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A Study on Performance Analysis and Evaluation of SBI Mutual Fund in India

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ABSTRACT

In recent years, mutual funds have gained popularity as a means of securing one's financial security. Mutual funds have not only contributed to India's growth story, but they have also aided families in capitalizing on the country's success. As knowledge and awareness of mutual funds grows, more people are reaping the benefits of investing in them. The fact that nine out of ten people in India with incomes are unaware of mutual funds is the key reason for the low number of retail mutual fund investors. However, once consumers are aware of mutual fund investing prospects, one out of every five persons decides to invest in mutual funds.Understanding which potential investors are more likely to buy mutual funds and using the proper arguments in the sales process that customers would accept as vital and relevant to their decision are the keys to converting a person with no understanding of mutual funds into a new Mutual Fund client. This project provided me with a fantastic learning opportunity while also allowing me to put my analytical skills to use. The analyses and recommendations offered in this Project Report are based on market research into investors' saving and investment habits, as well as their preferences for Mutual Fund investments.This project can be broken into two halves. The first section introduces Mutual Funds and their many elements, as well as the Company Profile, Study Objectives, Channel Management, and Research Methodology. Through the project, one can gain a fundamental understanding of mutual funds. The data and its analysis, as well as the collecting of secondary data, make up the second half of the project.

Keywords: Portfolio management, Market Derivatives, Risk Diversification.

1.0 Introduction

A mutual fund is a business that pools money from a large number of people and invests it in stocks, bonds, and other assets. A portfolio is a collection of stocks, bonds, or other assets that a fund owns. Each fund's investor has a share, which represents a portion of the funds' holdings. As of today, India has a total of 44 mutual funds. The fund house has opened with RBI approval, allowing investors to invest in overseas markets such as the United States. And, as a result of this beneficial development, asset classes have expanded beyond stock and debt to include gold funds, inflation, and more inventive funds such as arbitrage funds. The mutual fund sector in India began in 1963, when the Government of India and the Reserve Bank of India formed the Unit Trust of India under an Act of Parliament. After that, in 1987, SBI Mutual Fund became India's first non-UTI mutual fund. As a result, the year 1993 marked the start of a new era in the mutual fund sector. Following the passage of the Securities Exchange Board of India Act in 1992, private enterprises began to enter the market. In 1996, the SEBI mutual

fund regulations went into effect. Foreign institutions have set up shop in India through joint ventures and acquisitions since then, and the company has continued to develop enormously.

1.1 Objectives of the Study:

➢ Objectives:
- To compare the performance of a mutual fund schemes.

➢ Sub-objectives:
- Detailed investment rationality
- Comprehensive mutual fund industry analysis
- Investigation of SBI Mutual Fund and its plans
- The purpose of this study is to look at the growth and development of the mutual fund industry in India.
- To examine the performance of SBI Mutual Fund's selected Equity/Growth schemes.
- This study aims to discover equities fund risk and returns and compare them to returns and peers in order to assist mutual fund investors in selecting better funds as investment outlets.

1.2 Scope of the study:

- It's Help to how to manage Portfolio of Investor's
- Understand investor's Equity investment
- It's help to identify investor's goal in market

2.0 Literature review

1. Performance evaluation of debt mutual fund schemes in India

R. Kaur (2014)

He examined that the risk and return component among these mutual fund schemes and the relationship between NAV and market portfolio return with the help of various measures like standard deviation, beta, R-square, Sharpe, Treynor, Fama's measure and find that open-ended debt mutual fund not performed better than the benchmark indicator.

2. A Study on Performance Evaluation of Hdfc Mutual Funds In India.

M. Jayalakshmi and V. Palanichamy (2020)

They evaluated the performance of selected HDFC mutual fund undergrowth scheme and compare the schemes return and risk with benchmark index within o the help of various measures like Sharpe, Treynor, and Jenson's investment portfolio and concluded that the Sharpe and Treynor give a positive response to the decision-making process whereas Jenson's measure gives the negative response to the same.

3. An Emperical Study on performance evaluation of SBI Mutual Fund

S.M. Adhav and P Chauhan (2015)

They assessed the performance of mutual fund schemes of selected Indian companies in terms of risk-return relationship to compare the performance of mutual fund schemes of selected Indian companies based on benchmark index and concluded that during the last 5 year the performance of mutual fund of selected Indian companies is superior.

4. A comparative Analysis of returns of Mutual Fund schemes ranked 1 by CRISIL

P Dhume and B. Ramesh (2011)

They evaluated the performance of the sector mutual fund in relation with the market and performance using different approaches of performance measure and study the risk-return analysis of the sector fund a concluded that all the sector funds have outperformed the market according to Sharpe and Treynor, excluded infrastructure sector.

5.   **Performance analysis of Mutual Fund: A comparative study of selected debt mutual fund schemes in India**

Komal B Sharma (2020)

The study used NAV and the total return of these selected funs along with different tools of study like alpha, beta, Sharpe ratio, and Jenson's ratio. The study finds out that three mutual funds have performed well and two funds had not performed well during the study period of study. This study is providing some insight into the performance of mutual fund which will help them taking rational investment decisions and allocating their resources in the right mutual fund schemes.

3.0 RESEARCH METHODOLOGY:

3.1 RESEARCH METHODOLOGY

1. It refers to the overall approach to a problem which could be put into a practice in a research process, from the theoretical underpinnings to the collection and analysis of data

2. Research Methodology means various methods used by the investigator to obtain the knowledge of information about the subject which may differ from person to person, subject to subject. It gives guidelines as to how the data is to be collected and the presentation of information. It must be collected with the help of some technique. Collection of data is through primary and secondary sources.

3. **For this research activity** We have selected 6 mutual funds from Indian market. All funds are in equity growth category.

3.2 COLLECTION OF DATA IS THROUGH SECONDARY SOURCES.

1. The secondary data is the data which have already been collected by someone else, used for some purpose and stored.

2. Secondary data may be either published or unpublished data usually published data are available in:

3. Various publications of the central, state and local government

4. Various publications of foreign government or of international bodies

5. Technical and Trade journals

6. Books magazines and newspapers

7. Here in this research project, we have used data which were published on the websites of Money control, value research online, National stock exchange and mutual fund India.

3.3 STATISTICAL TECHNIQUES

Mutual fund performance can be analyzed through performance measurement ratios which are used in portfolio analysis. We here are using Treynor, Sharpe, and Jensen ratio to evaluate mutual funds and rank accordingly.

1. **TREYNER'S PERFORMANCE INDEX Treynor (1965)** was the first researcher developing a composite measure of portfolio performance. He measures portfolio risk with beta, and calculates portfolio's market risk premium relative to its beta: $Ti = (Rp - Rf) / \beta p$

2. **SHARPE'S PERFORMANCE INDEX Sharpe (1966)** developed a composite index which is very similar to the Treynor measure, the only difference being the use of standard deviation, instead of beta, to measure the portfolio risk, in other words except it uses the total risk of the portfolio rather than just the systematic risk. $Si = (Rp - Rf) / \sigma p$

3. **JENSEN'S ALPHA Jensen (1968),** on the other hand, writes the following formula in terms of realized rates of return, assuming that CAPM is empirically valid. Jensen uses α as his performance measure. **Jensen's Alpha = Rp – [Rf + β (Rm – Rf)]**

3.4 ANALYSIS

This research paper deals with performance of selected equity schemes of SBI during 2017-2021 The performance of 6 selected growth schemes presented here.

1. SBI SMALL CAP FUND-DIRECT PLAN-GROWTH

2. SBI MAGNUM MID CAP-DIRECT PLAN-GROWTH

3. SBI FOCUSED EQUITY FUND-DIRECT PLAN-GROWTH

4. SBI BLUE CHIP FUND-DIRECT PLAN -GROWTH

5. SBI EQUITY HYBRID FUND-DIRECT PLAN-GROWTH

4.0 DATA ANALYSIS AND DATA INTERPRETATION

4.1 Table No: Tables showing the Returns of SBI BLUE CHIP DIRECT PLAN GROWTH 2016-2021

Year	NAV	Fund Retrun Ri(X)	$\overline{X}$ (Rp)	X- $\overline{X}$	(X-$\overline{X}$)^2
2016	30.8149				
2017	40.5875	31.71	17.07	14.64	214.39
2018	39.3292	-3.10	17.07	-20.17	406.84
2019	44.2325	12.47	17.07	-4.60	21.18
2020	51.8572	17.24	17.07	0.17	0.03
2021	65.8793	27.04	17.07	9.97	99.40
Total		85.36			741.84

Year	Market Rm (X)	Ri (Y)	XY	X^2
2017	31.81	31.71	1008.70	1011.88
2018	-2.58	-3.1	8.00	6.66
2019	12.24	12.47	152.63	149.82
2020	17.17	17.24	296.01	294.81
2021	26.5	27.04	716.56	702.25
	85.14	85.36	2181.90	2165.41

N	5	SD	13.62
$\sum x$	85.14	Beta	1.02
$\sum y$	85.36	SHARPE	0.81
$\sum xy$	2181.90	treynor	10.88
$\sum x^2$	2165.41	alpha	-0.15
MEAN OF FUND	17.07172		
Ri	17.07		
Rm	17.03		
RF	6		

Interpretation: The above table reveals that SBI Blue Chip Fund Direct Plan – Growth is showing the average return of 17.07, Beta of 1.02, Sharpe Ratio of 0.81, Treynor's Ratio of 10.88, Jensen Ratio of -0.15 respectively.

4.2 Table No: Table showing the Returns of SBI Equity Hybrid Fund Direct Plan – Growth for year 2016-2021

Year	NAV	Fund Retrun Ri(X)	$\overline{X}$ (Rp)	X- $\overline{X}$	(X-$\overline{X}$)^2
2016	104.14				
2017	134.39	29.04	16.46	12.58	158.33
2018	135.59	0.89	16.46	-15.57	242.37
2019	154.90	14.24	16.46	-2.22	4.93
2020	176.03	13.64	16.46	-2.82	7.94
2021	219.13	24.49	16.46	8.03	64.40
Total		82.30			477.97

Year	Market Rm (X)	Ri (Y)	XY	X^2
2017	29.13	29.04	846.03	848.56
2018	1.26	0.89	1.12	1.59
2019	13.97	14.24	198.93	195.16
2020	13.49	13.64	184.04	181.98
2021	24.07	24.49	589.354	579.3649
	81.92	82.30	1819.48	1806.65

N	5			
$\sum x$	81.92		**SD**	10.93
$\sum y$	82.30		**Beta**	1.01
$\sum xy$	1819.48		**SHARPE**	0.96
$\sum x^2$	1806.65		**Treynor**	10.31
MEAN OF FUND	**16.46048**		**alpha**	-0.07
Ri	16.46			
Rm	16.38			
RF	6			

Interpretation: The above table reveals that **SBI Equity Hybrid Fund Direct Plan – Growth** is showing the average return of 16.46, Beta of 1.01, Sharpe Ratio of 0.96, Treynor's Ratio of 10.31, Jensen Ratio of -0.07 respectively.

4.3 Table No:
Table showing the Returns of the SBI Short Term Debt Fund Direct Plan – Growth for the year 2016-2021

Year	NAV	Fund Retrun Ri(X)	$\overline{X}$ (Rp)	X-$\overline{X}$	(X-$\overline{X}$)^2
2016	18.93				
2017	20.13	6.34	7.34	- 1.00	1.00
2018	21.47	6.64	7.34	- 0.70	0.49
2019	23.62	10.02	7.34	2.68	7.21
2020	26.08	10.41	7.34	3.07	9.42
2021	26.94	3.29	7.34	- 4.05	16.40
Total		36.71			34.51

Year	Market Rm (X)	Ri (Y)	XY	X^2
2017	6.36	6.34	40.34	40.45
2018	6.53	6.64	43.38	42.64
2019	10.04	10.02	100.64	100.80
2020	10.32	10.41	107.42	106.50
2021	3.26	3.29	10.72525	10.6276
	36.51	36.71	302.50	301.02

N	5	SD	2.94
$\sum x$	36.51	Beta	1.00
$\sum y$	36.71	SHARPE	0.46
$\sum xy$	302.50	treynor	1.34
$\sum x^2$	301.02	alpha	0.04
MEAN OF FUND	7.34		
Ri	7.34		
Rm	7.30		
RF	6		

Interpretation –

The above table reveals that **SBI Short Term Debt Fund Direct Plan –** Growth is showing the average return of 7.34 , Beta of 1.01 , Sharpe Ratio of 0.46 , Treynor's Ratio of 1.34 , Jensen Ratio of 0.04 respectively.

4.4 Table No

Table showing the Returns of SBI Focused Equity Fund - Direct Plan – Growth for the year 2016-2021

Year	NAV	Fund Retrun Ri(X)	$\overline{X}$ (Rp)	X- $\overline{X}$	(X-$\overline{X}$)^2
2016	98.24				
2017	143.52	46.09	24.14	21.95	481.99
2018	139.42	-2.86	24.14	-27.00	728.88
2019	163.37	17.18	24.14	-6.96	48.44
2020	189.11	15.75	24.14	-8.39	70.32
2021	273.32	44.53	24.14	20.39	415.66
Total		120.70			1745.29

Year	Market Rm (X)	Ri (Y)	XY	X^2
2017	45.98	46.09	2119.39	2114.16
2018	-2.87	-2.86	8.20	8.24
2019	16.78	17.18	288.28	281.57
2020	15.78	15.75	248.60	249.01
2021	43.95	44.53	1956.996	1931.603
	119.62	120.70	4621.47	4584.58

N	5		**SD**	20.89
$\sum x$	119.62		**Beta**	1.01
$\sum y$	120.70		**SHARPE**	0.87
$\sum xy$	4621.47		**treynor**	18.02
$\sum x^2$	4584.58		**alpha**	0.10
MEAN OF FUND	**24.14**			
Ri	24.14			
Rm	23.92			
RF	6			

Interpretation –

The above table reveals that **SBI Focused Equity Fund - Direct Plan – Growth** is showing the average return of 24.14, Beta of 1.01, Sharpe Ratio of 0.87, Treynor's Ratio of 18.02 , Jensen Ratio of 0.10 respectively.

4.5 Table No

Table showing the Returns of SBI Small Cap Fund Direct Plan – Growth for the year 2016-2021

Year	NAV	Fund Retrun Ri(X)	$\bar{X}$ (Rp)	X- $\bar{X}$	(X-$\bar{X}$)^2
2016	36.66				
2017	66.16	80.47	30.70	49.77	2477.02
2018	53.83	-18.64	30.70	-49.34	2434.10
2019	57.81	7.39	30.70	-23.31	543.19
2020	78.14	35.17	30.70	4.47	19.95
2021	116.51	49.10	30.70	18.40	338.71
Total		153.50			5812.98

Year	Market Rm (X)	Ri (Y)	XY	X^2
2017	80.44	80.47	6472.94	6470.59
2018	-18.69	-18.64	348.32	349.32
2019	7.42	7.39	54.86	55.06
2020	34.99	35.17	1230.49	1224.30
2021	47.56	49.10	2335.394	2261.954
	151.72	153.4972826	10442.01	10361.22

|			
∑x	151.72	**SD**	38.12
∑y	153.50	**Beta**	1.00
∑xy	10442.01	**SHARPE**	0.65
∑x^2	10361.22	**treynor**	24.58
MEAN OF FUND	**30.70**	**alpha**	0.24
Ri	30.70		
Rm	30.34		
RF	6		

Interpretation –

The above table reveals that **SBI Small Cap Fund Direct Plan – Growth** is showing the average return of 30.70 , Beta of 1.00 , Sharpe Ratio of 0.65, Treynor's Ratio of 24.58 , Jensen Ratio of 0.24 respectively.

4.6 Table No

Table showing the Returns of SBI Magnum Mid Cap Fund Direct Plan – Growth for year 2016-2021

Year	NAV	Fund Retrun Ri(X)	$\bar{X}$ (Rp)	X- $\bar{X}$	(X- $\bar{X}$)^2
2016	67.07				
2017	90.56	35.02	20.82	14.20	201.70
2018	75.12	-17.05	20.82	- 37.87	1434.10
2019	75.79	0.89	20.82	- 19.93	397.13
2020	99.74	31.60	20.82	10.78	116.22
2021	153.24	53.64	20.82	32.82	1077.12
Total		104.11			3226.26

Year	Market Rm (X)	Ri (Y)	XY	X^2
2017	35.13	35.02	1230.36	1234.12
2018	-17.1	-17.05	291.55	292.41
2019	0.69	0.89	0.62	0.48
2020	31.08	31.60	982.14	965.97
2021	51.9	53.64	2783.89	2693.61
	101.7	104.11	5288.55	5186.58

N	5	**SD**	28.40
$\sum x$	101.7	**Beta**	1.02
$\sum y$	104.11	**SHARPE**	0.52
$\sum xy$	5288.55	**treynor**	14.57
$\sum x^2$	5186.58	**alpha**	0.24
MEAN OF FUND	**20.82**		
Ri	20.82		
Rm	20.34		
RF	6		

Interpretation –

The above table reveals that **SBI Magnum Mid Cap Fund Direct Plan – Growth** is showing the average return of 20.82 , Beta of 1.02 , Sharpe Ratio of 0.52 , Treynor's Ratio of 14.57 , Jensen Ratio of 0.24 respectively.

4.7 Table No

Table showing the Average Returns of SBI Mutual Funds in the year 2016-2021

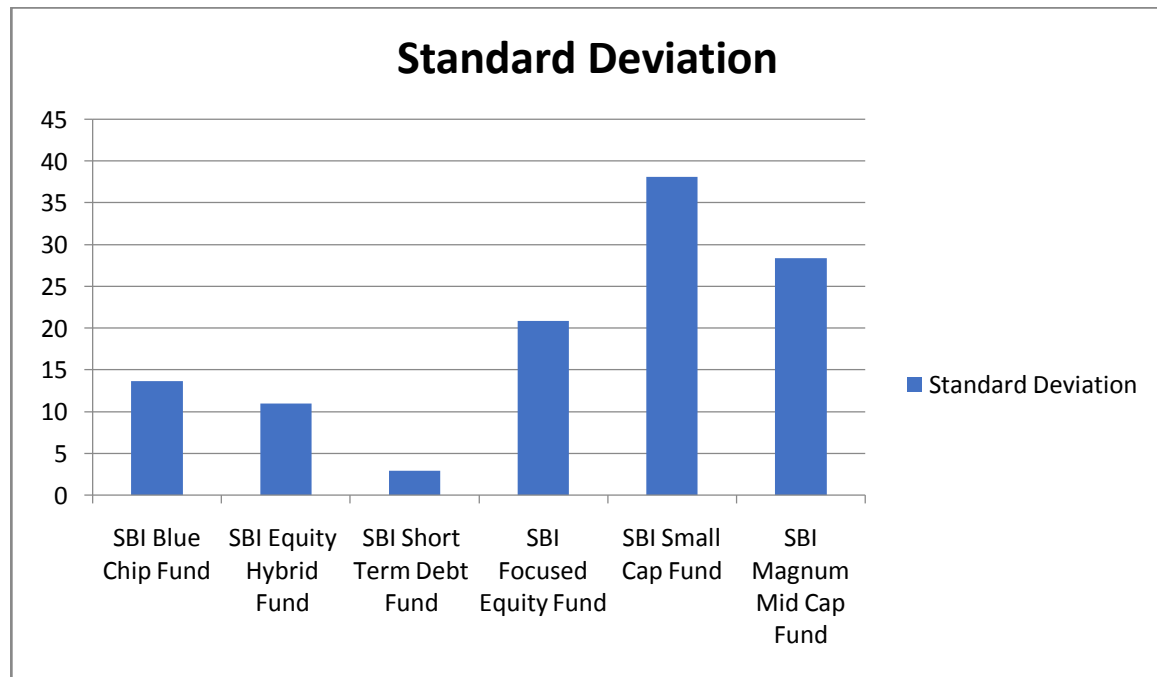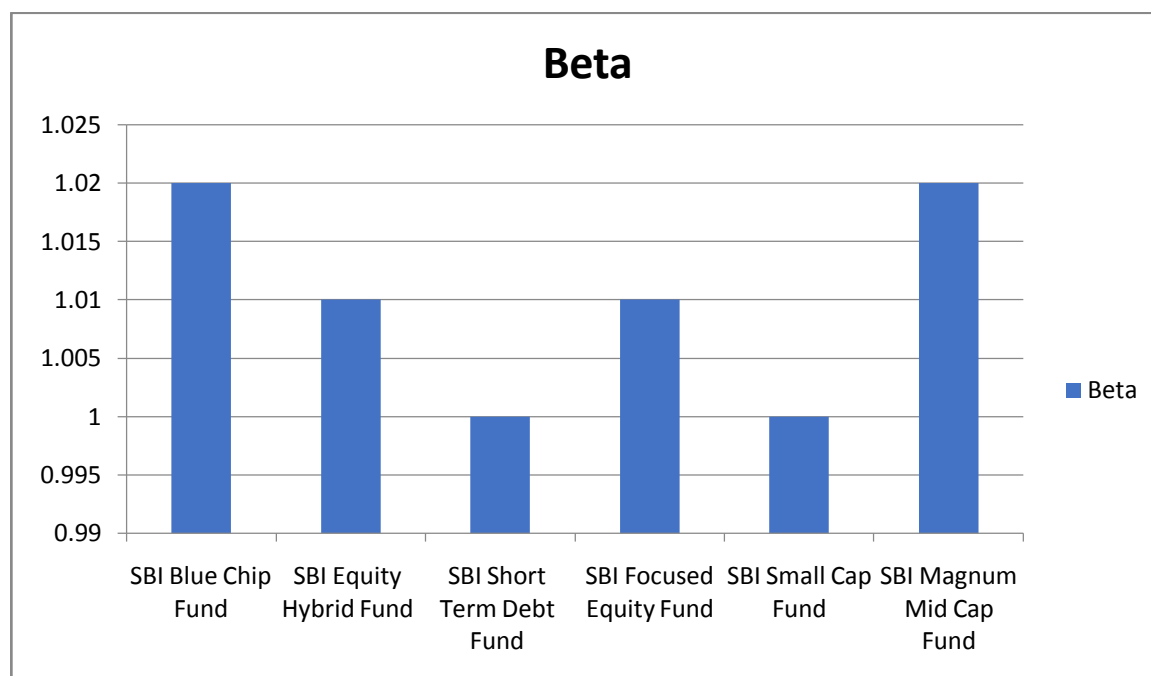| Fund Name	Mean
SBI Blue Chip Fund Direct Plan – Growth	17.07
SBI Equity Hybrid Fund Direct Plan – Growth	16.46
SBI Short Term Debt Fund Direct Plan - Growth	7.34
SBI Focused Equity Fund Direct Plan – Growth	24.14
SBI Small Cap Fund Direct Plan - Growth	30.70
SBI Magnum Mid Cap Fund Direct Plan - Growth	20.82
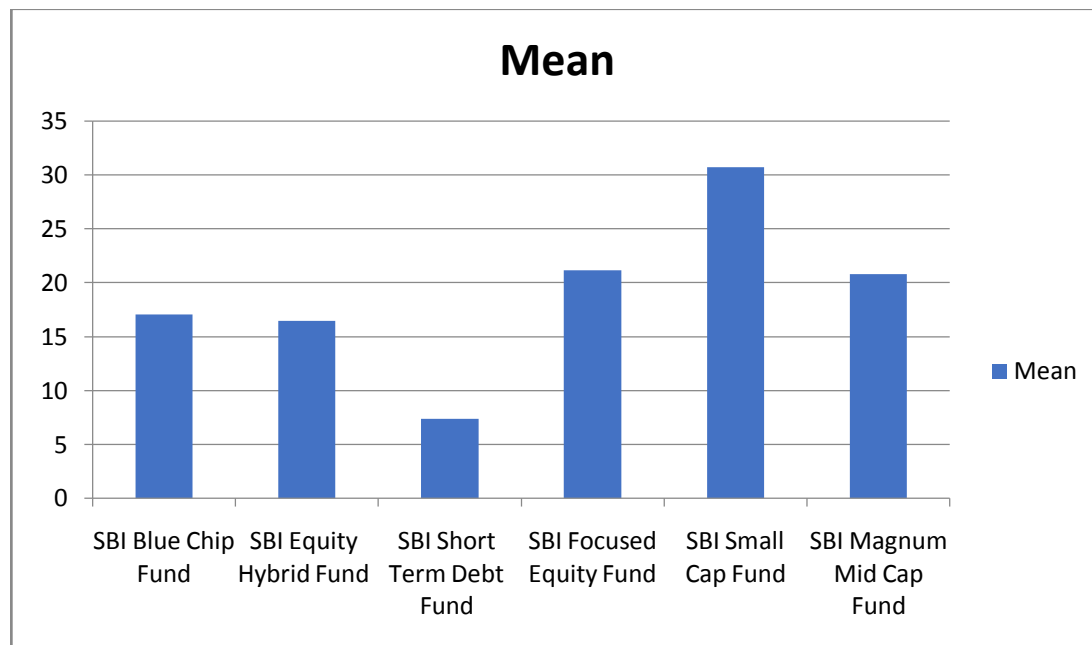
Interpretation –

- The above table is showing that SBI Short Term Debt Fund Direct Plan – Growth is giving lowest average returns of 7.34.

- The above table is showing that SBI Small Cap Fund Direct Plan – Growth is giving highest average returns of 30.70.

4.8 Table No

The below table is showing the Standard Deviation of SBI Mutual Funds of year 2016-2021

Fund Name	Standard Deviation
SBI Blue Chip Fund Direct Plan – Growth	13.62
SBI Equity Hybrid Fund Direct Plan – Growth	10.93
SBI Short Term Debt Fund Direct Plan - Growth	2.94
SBI Focused Equity Fund Direct Plan – Growth	20.89
SBI Small Cap Fund Direct Plan - Growth	38.12
SBI Magnum Mid Cap Fund Direct Plan - Growth	28.40

Interpretation –

- The above table is showing that SBI Short Term Debt Fund Direct Plan – Growth is giving lowest standard deviation of 2.94.
- The above table is showing that SBI Small Cap Fund Direct Plan – Growth is giving highest standard deviation of 38.12.

4.9 Table No

The below table is showing the beta of the SBI mutual Funds of year 2016-2021

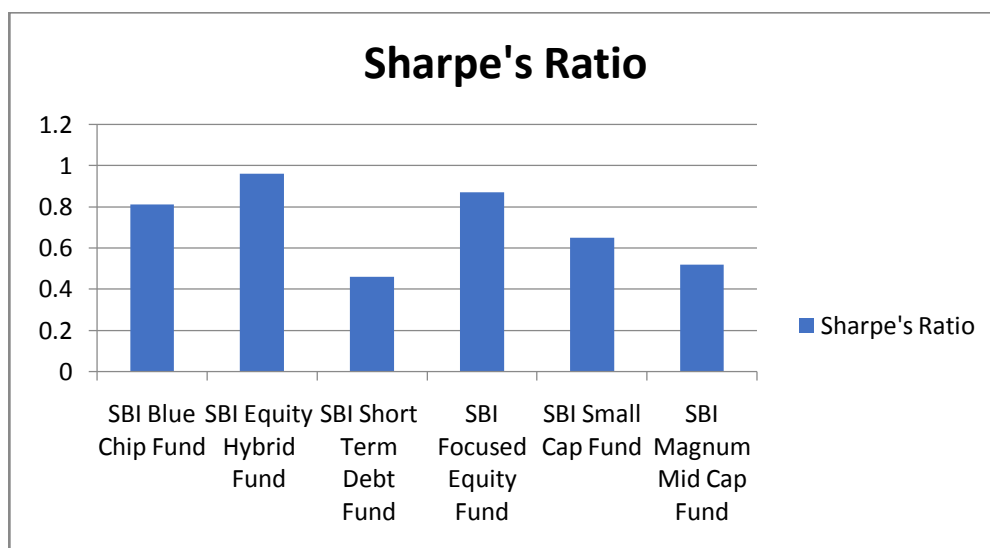| Fund Name	Beta
SBI Blue Chip Fund Direct Plan – Growth	1.02
SBI Equity Hybrid Fund Direct Plan – Growth	1.01
SBI Short Term Debt Fund Direct Plan - Growth	1.00
SBI Focused Equity Fund Direct Plan – Growth	1.01
SBI Small Cap Fund Direct Plan - Growth	1.00
SBI Magnum Mid Cap Fund Direct Plan - Growth	1.02

Interpretation

- The above table is showing that SBI Short Term Debt Fund Direct Plan – Growth and SBI Small Cap Fund Direct Plan - Growth is having lowest beta of 1.00.
- The above table is showing that SBI Blue Chip Fund Direct Plan – Growth and SBI Magnum Mid Cap Fund Direct Plan - Growth is having highest beta of 1.02.

4.10 Table No

The below table is showing Sharpe's Ratio of SBI Mutual Funds of year 2016-2021

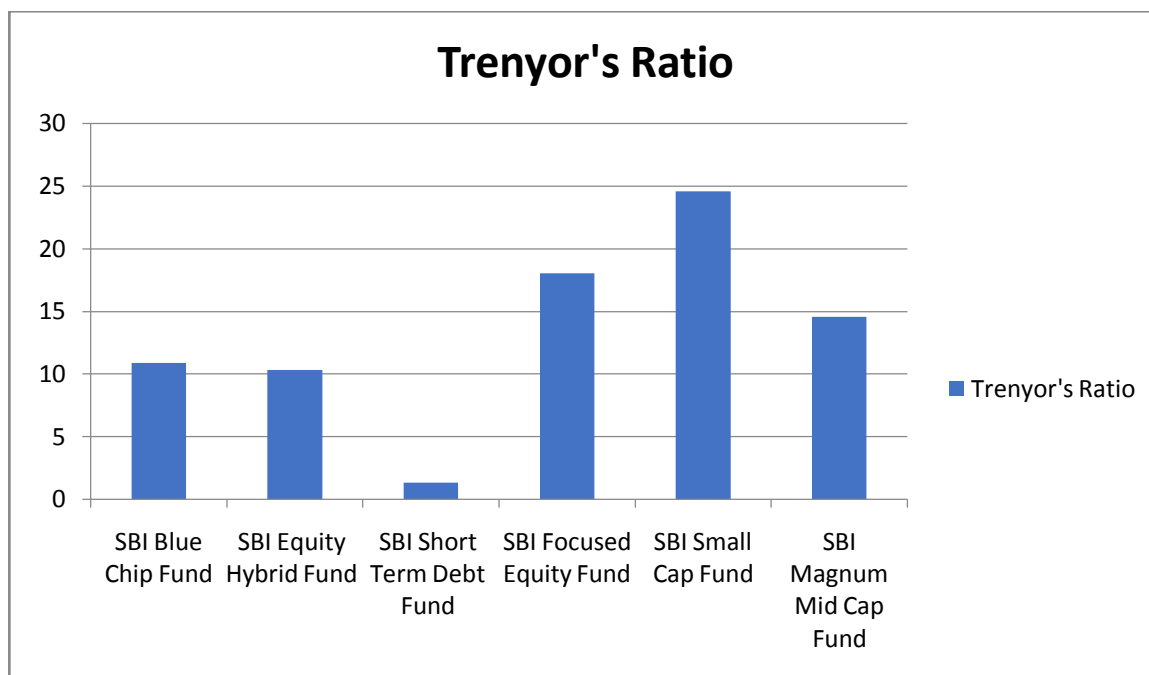| Fund Name	Sharpe's Ratio
SBI Blue Chip Fund Direct Plan – Growth	0.81
SBI Equity Hybrid Fund Direct Plan – Growth	0.96
SBI Short Term Debt Fund Direct Plan - Growth	0.46
SBI Focused Equity Fund Direct Plan – Growth	0.87
SBI Small Cap Fund Direct Plan - Growth	0.65
SBI Magnum Mid Cap Fund Direct Plan - Growth	0.52

Interpretation -

- The above table is showing that SBI Short Term Debt Fund Direct Plan – Growth is having lowest Sharpe's Ratio of 0.46.
- The above table is showing that SBI Equity Hybrid Fund Direct Plan – Growth is giving highest Sharpe's Ratio of 0.96.

4.11 Table No

The below table is showing Trenyor's Ratio of SBI Mutual Funds of year 2016-2021

| Fund Name	Trenyor's Ratio
SBI Blue Chip Fund Direct Plan – Growth	10.88
SBI Equity Hybrid Fund Direct Plan – Growth	10.31
SBI Short Term Debt Fund Direct Plan - Growth	1.34
SBI Focused Equity Fund Direct Plan – Growth	18.02
SBI Small Cap Fund Direct Plan - Growth	24.58
SBI Magnum Mid Cap Fund Direct Plan - Growth	14.57

Trenyor's Ratio

Interpretation -

- The above table is showing that SBI Short Term Debt Fund Direct Plan – Growth is having lowest Treynor's Ratio of 1.34.
- The above table is showing that SBI Small Cap Fund Direct Plan – Growth is having highest Treynor's Ratio of 24.58.

4.12 Table No

The below table is showing Jensen's Ratio of SBI Mutual Funds of year 2016-2021

Fund Name	Jensen's Ratio
SBI Blue Chip Fund Direct Plan – Growth	-0.15
SBI Equity Hybrid Fund Direct Plan – Growth	-0.07
SBI Short Term Debt Fund Direct Plan - Growth	0.04
SBI Focused Equity Fund Direct Plan – Growth	0.10
SBI Small Cap Fund Direct Plan - Growth	0.24
SBI Magnum Mid Cap Fund Direct Plan - Growth	0.24
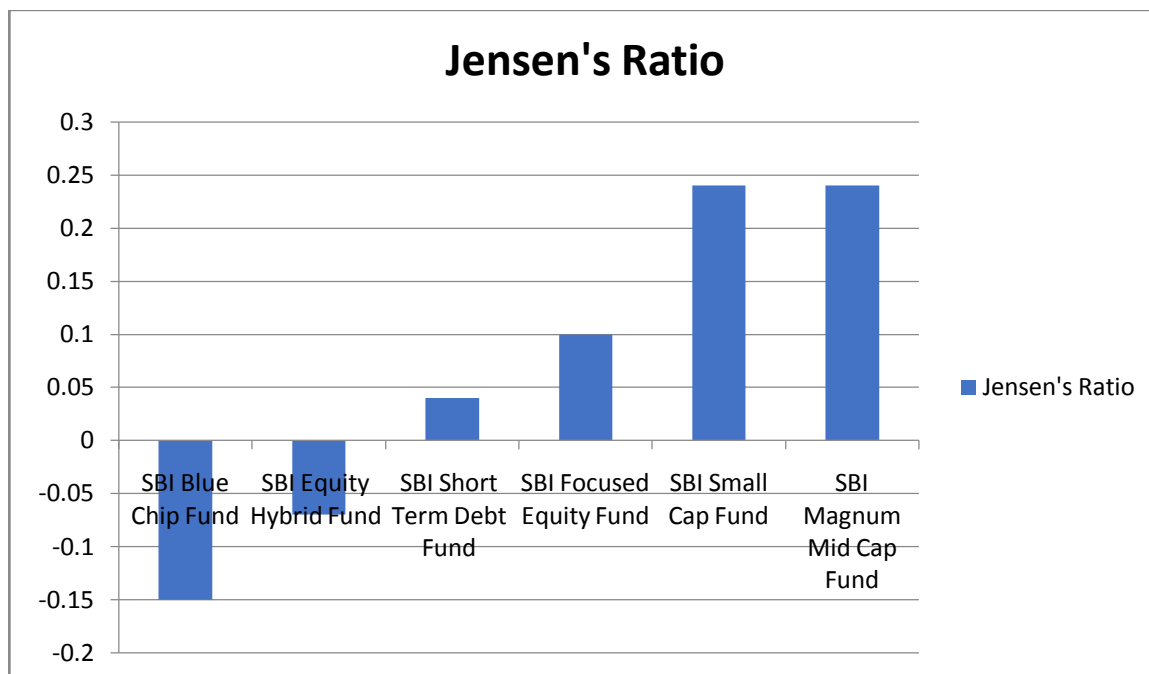
Jensen's Ratio

Interpretation -

- The above table is showing that SBI Blue Chip Fund Direct Plan – Growth is having lowest Jensen's Ratio of -0.15.
- The above table is showing that SBI Small Cap Fund Direct Plan – Growth and SBI Magnum Mid Cap Fund Direct Plan - Growth is having highest Jensen's Ratio of 0.24.

5.0 FINDINGS AND CONCLUSION

5.1 FINDINGS

1. SBI small cap fund has given good average return for the last 5 years of 30.70
2. By measuring SD, we found that which schemes have consistent rate of return over the time
3. SBI small cap fund is more volatile and riskier as it is having high SD of 38.12%
4. SBI Short Term Debt fund is having record of consistent return and it is more predictable as it is having low SD of 2.94%.
5. SBI Blue Chip Fund and SBI magnum have beta 1.02 that means it is 0.02% more volatile than market.
6. Short Term Debt fund and Small Cap Fund have beta 1 that means they move along with the market.
7. SBI Equity Hybrid Fund has high Sharpe's Ratio with 0.96 % that means it has better risk adjusted performance.
8. SBI Small Cap Fund is having greater alpha of 24.58% that means this portfolio is more suitable investment.

5.2 CONCULSION:

1. In today's world, the mutual fund business is one of the most popular investment options. It is essential to a country's economic development. Mutual funds are mostly reliant on the success of the stock market. If the market is performing well, its returns are good, and vice versa.
2. The analysis concludes that mutual funds are a safe way to speculate. Many investors' only option for investing in an intellectually diverse portfolio is to use a mutual fund, after studying and assessing several mutual fund plans, take the following strategy as it is possible to reach a conclusion.

REFERENCES

1. B., R., & P., D. (2011). A comparative analysis of returns of Mutual Fund Schemes ranked 1 by CRISIL.
2. M, J., & V., P. (2020). A study on performance evaluation of HDFC Mutual Funds in India.
3. R., K. ((2014)). Performance Evaluation of debt Mutual Fund schemes in India.
4. S., M. A., & P., C. (2015). An Emperical Study on Performance Evauation of SBI Mutual Fund.
5. Sharma K. B (2020) Performanece Analysis of Mutual Fund: A comparative study of the Selected debt Mutual fund scheme in india A Global Journal Of interdisciplinary studies