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A Comparative Analysis of Debt Mutual Funds

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Abstract: **Mutual funds are a very important tool for investing. Mutual fund investing has a significant contribution when it comes to the development of the Indian economy. The Indian financial market has seen a great upheaval in the early eighties and nineties. Mutual funds investment has acted as a bridge connecting the gap between the supply and demand for funds in the financial markets. Since 2003, the financial sector has been on a constant rise. The mutual fund industry has acted on the forefront to contribute to the Indian economy.**

Keywords: **Mutual fund, Indian Economy and Financial Market.**

1. INTRODUCTION

MUTUAL FUND INDUSTRY IN INDIA:

The first introduction of a mutual fund in India occurred in 1963, when the government of India launched Unit Trust of India(UTI). UTI enjoyed a monopoly in the Indian mutual fund market until 1987, when a host of other government-controlled Indian financial companies established their own funds, including State Bank of India, Canara Bank and Punjab National Bank. This market was made open to private players in 1993, as a result of the historic constitutional amendments brought forward by the then congress-led government under the existing regime of Liberalization, Privatization and Globalization(LPG). The First private sector fund to operate in India was Kothari Pioneer, which later merged with Franklin Templeton. In 1996, SEBI, the regulator of mutual funds in India, formulated the Mutual Fund Regulation which is a comprehensive regulatory framework.

MUTUAL FUND INDUSTRY CONTRIBUTION TOWARDS

INDIAN ECONOMY:

Since 2003, the financial sector has been on a constant rise. The mutual fund industry has acted on the forefront to contribute to the Indian economy.

- Development of Financial Sector
- Mutual Funds as a Source of Investment
- Household Savings Breakdown
- Market Development due to Mutual Funds

OPERATIONAL CONCEPTS:

NET ASSET VALUE (NAV):
STANDARD DEVIATION ANALYSIS
SHARPE RATIO ANALYSIS
BETA ANALYSIS
TREYNOR RATIO ANALYSIS
JENSEN’S ALPHA ANALYSIS
EXPENSE RATIO ANALYSIS

TITLE OF THE STUDY:

"A Comparative Analysis of Debt Mutual Funds"

STATEMENT OF THE PROBLEM:

Mutual fund is one of the safest ways to invest in this highly yet risky market. However, the layman does not know much about the mutual funds. This report aims to shed light on the mutual funds industry by outlining its history, growth in India, and discussing the basics so as to enable a layman to have a thorough understanding about the mutual fund concepts.

Also, the average investor is very often confused by the massive amount of information provided by the mutual fund companies and the large number of schemes being offered. In order to make things slightly easier, various debt mutual funds schemes offered by different company has been compared.

State Bank of India has been a reputed bank and commodity trading company from last many years. State Bank of India also offers mutual fund services to its clients.

OBJECTIVES OF THE STUDY:

1. To examine the performance of Corporate Bond Fund, Income Fund, Gilt Fund, and Dynamic Fund.

2. To Compare the NAV (Net Asset Value) performance of State Bank of India, ICICI Prudential, Kotak, DSP Black Rock and UTI Mutual Fund.

3. To examine the performance of selected schemes by using the portfolio performance evaluation models namely Sharpe, Treynor and Jensen's Alpha.

SCOPE OF THE STUDY:

The study covers a brief study of mutual fund industry across the globe and in India, also their growth. Mutual funds are a very important tool for investing and the purpose of this study is to make them understandable. Therefore, four debt funds are chosen of five mutual fund companies to analysis which debt fund and company is good to invest in terms of risk and return.

SAMPLING TECHNIQUE:

To examine the debt mutual fund schemes performance, four schemes were selected at random basis. Daily NAV of different schemes have been used in this study for the period of three years i.e., December 2013 to December 2016 (three years). Nifty has been used for market portfolio. In the study the monthly yield on 365-day Treasury bills have been used as risk-free rate.

2. DATA COLLECTION METHODOLOGY

SECONDARY DATA:

Secondary data are those data which are available for further analysis.

NAV (Net Asset Value) is taken from personalfn.com and sbimf.com website.

TOOLS FOR DATA COLLECTION:

The research undertaken is mainly based on secondary data and statistical tool. The relevant financial details were collected mainly from the company websites and various business magazines and journals. Also, return and risk ratio is used namely, Sharpe, Treynor and Jensen's alpha ratio.

LIMITATIONS OF THE STUDY:

1. The study is very time consuming. The data used to judge the performances of the scheme is five years.

2. The study has made a conclusion based on various debt mutual funds, and hence, suffers from generalization and therefore, the conclusion might not be universal to the sector.

3. Most of the information collected was secondary data and hence accuracy may have been compromised.

4. Since most of the secondary data has been collected from multiple sources, there may be a conflict in the data presented as it varies from source to source.

3. STATISTICAL TOOLS

NET ASSET VALUE (NAV):

NAV is calculated by the formula:

Market/Fair Value of Scheme's investments (+) Receivables (+) Accrued Income (+) Other Assets
RETURNS (-) Accrued expenses (-) Payables (-) Other Liabilities

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Number of Units Outstanding

STANDARD DEVIATION ANALYSIS:

$$SD = \frac{1}{n} (x_i \quad x_{mean})^2$$

Where,

$(x_i \quad x_{mean})^2$ gives the square of the sum of differences of each value in the sample from the mean of the sample of 'n' element.

SHARPE RATIO ANALYSIS:

Where,

R is the asset return,

Rf is the risk-free rate of return,

E[*R* − *Rf*] is the expected value of the excess of the asset return over the Benchmark return

σ is the standard deviation of the asset.

BETA ANALYSIS:

COV_{im} is covariance of market returns.

m^2 is market variance.

TREYNOR RATIO ANALYSIS:

T = Ri –Rf

β

T = Treynor ratio,

Ri = portfolio *i*'s return,

Rf = risk free rate

β = portfolio *i*'s beta

JENSEN'S ALPHA ANALYSIS:

Jensen's alpha = Portfolio Return - [Risk Free Rate + Portfolio Beta * (Market Return - Risk Free Rate)]

SWOT ANALYSIS OF SBI AMC:

STRENGTHS:

Professional Investment Management

Diversification

Low Cost

Convenience and Flexibility

Personal Service

Liquidity

Transparency

WEAKNESS:

Risk is defined as short-term price variability. But on a long-term basis, risk is the possibility that your accumulated real capital will be insufficient to meet your financial goals. And if you want to reach your financial goals, you must start with an honest appraisal of your own personal comfort zone with regard to risk.

Individual tolerance for risk varies, creating a distinct "investment personality" for each investor. Some investors can accept short-term volatility with ease, others with near panic. So whether you consider your investment temperament to be conservative, moderate or aggressive, you need to focus on how comfortable or uncomfortable you will be as the value of your investment moves up or down.

OPPORTUNITIES:

As per the BLOOM BERG survey India's total disposable income will increase to 40% by 2016, along with total income of an average Indian family will be 450000.

As people are getting aware of the fact of investment and want to invest more with specialized assistant mutual funds have great opportunities.

As the risk is diversified and funds are available as per the different objective people can invest as per their requirement.

Maximum money is invested in equity market and as the GDP is growing sturdily this is a great opportunity for the companies to go ahead and invest more in to the market.

THREATS:

A new competitor in home market

Price wars with competitors

Competitor has new innovative product or service

Taxation

COMPETITORS OF SBI MUTUAL FUND:

The presence of more than one firm in an industry or the presence of substitute products offered by firms in other industries implies competition. Even in mutual fund industry there are numbers of firms operating thereby increasing competition. Some of them are as follows:

Prudential ICICI Mutual fund	Kotak Mahindra Mutual fund
HDFC Mutual fund	Franklin Templeton Mutual fund
UTI Mutual fund	Principal Mutual Fund
PNB Mutual Fund	GIC Mutual Fund
ING Vyasa Mutual Fund	LIC Mutual Fund
JM Financial Mutual Fund	Taurus Mutual fund
Birla Sun Life Mutual Fund	Deutsche Mutual Fund

Morgan Stanley Mutual Fund	DPS BlackRock Mutual Fund
Tata Mutual Fund	HSBC Mutual fund

COMPARISON OF STANDARD DEVIATION OF SELECTED SCHEMES

Schemes	**Dynamic debt fund (%)**	**Giltdebt fund (%)**	**Income fund (%)**	**Corporate bond fund (%)**
SBI	0.21	0.10	0.17	0.08
DSP BlackRock	0.25	0.11	0.07	0.23
UTI	0.26	0.08	0.10	0.25
ICICI Prudential	0.20	0.13	0.06	0.10
Kotak	0.09	0.16	0.09	0.07

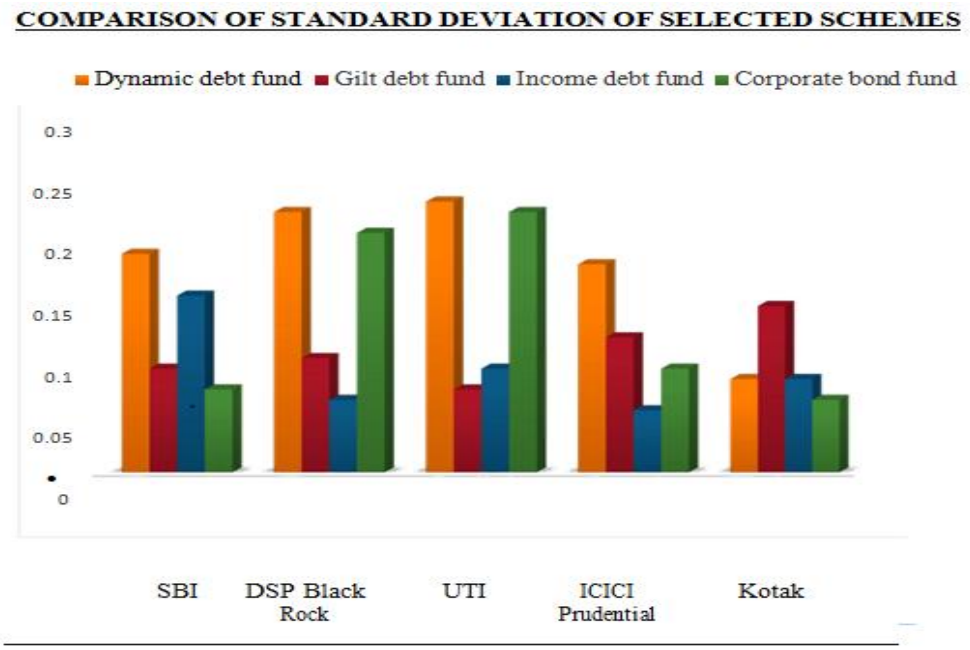
ANALYSIS:

Among **DYNAMIC DEBT FUNDS**, UTI Fund has the highest standard deviation of 0.26, followed by DSP Blackrock Dynamic Fund with 0.25 which indicates it is highly risky. SBI Dynamic Fund has a standard deviation of 0.21, ICICI Prudential Dynamic Fund with 0.20 and Kotak Fund has the lowest value of 0.09 among all dynamic debt funds which means it is preferable and less risky.

Among **GILT DEBT FUNDS**, Kotak Gilt Fund has the highest standard deviation of 0.16, followed by ICICI Gilt Fund with 0.13 as it is risky to invest. DSP Gilt Fund has a standard deviation of 0.11, SBI Gilt Fund with 0.10 and UTI Gilt Fund has the lowest value of 0.08 among all gilt debt funds which means these gilt funds are less risky and better because standard deviation is low.

Among **INCOME DEBT FUNDS**, SBI Fund has the highest standard deviation of 0.17, followed by UTI Fund with 0.10 so it is risky because standard deviation is high. Kotak Income Fund has a standard deviation of 0.09, followed by DSP Fund with 0.07 and ICICI Fund has the lowest value of 0.06 among all income debt funds as these companies have lesser standard deviation value, they are less risky.

Among **CORPORATE BOND FUNDS**, UTI Fund has the highest standard deviation of 0.25, followed by DSP Blackrock Fund with 0.23, these companies are highly risky. ICICI Corporate Bond Fund has a standard deviation of 0.10, also SBI Corporate Bond Fund with 0.08 and Kotak Fund has the lowest value of 0.07 among all corporate bond funds so they are less risky because the value is low.



INFERENCE:

DYNAMIC DEBT FUNDS:

Among Dynamic Debt Funds, UTI Dynamic Fund has the highest standard deviation and Kotak Dynamic Fund has the lowest value among all dynamic debt funds. Hence, UTI Dynamic Fund is the most risky scheme whereas Kotak Dynamic Fund is the least risky scheme which makes it more preferable in terms of standard deviation.

GILT DEBT FUNDS:

Among Gilt Debt Funds, Kotak Gilt Fund has the highest standard deviation and UTI Gilt Debt Fund has the lowest value among all dynamic debt funds. Hence, Kotak Gilt Fund is the most risky scheme whereas UTI Gilt Fund is the least risky scheme which makes it more preferable in terms of standard deviation.

INCOME DEBT FUNDS:

Among Income Debt Funds, SBI Income Fund has the highest standard deviation and ICICI Income Fund has the lowest value among all dynamic debt funds. Hence, SBI Income Fund is the most risky scheme whereas ICICI Income Fund is the least risky scheme which makes it more preferable in terms of standard deviation.

CORPORATE BOND FUNDS:

Among Corporate Bond Funds, UTI corporate bond fund has the highest standard deviation and Kotak corporate bond fund has the lowest value among all debt funds. Hence, Kotak Fund is the most risky scheme whereas UTI Fund is the least risky scheme which makes it more preferable in terms of standard deviation.

COMPARISON OF BETA OF SELECTED SCHEMES

Schemes	**Dynamic debt fund (%)**	**Giltdebt fund (%)**	**Income fund (%)**	**Corporate bond fund (%)**
SBI	0.0077	-0.0023	0.0041	0.08
DSP BlackRock	0.0135	-0.0038	-0.0135	0.23
UTI	-0.0132	-0.0024	-0.0029	0.25
ICICI Prudential	0.0002	-0.0025	0.0010	0.10
Kotak	0.0092	-0.0211	0.0098	0.07

ANALYSIS:

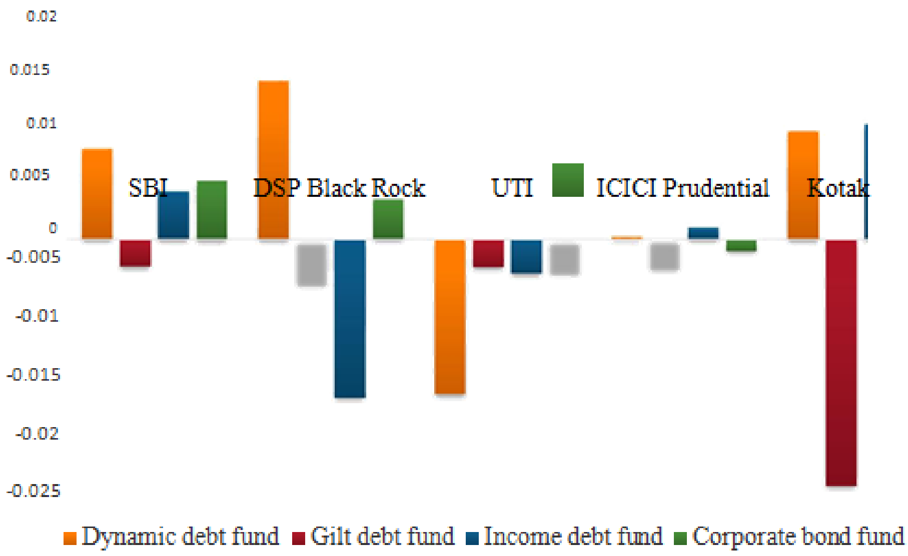
It can be seen from the above table, **DYNAMIC DEBT FUNDS**, UTI Dynamic Fund has the lowest beta of -0.0132, followed by ICICI Dynamic Fund with 0.0002. SBI Dynamic Fund has a beta of 0.0077, Kotak Dynamic Fund has a beta of 0.0092 and DSP BlackRock Dynamic Debt Fund has the highest beta of 0.0135 among all dynamic debt fund which indicates dynamic debt fund is less volatile.

Among **GILT DEBT FUNDS**, Kotak Gilt Debt Fund has the lowest beta of -0.0211, followed by DSP Gilt Fund has a beta of -0.0038, ICICI Gilt Debt Fund has beta of -0.0025, UTI Gilt Fund of -0.0024 and SBI Gilt Debt Fund with highest beta of -0.0023 which means it is less volatile as the market beta is 1 as there is no beta value more than 1.

Among **INCOME DEBT FUNDS**, DSP Income Fund has the lowest beta of -0.0135, followed by UTI Income Fund with -0.0029. ICICI Income Fund has a beta of 0.0010, SBI Income Fund with 0.0041 and Kotak Income Debt Fund has the highest beta of 0.0098 among all income debt fund. These companies are less volatile because it is less than 1.

Among **CORPORATE BOND FUNDS**, UTI corporate bond Fund has the lowest beta of -0.0028, followed by Kotak Fund with -0.0011. ICICI corporate bond Fund has a beta of -0.0007, DSP BlackRock with 0.0034 and SBI Fund has the highest beta of 0.0050 among all corporate bond funds which indicates less volatile.

COMPARISON OF BETA OF SELECTED SCHEMES



INFERENCE:

In terms of BETA, a scheme with a lower beta ratio will be less volatile to market fluctuations as compared to schemes with higher beta ratios. Therefore, lower the BETA ratio, safer is the scheme in relation to market fluctuations.

DYNAMIC DEBT FUNDS:

Among the selected Dynamic Debt Funds, UTI Dynamic Debt Fund has the lowest BETA, making it the least risky, and DSP Dynamic Debt Fund has the highest BETA, making it the scheme with the highest beta risk. Therefore, UTI Dynamic Fund is the best among all the schemes in terms of BETA ratio because it is less volatile.

GILT DEBT FUNDS:

Among the selected Gilt Debt Funds, Kotak Gilt Debt Fund has the lowest BETA, making it the least risky, and SBI Gilt Debt has the highest BETA as it is more volatile. Therefore, Kotak Gilt Debt Fund is the best among all the schemes in terms of BETA ratio.

DEBT FUND:

Among the selected Income Debt Funds, DSP Blackrock Income Debt Fund has the lowest BETA, making it the least risky, and Kotak Income Debt Fund has the highest BETA, making it the scheme with the highest beta risk. Therefore, DSP Blackrock Income Fund is the best among all the schemes in terms of BETA ratio because it is less volatile to market fluctuation.

CORPORATE BOND FUND:

Among the selected Corporate Bond funds, UTI Corporate Bond Fund has the lowest BETA, making it the least risky, and SBI Corporate Bond Fund has the highest BETA, making it the scheme with the highest beta risk. Therefore, UTI Corporate Bond is the best among all the schemes in terms of BETA ratio.

COMPARISON OF SHARPE RATIO OF SELECTED SCHEMES

Schemes	**Dynamic debt fund (%)**	**Giltdebt fund (%)**	**Income fund (%)**	**Corporate bond fund (%)**
SBI	46.24	73.84	45.50	66.22
DSP BlackRock	30.90	43.63	74.19	30.69
UTI	37.31	36.22	43.03	34.54
ICICI Prudential	41.56	44.20	89.42	50.41
Kotak	49.81	36.67	66.38	51.83

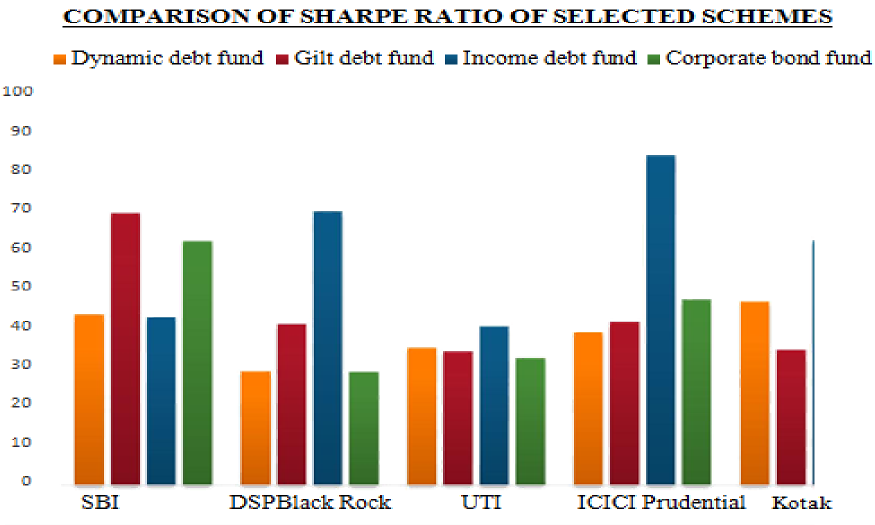
ANALYSIS:

Among **DYNAMIC DEBT FUNDS**, Kotak Dynamic Fund has the highest SHARPE ratio of 49.81, followed by SBI Dynamic Fund with 46.24 because the higher the SHARPE ratio better is the return to investors. ICICI Dynamic Fund has a Sharpe ratio of 41.56, UTI Dynamic Fund with 37.31 and DSP Blackrock Dynamic Fund has the lowest Sharpe ratio of 30.90 which means less return to investors.

Among **GILT DEBT FUNDS**, SBI Gilt Fund has the highest SHARPE ratio of 73.84, followed by ICICI Gilt Fund with 44.20 means the investors are rewarded to the amount of risk held by them. DSP Gilt Fund has a Sharpe ratio of 43.63, Kotak with 36.67 and UTI Gilt Fund has the lowest Sharpe ratio of 36.22 which indicates investors are not rewarded to the amount of risk held by them.

Among **INCOME DEBT FUNDS**, ICICI Income Fund has the highest SHARPE ratio of 89.42, followed by DSP Blackrock Income Debt Fund with 74.19 as the ratio is high meaning the investors are rewarded. Kotak Income Fund has a Sharpe ratio of 66.38, SBI Income fund with 45.50 and UTI Fund has the lowest Sharpe ratio of 43.03 meaning the investors are not rewarded to the amount of risk held by them.

Among **CORPORATE BOND FUNDS**, SBI Fund has the highest SHARPE ratio of 66.22, followed by Kotak Fund with 51.83 which indicate investors are rewarded and have high return. ICICI Fund has a Sharpe ratio of 50.41, UTI Fund with 34.54 and DSP Blackrock Fund has the lowest Sharpe ratio of 30.69 which indicate investors are not rewarded and have less return.



INFERENCE:

In terms of Sharpe ratio, a scheme with a higher ratio will give more returns in relation to the risk taken as compared to schemes with lower ratio. Therefore, higher the Sharpe ratio better is the fund manager’s performance.

DYNAMIC DEBT FUNDS:

Among the selected dynamic debt funds, Kotak Dynamic Debt Fund has the highest SHARPE ratio and DSP Blackrock Dynamic Debt Fund has the lowest SHARPE ratio. Hence, Kotak Dynamic Debt Fund is the best among all Dynamic Funds in terms of SHARPE ratio because the ratio will give more return in relation to the risk.

GILT DEBT FUNDS:

Among the selected gilt debt funds, SBI Gilt Debt Fund has the highest SHARPE ratio and UTI Gilt Debt Fund has the lowest SHARPE ratio. Hence, SBI Gilt Debt Fund is the best among all Gilt Debt Funds in terms of SHARPE ratio means the investors have more return in relation to risk held by them.

INCOME DEBT FUNDS:

Among the selected income debt funds, ICICI Income Debt Fund has the highest SHARPE ratio and UTI Income Debt Fund has the lowest SHARPE ratio. Hence, ICICI Income Debt Fund is the best among all Income Debt Funds in terms of SHARPE ratio indicating return is more than risk.

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CORPORATE BOND FUNDS:

Among the selected corporate bond funds, SBI Fund has the highest SHARPE ratio and DSP Blackrock Fund has the lowest SHARPE ratio. Hence, SBI Fund is the best among all Corporate Bond Funds in terms of SHARPE ratio as there is more return to the risk held by investors.

COMPARISON OF TREYNOR RATIO OF SELECTED SCHEMES

Schemes	**Dynamic debt fund (%)**	**Giltdebt fund (%)**	**Income fund (%)**	**Corporate bond fund (%)**
SBI	1.27	-3.05	1.93	1.03
DSP BlackRock	0.58	-1.26	-0.37	2.10
UTI	-0.73	-1.20	-1.50	-3.11
ICICI Prudential	4.21	-2.32	5.15	-6.92
Kotak	0.50	-0.28	0.58	-3.1

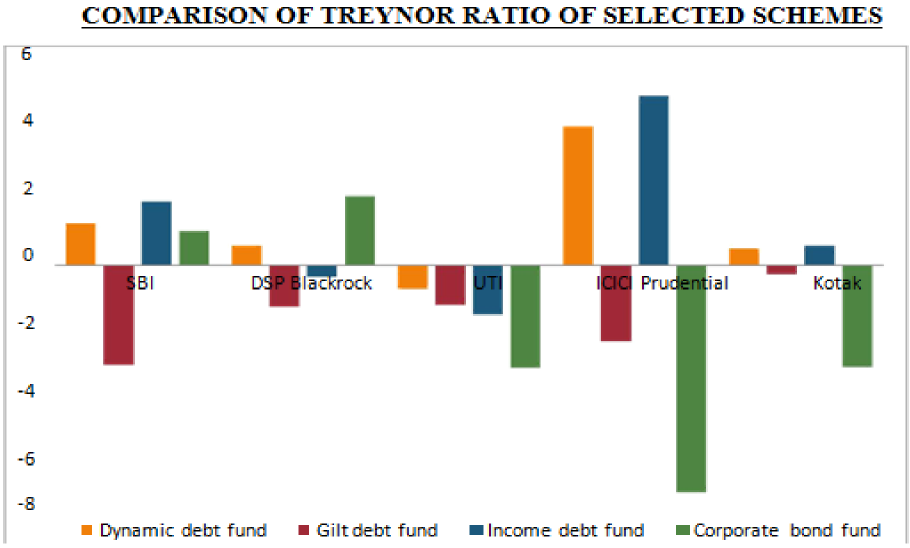
ANALYSIS:

Among **DYNAMIC DEBT FUNDS**, ICICI Dynamic Fund has the highest TREYNOR ratio of 4.21, followed by SBI Dynamic Fund with 1.27 indicating the investors are rewarded to the amount of systematic risk held by them. DSP BlackRock Dynamic Debt Fund has a TREYNOR ratio of 0.58, Kotak with 0.50 and UTI Dynamic Fund has the lowest TREYNOR ratio of -0.73 indicating the investors are not rewarded to the amount of systematic risk.

Among **GILT DEBT FUNDS**, Kotak Gilt Fund has the highest TREYNOR ratio of -0.28, followed by UTI Gilt Debt Fund with -1.20 means the returns are negative and not earned enough to the amount of systematic risk compare to other companies. DSP BlackRock Gilt Debt Fund has a TREYNOR ratio of -1.26, ICICI Gilt Fund with -2.32 and SBI Gilt Fund has the lowest TREYNOR ratio of -3.05 means negative returns.

Among **INCOME DEBT FUNDS**, ICICI Income Fund has the highest TREYNOR ratio of 5.15, followed by SBI Income Debt Fund with 1.93 which means the investors are rewarded to the amount of systematic risk held by them. Kotak Income Debt Fund has a TREYNOR ratio of 0.53, DSP BlackRock with - 0.37 and UTI Income Fund has the lowest TREYNOR ratio of -1.50 which means negative return from DSP and UTI.

Among **CORPORATE BOND FUNDS**, DSP BlackRock Fund has the highest TREYNOR ratio of 2.10, followed by SBI Fund with 1.03 which indicate investors are rewarded to the amount of systematic risk held by them. Kotak Fund with -3.10, UTI Fund has a TREYNOR ratio of -3.11 and ICICI Fund has the lowest TREYNOR ratio of -3.92 which indicate investors are not rewarded to the amount of systematic risk held by them indirectly means negative return



INFERENCE:

In terms of Treynor ratio, a scheme with a higher ratio will give more returns in relation to the systematic risk taken as compared to schemes with lower ratio. Therefore, higher the Treynor ratio better is the fund manager's performance.

DYNAMIC DEBT FUNDS:

Among the selected dynamic debt funds, ICICI Dynamic Debt Fund has the highest TREYNOR ratio, and UTI Dynamic Fund has the lowest TREYNOR ratio. Hence, ICICI Dynamic Debt Fund is the best among all funds in terms of TREYNOR ratio and to investors for positive return from systematic risk held by them.

GILT DEBT FUND:

Among the selected gilt debt funds, Kotak Gilt Fund has the highest TREYNOR ratio, and SBI Gilt Fund has the lowest TREYNOR ratio. Hence, Kotak Gilt Fund is the best among all funds in terms of TREYNOR ratio but has a negative ratio which results in negative return to the systematic risk.

INCOME DEBT FUND:

Among the selected income debt funds, ICICI Income Debt Fund has the highest TREYNOR ratio, and UTI Income Fund has the lowest TREYNOR ratio. Hence, ICICI Income Debt Fund is the best among all funds in terms of TREYNOR ratio as it has a positive ratio which will give a positive return to the amount of systematic risk.

CORPORATE BOND FUND:

Among the selected corporate bond funds, DSP Blackrock Fund has the highest TREYNOR ratio, and ICICI Fund has the lowest TREYNOR ratio. Hence, DSP BlackRock Fund is the best among all funds in terms of TREYNOR ratio having a positive ratio compare to other companies.

COMPARISON OF JENSEN'S ALPHA OF SELECTED SCHEMES

Schemes	Dynamic debt fund (%)	Giltdebt fund (%)	Income fund (%)	Corporate bond fund (%)
SBI	10.61	6.80	8.26	5.66
DSP BlackRock	9.30	4.42	3.61	7.51
UTI	9.57	2.62	4.17	8.36
ICICI Prudential	8.28	5.59	5.09	5.08
Kotak	5.56	3.73	6.74	3.29

ANALYSIS:

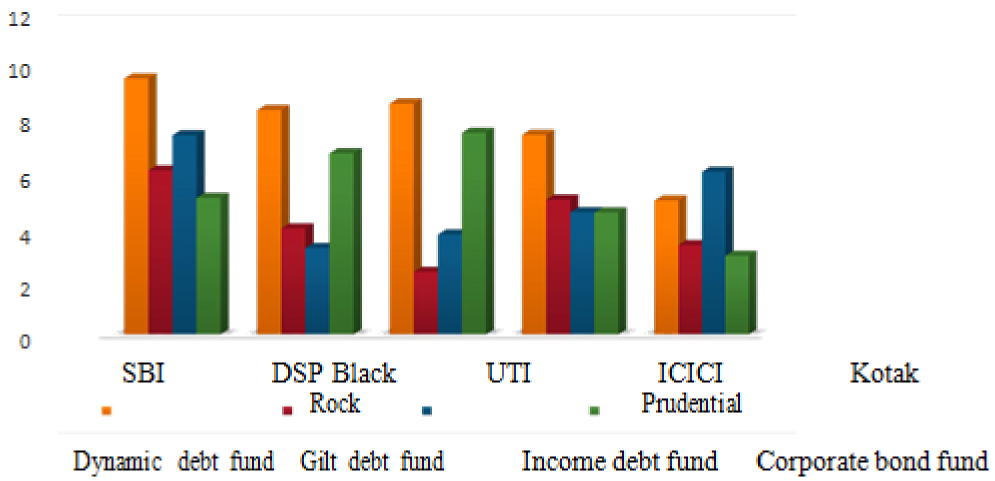
Among **DYNAMIC DEBT FUNDS**, SBI Dynamic Debt Fund has the highest Jensen's alpha of 10.61, followed by UTI Dynamic Fund with 9.57 indicate excess return from the amount of risk. DSP BlackRock Dynamic Fund has Jensen's alpha of 9.30, ICICI Dynamic Debt Fund with a ratio of 8.28 and Kotak Dynamic Debt Fund has the lowest value of 5.56 among all dynamic debt funds indicate less excess return compare to other companies.

Among **GILT DEBT FUNDS**, SBI Gilt Fund has the highest Jensen's alpha of 6.80, followed by ICICI Gilt Fund with 5.59 which means the investment is excess in return of the reward for the assume risk. DSP Gilt Fund has a ratio of 4.42, Kotak with 3.73 And UTI Gilt Debt Fund has the lowest value of 2.62 among all gilt debt funds has a lower excess return for the assume risk.

Among **INCOME DEBT FUNDS**, SBI Income Debt Fund has the highest alpha of 8.26, followed by Kotak Income Fund with 6.74 means the investment has a return in excess for the assume risk. ICICI Income Debt Fund has a alpha of 5.09, UTI Income Debt Fund has a ratio of 4.17 and DSP BlackRock has the lowest value of 3.61 among all income debt funds.

Among **CORPORATE BOND FUNDS**, UTI Corporate Bond Fund has the highest alpha of 8.36, followed by DSP Blackrock Fund with 7.51 indicating the investment return will be in excess for the assume risk. SBI Fund has a ratio of 5.66, ICICI Fund with 5.08 and Kotak Fund has the lowest value of 3.29 among all corporate bond funds indicating the investment return comparatively less.

COMPARISON OF JENSEN'S ALPHA OF SELECTED SCHEMES



INFERENCE:

In terms of ALPHA, a scheme with a higher alpha will give excess returns in relation to the risk taken as compared to schemes with lower alpha. Therefore, higher the alpha better is the fund manager's performance.

DYNAMIC DEBT FUNDS:

Among the selected dynamic debt funds, SBI Dynamic Debt Fund has the highest alpha and Kotak Dynamic Fund has the lowest alpha among all debt funds. Therefore, the performance of fund managers of SBI Dynamic Fund is the best among all dynamic debt fund schemes in terms of alpha because of excess return.

GILT DEBT FUND:

Among the selected gilt debt funds, SBI Gilt Fund has the highest alpha and UTI Gilt Debt Fund has the lowest alpha among all funds. Therefore, the performance of fund manager of SBI Gilt Fund is the best among all Gilt debt fund schemes in terms of alpha because of excess return for the assume risk.

INCOME DEBT FUND:

Among the selected income debt funds, SBI Income Debt Fund has the highest alpha and DSP Blackrock Income Debt Fund has the lowest alpha among all funds. Therefore, the performance of fund managers of SBI Income Debt Fund is the best among all income debt fund schemes in terms of alpha because the return is excess.

CORPORATE BOND FUND:

Among the selected funds, UTI Corporate Bond Fund has the highest alpha and Kotak Fund has the lowest alpha among all funds. Therefore, the performance of fund managers of UTI Corporate Bond Fund is the best among all corporate bond fund schemes in terms of alpha because there is excess return for the assume risk.

COMPARISON OF EXPENSE RATIO OF SELECTED SCHEMES

Schemes	Dynamic debt fund (%)	Giltdebt fund (%)	Income fund (%)	Corporate bond fund (%)
SBI	1.76	1.25	1.76	0.86
DSP BlackRock	1.60	1.76	1.81	0.13
UTI	1.03	1.55	0.99	0.46
ICICI Prudential	0.90	1.42	1.83	0.63
Kotak	0.63	1.00	0.73	0.99

ANALYSIS:

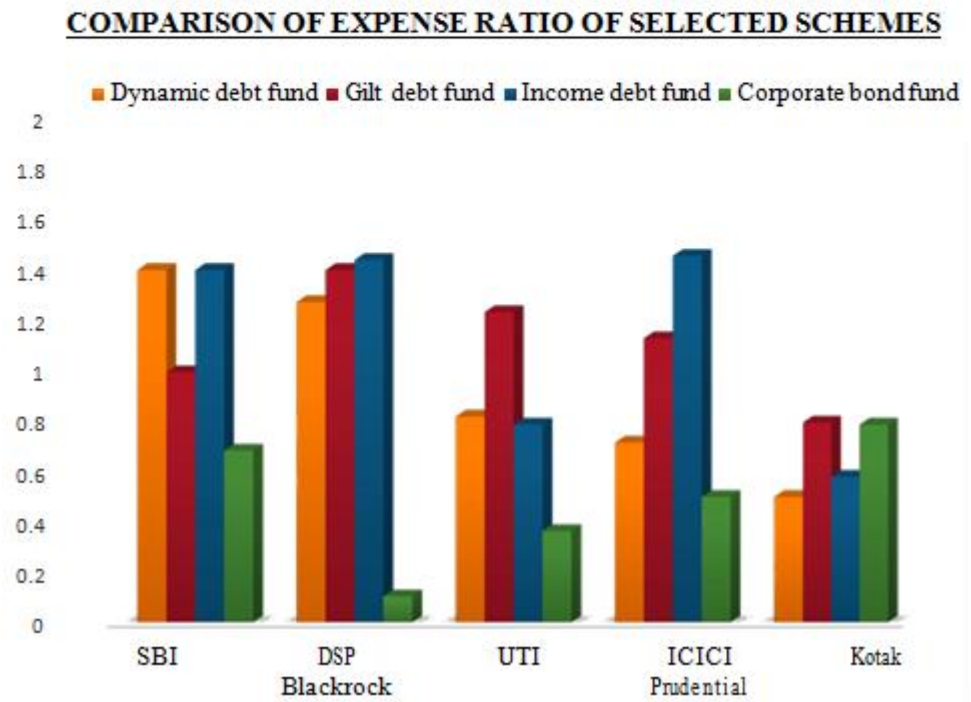
Among **DYNAMIC DEBT FUNDS**, Kotak Dynamic Fund has the lowest expense ratio of 0.63, followed by ICICI Dynamic Fund with 0.90 and UTI Dynamic Fund with 1.03. DSP BlackRock Dynamic Debt Fund has an expense ratio of

1.61 and SBI Dynamic Debt Fund has the highest ratio of 1.76 among all dynamic debt funds has it has the highest operating expense.

Among **GILT DEBT FUNDS**, Kotak Gilt Fund has the lowest expense ratio of 1.00, followed by SBI Gilt Fund with 1.25 and ICICI Gilt Fund with 1.42 which means they have less operating expenses. UTI Gilt Debt Fund has a expense ratio of 1.55 and DSP BlackRock Gilt Debt Fund has the highest ratio of 1.76 among all gilt debt funds which means these mutual fund company has more operating expenses compare to other companies.

Among **INCOME DEBT FUNDS**, Kotak Income Debt Fund has the lowest expense ratio of 0.78, followed by UTI Income Fund with 0.99 and SBI Income Fund with 1.76 has low expense and cost to operate mutual fund. DSP BlackRock Income Debt Fund has a expense ratio of 1.81 and ICICI Income Debt Fund has the highest ratio of 1.83 among all income debt funds has more expense and cost to operate mutual fund.

Among **CORPORATE BOND FUNDS**, DSP BlackRock Corporate Bond Fund has the lowest expense ratio of 0.13, followed by UTI Corporate Bond Fund with 0.46 and ICICI Corporate Bond with 0.63 indicate less expense of the company. SBI Corporate Bond Fund has a expense ratio of 0.86 and Kotak Corporate Bond Fund has the highest ratio of 0.99 among all Corporate Bond funds indicate more expense of the company.



INFERENCE:

DYNAMIC DEBT FUNDS:

Among the selected dynamic debt funds, Kotak Dynamic Fund has the lowest expense ratio, SBI Dynamic Fund has the highest expense ratio. Hence, the scheme from Kotak Dynamic is the best among all dynamic funds in terms of expense ratio because the expense to operate mutual fund is less.

GILT DEBT FUNDS:

Among the selected gilt debt funds, Kotak Gilt Fund has the lowest expense ratio, DSP BlackRock Gilt Fund has the highest expense ratio. Hence, the scheme from Kotak Gilt is the best among all gilt funds in terms of expense ratio because it has low operating expense to operate mutual fund.

INCOME DEBT FUNDS:

Among the selected income debt funds, Kotak Income Debt Fund has the lowest expense ratio, ICICI Income Debt Fund has the highest expense ratio. Hence, the scheme from Kotak Income Debt Fund is the best among all income funds in terms of expense ratio because the cost to operate mutual fund is low.

CORPORATE BOND FUND:

Among the selected Corporate Bond Funds, DSP BlackRock Corporate Bond Fund has the lowest expense ratio, Kotak Fund has the highest expense ratio. Hence, the scheme from DSP BlackRock Fund is the best among all Corporate Bond funds in terms of expense ratio because it has low operating expenses compare to other companies.

4. SUMMARY OF FINDINGS

GENERAL FINDINGS:

- It has been observed that all the debt schemes have delivered maximum returns over a 3year investment period.
- It has been observed that the STANDARD DEVIATION of Kotak Dynamic Fund, UTI Gilt Fund, ICICI Prudential Income Fund, and Kotak Corporate Fund are lowest ratio. This clearly shows that these schemes are less risky.
- It has been observed that all debt funds have a BETA ratio of less than 1 and since the BETA ratio of the market is 1, these funds are less volatile than the market.
- All the Debt funds schemes have a positive SHARPE ratio, which means that the funds are rewarding investors for the amount of risk held by them (which means that these funds have delivered positive returns).
- All the Gilt debt funds schemes have a negative TREYNOR ratio, which means that the funds have not been rewarding the investors for the amount of Systematic risk held by them (indirectly means that they have delivered negative returns).
- Some of the Debt funds schemes have a positive TREYNOR ratio, which means that the funds are rewarding investors for the amount of Systematic risk held by them (which means that these funds have delivered positive returns).
- In terms of Expense ratios, all the debt fund schemes have a positive expense ratio and ICICI Income Debt Fund Scheme has the highest expense ratios whereas a DSP BlackRock scheme has the lowest expense ratios means that if the ratio is high the cost to operate mutual fund is more but if the ratio is less the cost to operate is less.

DYNAMIC DEBT FUND

Category	**SBI**	**DSP BlackRock**	**UTI**	**ICICI Prudential**	**Kotak**
Standard Deviation	0.21	0.25	0.26	0.20	0.09
Overall Returns	40.4	42.9	43.5	41.2	33.6
BETA	0.0077	0.0135	-0.0132	0.0002	0.0092
Sharpe Ratio	46.24	30.90	37.31	41.56	49.81
Treynor Ratio	1.27	0.58	-0.73	4.21	0.50
Jensen’s Alpha	10.61	9.30	9.57	8.28	5.56
Expense Ratio	1.76	1.61	1.03	0.90	0.63

- Among all the dynamic debt funds, **SBI Dynamic Debt Fund** is undoubtedly the best performer as is clear from its rankings. This fund has delivered the highest returns for the highest risk taken, it has the highest alpha, expense ratio and a moderate Sharpe ratio. Although this fund scores poorly in terms of standard deviation, beta, and treynor (making it the most volatile and risky among all funds), this is the best fund for investors who can bear a high risk investment.
- On the other hand, for investors looking for a safer fund, the **ICICI Dynamic Debt Fund** is the most preferable debt scheme because of its ratio in Sharpe, Treynor and Jensen’s alpha. It also incurs moderate expenses as shown by the expense ratio.
- **UTI Dynamic Debt Fund** has the negative Treynor ratio which shows that it has earned the lowest returns to the amount of systematic risk. The fund is earning good amount of returns for the risk taken in Sharpe and Jensen’s alpha and the expenses incurred which makes it a moderate risky investment.

GILT DEBT FUND

Category	SBI	DSP BlackRock	UTI	ICICI Prudential	Kotak
Standard Deviation	0.10	0.11	0.08	0.13	0.16
Overall Returns	40.0	34.1	28.0	35.6	35.3
BETA	-0.0023	-0.0038	-0.0024	-0.0025	-0.0211
Sharpe Ratio	73.84	43.63	36.22	44.20	36.67
Treynor Ratio	-3.05	-1.26	-1.20	-2.32	-0.28
Jensen's Alpha	6.80	4.42	2.62	5.59	3.73
Expense Ratio	1.25	1.76	1.55	1.42	1.00

➢ Among all the gilt debt funds, **SBI Gilt Debt Fund** is undoubtedly the best performer as is clear from its rankings. This fund has delivered the highest Sharpe ratio for the highest risk taken, it has the highest alpha, and returns. Although this fund scores poorly in terms of standard deviation, beta, Treynor ratio and moderate expense ratio (making it the most volatile and risky among all funds), this is the best fund for investors who can bear a high risk investment.

➢ On the other hand, for investors looking for a safer fund, the **ICICI Gilt Debt Fund** is the most preferable debt scheme because of its moderate standard deviation, beta and alpha. It also incurs moderate expenses as shown by the expense ratio.

➢ **UTI Gilt Debt Fund** has the negative Treynor ratio which shows that it has earned the lowest returns to the amount of systematic risk. The fund is earning good amount of returns for the risk taken and the expenses incurred which makes it a moderate risky investment.

INCOME DEBT FUND

Category	SBI	DSP BlackRock	UTI	ICICI Prudential	Kotak
Standard Deviation	0.17	0.07	0.10	0.06	0.09
Overall Returns	36.1	36.5	34.1	41.1	38.4
BETA	0.0041	-0.0135	-0.0029	0.0010	0.0098
Sharpe Ratio	45.50	74.19	43.03	89.42	66.38
Treynor Ratio	1.93	-0.37	-1.50	5.15	0.58
Jensen's Alpha	8.26	3.61	4.17	5.09	6.74
Expense Ratio	1.76	1.81	0.99	1.83	0.78

➢ Among all the income debt funds, **ICICI Income Debt Fund** is undoubtedly the best performer. This fund has delivered the highest Sharpe ratio for the lowest risk taken, it has the highest Treynor, lowest standard deviation, the highest returns and a moderate alpha. Although this fund scores moderate in terms of expense ratio, this is the best fund for investors who do not want to bear much risk.

➢ On the other hand, for investors looking for a safer fund, the **Kotak Income Debt Fund** is the second best debt scheme because of its higher return, higher alpha and comparatively moderate standard deviation and beta.

➢ **UTI Income Debt Fund** has negative Treynor ratio which shows that it has earned the lowest returns for the amount of systematic risk. The fund is earning good amount of returns for the risk taken and the expenses incurred which makes it a moderate risky investment.

CORPORATE BOND FUND

Category	SBI	DSP BlackRock	UTI	ICICI Prudential	Kotak
Standard Deviation	0.08	0.23	0.25	0.10	0.07
Overall Returns	36.3	39.7	43.9	37.7	34.0
BETA	0.0050	0.0034	-0.0028	-0.0007	-0.0011
Sharpe Ratio	66.22	30.69	34.54	50.41	51.83
Treynor Ratio	1.03	2.10	-3.11	-6.92	-3.10

Jensen's Alpha	1.03	2.10	-3.11	-6.92	-3.10
Expense Ratio	5.66	7.51	8.36	5.08	3.29

➢ Among all the income debt funds, **DSP BlackRock Corporate Bond Fund** is the best performer. This fund has delivered the higher Treynor ratio, and alpha for the highest risk taken; it has the higher returns, lowest standard deviation, and lower beta. Although this fund scores poorly in terms of Sharpe ratio, this is the best fund for investors who can bear a high risk investment.

➢ On the other hand, for investors looking for a safer fund, the **SBI Corporate Bond Fund** is the most preferable debt scheme because of its high return, highest Sharpe ratio and comparatively lower standard deviation and beta.

➢ **UTI Corporate Bond Fund** has low Sharpe ratio and alpha which shows that it has earned the lowest returns, also having a negative Treynor ratio. But this fund is earning good amount of returns for the risk taken and the expenses incurred which makes it a moderate risky investment.

5. SUGGESTIONS AND RECOMMENDATIONS

GENERAL SUGGESTIONS:

- The concept of mutual funds has not been accepted well by the investors who think of them as instruments with low returns. Hence, awareness of this concept must be spread about mutual funds among the investors, to stimulate investment by them in the same.
- The penetration levels of mutual fund houses has been limited to only the major cities (TIER 1 and TIER 2 cities), thereby limiting their reach to just urban customers. There is a lot of potential for mutual funds in semi-urban and rural areas, and hence, mutual funds should concentrate on expanding their distribution network so as to reach out to a larger customer base.
- Diverse range of products to make mutual funds more acceptable to the retail investor, the mutual fund industry has to offer products that provide products relating to specific life needs.
- The most ideal investment period is from 1 to 3 years as this period has consistently delivered the highest rate of return for the investors. The longer an investor stays invested in a scheme or instrument, the higher will be his returns. He will also be well protected from the fluctuation of the NAV

GENERAL SUGGESTIONS BASED ON PORTFOLIO:

1. DYNAMIC PORTFOLIO:

Investors who want to build up a dynamic portfolio should invest 60% of their funds in SBI dynamic debt fund, 40% of funds in ICICI dynamic debt funds.

2. GILT PORTFOLIO:

Investors who want to build up a gilt portfolio should invest 60% of their funds in SBI gilt fund, 40% of funds in ICICI gilt debt funds.

3. INCOME PORTFOLIO:

Investors who want to build up an income portfolio should invest 60% of their funds in ICICI Income Debt fund, 40% of funds in Kotak Income debt funds.

4. CORPORATE BOND PORTFOLIO:

Investors who want to build up a corporate bond portfolio should invest 60% of their funds in DSP BlackRock fund, 40% of funds in SBI funds.

SUGGESTIONS BASED ON INVESTMENT PERIOD:

1. LONG TERM:

Investors who are looking for long term investments with a high rate of return can invest in SBI Corporate Bond Fund and SBI Gilt Fund depending upon their risk appetite. Although these two schemes have delivered the highest returns in their respective classes, they also have a higher beta and Sharpe ratio as compared to other schemes and therefore are recommended only for long term investors. This is because the higher beta and Sharpe ratio can significantly affect the returns and risk of holding such investments.

2. MEDIUM TERM:

Investors who are looking for medium term and moderate returns should look at investing in UTI Corporate Bond Fund and UTI Income Debt Fund depending upon their risk appetite. These funds have lesser volatility and have a good rate of return, and hence are suggested for a medium investment term.

3. SHORT TERM:

For a short term investor, the best fund to invest in would be funds with the lowest beta and highest Sharpe ratio. Therefore, DSP Income Debt Fund, Kotak Dynamic Debt Fund are the best options depending upon the risk profile of the investor.

6. CONCLUSION

Based on the study, it can be concluded that the mutual fund industry has just started its growth in the Indian subcontinent. The penetration of mutual funds is at a very low rate and hence this means that this industry has a great potential for growth and expansion.

Under this study, compares five different mutual fund companies namely, SBI Mutual Fund, ICICI Prudential, DSP BlackRock, Kotak, and UTI Mutual Fund with four types of debt funds namely, Dynamic Debt Fund, Income Debt Fund, Corporate Bond Fund, and Gilt Debt Fund to know which company and return is preferable to invest. Hence, it is find out by using various return and risk tools namely, Sharpe ratio, Treynor ratio and Jensen’s alpha so as to aware investors about the returns are stable with risk. Therefore, under this analysis SBI Mutual Fund is the best company to invest for high return and ICICI Prudential is also another preferred company to invest in mutual fund.

But mutual fund has not gained a big margin in the world because even as an instrument of investment, it has yet to be accepted well by investors since they prefer other instruments such as the stock markets because of the returns that they provide.

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