0 <sub>2</sub>	There is negative relation between risk and return of equity mutual funds.	Sharpe	Positive	Rejected

H1 <sub>2</sub>	There is positive relation between risk and return of equity mutual funds.			
H0 <sub>3</sub>	There is normal return over risk taken for equity mutual funds.	Jensen	Abnormal	Rejected
H1 <sub>3</sub>	There is abnormal return over risk taken for equity mutual funds.			
H0 <sub>4</sub>	There is lesser return over benchmark index.	Information	Excess	Rejected
H1 <sub>4</sub>	There is excess return over benchmark index.			
H0 <sub>5</sub>	There is a negative relation between risk and return of debt mutual funds.	Treynor	Positive	Rejected
H1 <sub>5</sub>	There is a positive relation between risk and return of debt mutual funds.			
H0 <sub>6</sub>	There is negative relation between risk and return of debt mutual funds.	Sharpe	Positive	Rejected
H1 <sub>6</sub>	There is positive relation between risk and return of debt mutual funds.			
H0 <sub>7</sub>	There is normal return over risk taken for debt mutual funds.	Jensen	Abnormal	Rejected
H1 <sub>7</sub>	There is abnormal return over risk taken for debt mutual funds.			
H0 <sub>8</sub>	There is lesser return over benchmark index.	Information	Lesser	Accepted
H1 <sub>8</sub>	There is excess return over benchmark index.			
H0 <sub>9</sub>	There is negative relation between risk and return of hybrid mutual funds.	Treynor	Positive	Rejected
H1 <sub>9</sub>	There is positive relation between risk and return of hybrid mutual funds.			
H0 <sub>10</sub>	There is negative relation between risk and return of hybrid mutual funds.	Sharpe	Negative	Accepted
H1 <sub>10</sub>	There is positive relation between risk and return of hybrid mutual funds.			
H0 <sub>11</sub>	There is normal return over risk taken for hybrid mutual funds.	Jensen	Abnormal	Rejected
H1 <sub>11</sub>	There is abnormal return over risk taken for hybrid mutual funds.			
H0 <sub>12</sub>	There is lesser return over benchmark index.	Information	Lesser	Accepted
H1 <sub>12</sub>	There is excess return over benchmark index.			
H0 <sub>13</sub>	There is negative relation between Scheme return and Index return.	Sharpe	Positive	Rejected
H1 <sub>13</sub>	There is positive relation between Scheme return and Index return.			

**Interpretation:**

Above table summarises the hypothesis testing results, mostly for all selected mutual fund schemes null hypothesis is rejected and alternative hypothesis is accepted except Information ratio for Debt MF as well as Hybrid MF and Sharpe Ratio for Hybrid MF. In case of Treynor and Sharpe ratio in short term null hypothesis is accepted as values are positive and in long term it is negative as null hypothesis is rejected

there is positive relation between risk and return. Jensen ratio is positive for all the schemes so for all 3 Equity, Debt and Hybrid MF null hypothesis is rejected and there is abnormal return for all schemes selected. In case of Information ratio, it is not attractive for most of all schemes selected. And in case of correlation, the value of 'r' is positive for all schemes selected so, there is positive relation between Index return and fund return as null hypothesis is rejected.

## 8. CONCLUSION

The study is directed towards analyzing the performance of selected Equity, Debt and Hybrid fund schemes and compares the performance of selected Equity, Debt and Hybrid mutual fund schemes, measure the risk- return relationship and market volatility of the selected mutual fund schemes. For that purpose, 36 mutual funds were selected and analyze through various ratios.

The result shows that the equity funds are more volatile at the same time give higher return as compared to debt and hybrid mutual funds. From the equity fund Nippon India Small Cap Fund (D) Growth Small Cap Fund performed well as compared to others. In case of debt funds the best performed scheme is Axis Credit Risk Fund (D) Growth Credit Risk Fund. While in the hybrid funds the best performed fund is BOI AXA Mid & Small Cap Equity & Debt Fund (D) Growth Aggressive Hybrid Fund. Also, the return of index and the return of each mutual fund are positively related. On the basis of our study it can be concluded that equity funds performed well in the first year, debt funds may perform well in the long term and hybrid funds may perform well in short term.

## 9. SUGGESSTIONS

- There are only 36 schemes selected for this research from each debt, equity and hybrid funds.
- Tests are limited to selected ratio analysis and correlation. One may go for other tests also.
- One can also go for comparison of different types of schemes than selected here or may focus on only one type of scheme and then compare the performance of different AMC.
- One can also opt for both primary and secondary data for analysis.
- Future researcher can also take a greater number of years for the study.

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