

Mutual Funds, Stocks and Banks: A Study on the Changing Perspectives of Investments

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Abstract - This paper is an empirical study of the two investment options available for the investor i.e. comparing the mutual fund market with the stock market index, which is relevant in the current context as the recent policy rate cut suggests that RBI has taken an accommodative stand. This is reflected in the deposit rates offered by banks. Presently, the real return from a bank deposit for the customer is only 3.22% which has created a positive momentum for other investment alternatives. The study attempts to find the best investment alternative by doing the risk-return analysis of the selected mutual funds and stocks for the period of 10 years (FY2007 - FY2017). Top 10 companies are selected from SENSEX based on market capitalization and is compared with top 2 companies each from 5 different Mutual Fund schemes based on CRISIL ratings. The findings would help the investors in understanding more about investment decision.

Key words: Standard Deviation, Beta, Sharpe, Jensen, Treynor Measures, CAPM.

I. INTRODUCTION

Investment is termed as a sacrifice of certain present value for some uncertain future values (Sharpe). Investing has its roots in the ancient times where the barter system was the first mode of exchange which took place. Today investment has been at its most convenient form where a person could choose his mode of investment by just making a click on his mobile. The world has come to a fingertip where the avenues to park your excess funds has become too easy. Even with all these advantages, investors face the challenge of finding the best avenue for parking his funds which gives him the maximum return with the amount of risk he is willing to take. As the investment gurus mention, *do not put all your eggs in one basket* rule also applies to the investors while making their investment decision.

I. Among the different platforms for investment, the most preferred ones are the Banks, Mutual Funds and Stock Markets. Banks were the best choice among the investors during the 20th century and most of the business persons as well as individuals has invested majority of their funds with the banks. The trend has shifted from the late 20th century where the investors found a booming return from the stock market and the radical shift to the stock markets took place from then. Stock market or share

market is the aggregation of buyers and sellers of stocks which represent ownership claims on businesses.

Mutual fund is a trust that pools the savings of a number of investors who share common financial goal. Anybody with an investible surplus of as little as a few thousand rupees can invest in mutual funds. This investor buys units of a particular mutual fund scheme that has a defined investment objective and strategy (Association of Mutual Funds in India).

II. SIGNIFICANCE OF THE STUDY

India is set to become a global power by 2020. The investments made in the Indian market have a crucial role to play for this attainment. Growth of any nation is based on the fund flow to the economy; especially the economies like Brazil, Russia, India and China (BRICS) are totally dependent on the fund flows from Foreign Direct Investments (FDI) and Foreign Institutional Investors (FII).

The retail investors have a major role in the growth story of India. The paper emphasizes on comparing the various investment avenues available to the investors like Banks, Mutual Funds and Stock Markets. This study is relevant in the current context as India is set to overtake France (World Development Indicators Database) as the sixth largest economy of the world in terms of Gross Domestic Product (GDP).

The increase in the level of discretionary income has resulted in massive entry of retail investors into the market. A comparative analysis on the risk-return matrix has been done, which might help the investors in getting more insights on the available alternatives.

III. REVIEW OF LITERATURE

The trend of economy is moving to a phase where the common man has to choose his investment avenues with careful assessment based on the return and risk to be taken while parking their funds. The analysis and study on this is done with utmost care as there exist a wide range of opportunities for investment. Studies have been conducted worldwide to predict the best investment option and few

among those studies referred for this article are as follows

National –

Krishnaprabha S & VijayaKumar M. (2015) has done a comparative study of risk and return of top market capitalization companies from BSE for a period starting from Jan 1st 2010 to Dec 31st 2014 to analyze the performance of selected stocks in India. They have picked up companies from different sectors such as Banking, IT, Automobile, Pharmaceuticals and Fast Moving Consumer Goods(FMCG). Standard deviance and variance of stock was also calculated on the stock value. They were able to find that the market was less volatile during the period and long term investors found it positive on investments in stocks.

Prabhu Gauri & Vechalekar M.N. (2013) conducted a research on Monthly Investment plan (MIP) and the perception of Indian investors towards MIP investments. The study concluded that most of the investors are aware of various schemes of Mutual Funds and prefers for a diversification of portfolio and also has an allure on tax benefit schemes. The preference of MIP is mostly because of the consistent returns given by those funds.

Mehta Shantanu & Shah Charmi (2012) in their paper gave an overview of preference of investors for Indian Mutual Fund with specially focusing on the city of Ahmedabad and Baroda. They have focused on factors which influenced the investors to chose Mutual funds and the mode in which they prefer to invest in a Mutual Fund. This study was also extended to evaluate the performance of mutual fund schemes preferred by the investors based on the return parameter. Sample of 100 educated investors were taken for the conduct of this study.

Sahoo Deepti & Sharma Kumar Naresh (2008) conducted an empirical study to evaluate the performance of some selected mutual funds in India. CAPM model along with the Sharpe, Treynor and Jensen measures were tested on different types of mutual fund schemes and found that the returns from Tax Planning Funds were positive.

International –

Vikpossi Ekoue Anani & Pamane Kolani(2014) has investigated the relationship between the securities portfolio risk and the return on the investment of selected firms in the regional stock market of the West African Economic and Monetary Union called the BRVM and prospects on how this affects their investment decision using the CAPM model. The results implied controversially to the predictions that investors who bear higher risk in the BRVM stock exchange should not necessarily expect a higher return from his investment as well as the risk averse investor for whom the probability to yield a low return by bearing a low risk is not certain.

Hossain Shahadath, Rahman Munibur A.B.M, Rajib Uddin Salah (2013) in their paper has done a study to check the dynamics of Mutual fund in relation to Stock Market. They have taken data from a period of January 2008 to December 2010 of four variables– DSE (Dhaka Stock Exchange) general index return, DSE general index turnover, mutual funds' return and mutual funds' turnover. Stationarity of the variables was tested using Augmented Dickey-Fuller (ADF) and results prove that the variables are in different order of integration, Long-term equilibrium relationships among the variables were tested with Johansen co integration and found that DSE general index return and mutual funds' return are co integrated. Toda-Yamamoto (TY) version of granger non-causality test was employed and bidirectional causality was found to be moving from DSE (Dhaka Stock Exchange) general index turnover to DSE general index return, whereas unidirectional causality is found moving from mutual fund's return to DSE general index return, mutual funds' return to mutual funds turnover, and DSE general index turnover to mutual funds turnover.

Neuberger Jonathan A.(1992) conducted an analysis of the behavior of bank holding company stock returns with the goal of identifying the effect of portfolio composition on the risks embodied in those returns. They have used the modified arbitrage pricing theory model to test the significance effects of both market and non-market components of bank stock systematic risk.

IV. OBJECTIVES OF THE STUDY

- To analyze the real and nominal returns from Banks, Mutual Funds and Stocks.
- To suggest the best investment platform based on the risk-return dynamics.

V. HYPOTHESES

- **H0a:** There is no significant difference in the real return from banks, mutual funds and stock markets. ($M1=M2=M3$)
- **H0b:** There is no significant relationship between the performance of mutual funds and stock markets.

VI. RESEARCH METHODOLOGY

- **Data Sources** – The study is primarily based on secondary data. The financial data is collected from mutual fund websites, SBI websites, and investment websites such as Association of Mutual Funds in India (AMFI), CRISIL, Ministry of Statistics, Reserve Bank of India (RBI) and Bombay Stock Exchange (BSE).
 - Financial data of 10 years have been collected for the purpose of evaluation from the Financial Year (FY) starting 2007 to 2017.
 - Sample size – For the Mutual Fund evaluation, based on the CRISIL rating top performing 2

mutual funds were chosen from 5 different schemes such as Equity Linked Savings scheme, Diversified Equity scheme, Balanced Fund, Debt Fund and Gilt-edged fund.

- For the purpose of the study, Average Fixed Deposit (FD) rate offered by SBI for one year deposits were taken as SBI is the largest bank in terms of market capitalization.
- Based on the market capitalization, 10 stocks of BSE were taken for the purpose of analysis.

- **Method of Sampling** – The samples are selected based on Judgmental sampling which involves the choice of funds and companies based on the report published by the rating agency (CRISIL) and the stock samples were chosen based on the market capitalization.

- **Financial Indicators** –

For Mutual Funds –

Sharpe Ratio – helps in understanding the average return per unit in excess of the risk free return. In simple words, it helps the researcher in calculating whether the investment is providing apt return for the incremental risk taken.

- Sharpe ratio = (Mean portfolio return – Risk-free rate)/Standard deviation of portfolio return)

$$= \frac{\bar{r}_p - r_f}{\sigma_p}$$

Where:

\bar{r}_p = Expected portfolio return

r_f = Risk free rate

σ_p = Portfolio standard deviation

- Jensen's Alpha – gives the risk adjusted performance of a portfolio in relation to the expected market return (based on the market indices). The higher alpha indicates better performance of the portfolio.

$$\text{Alpha} = R(i) - (R(f) + B \times (R(m) - R(f)))$$

- $R(i)$ = the realized return of the portfolio or investment
- $R(m)$ = the realized return of the appropriate market index
- $R(f)$ = the risk-free rate of return for the time period
- B = the beta of the portfolio of investment with respect to the chosen market index

- Treynor – measures the risk adjusted performance of the portfolio. It helps in calculating the excess return generated for each unit of risk taken. Higher Treynor index indicates more return.

(Average Return of a Portfolio – Average Return of the Risk-Free Rate)/Beta of the Portfolio.

For Stocks –

CAPM –It describes the relationship between the systematic risk taken and the expected return for the stocks. It is used for ascertaining the required rate of return for a stock based on the risk taken.

$$\bar{r}_a = r_f + \beta_a (\bar{r}_m - r_f)$$

Where:

r_f = Risk free rate

β_a = Beta of the security

\bar{r}_m = Expected market return

Beta – calculates the systematic risk of an investment.

Statistical tools – For the conduct of the study, statistical tools such as –

- Standard Deviation(SD)
- Correlation
- Kruskal Wallis H Test – is a rank based non-parametric test used for comparing two or more independent samples of equal or different sample sizes. The test determines the statistical significance between two or more groups of an independent variable on a continuous or ordinal dependent variable.

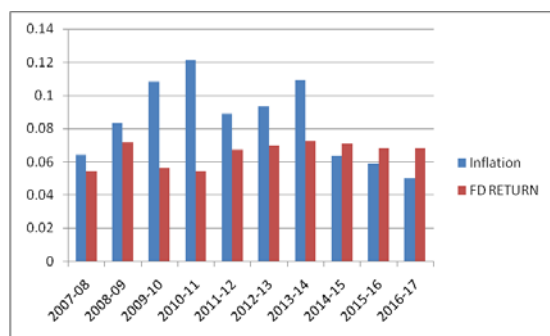
VII. DATA ANALYSIS & INTERPRETATION

Banks as an Investment Avenue

TABLE 1: Showing The Inflation And Returns Offered By Banks On A Half Yearly Basis

Year	Inflation	FD Return	Real Return
2007-08	6.39%	5.44%	-0.95%
2008-09	8.32%	7.17%	-1.15%
2009-10	10.83%	5.63%	-5.20%
2010-11	12.11%	5.42%	-6.69%
2011-12	8.87%	6.70%	-2.17%
2012-13	9.30%	6.96%	-2.34%
2013-14	10.93%	7.25%	-3.68%
2014-15	6.37%	7.08%	0.71%
2015-16	5.88%	6.79%	0.91%
2016-17	4.97%	6.79%	1.82%
Average	8.40%	6.52%	-1.87%
SD		1%	3%

FIG:1 REPRESENTING THE INFLATION & FD RETURN OFFERED BY BANKS



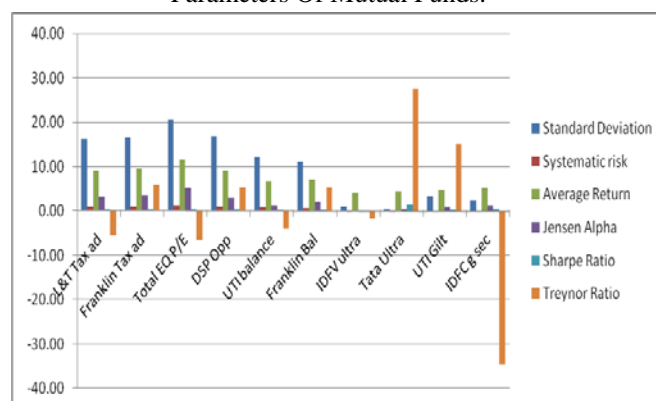
- The average fixed deposit return (for 6 months) offered by the banks for the last decade was merely 6.52% whereas the average inflation rate for the same period was whopping 8.40%. It is clear from the study that the bank deposit rates were not able to cover the inflation. This was a bad signal for the common investor who prefers to follow the orthodox modes of investment and FD being the prominent one.
- It is evident from the data that from 2007 to 2010, the real return from stock markets, mutual funds and banks were negative. This can be mainly due to the subprime crisis.
- With a standard deviation of 1%, fixed deposits are the safest mode of investment for the Indians. This again tells us the reason as to why the other two options i.e. mutual funds and stocks are largely untapped. The salaried employees are not completely utilizing the other two options primarily considering the risk factor.
- The interest rates are showing a positive trend with a real half yearly return of 1.82% in Financial Year (FY) 2016-17 (as against -6.69% in FY 2010-11) which is because of the effective steps taken by RBI from 2013 onwards. *The Urjit Patel committee's recommendation of accepting the CPI as the primary indicator of inflation has helped the central bank in controlling the inflation.*
- Mutual Funds as an Investment Avenue**

TABLE 2: Showing The Various Measurements Of Mutual Funds

Name	SD	Syste matic risk	Avg. Retur n	Jens en Alph a	Sharp e Ratio	Treyn or Ratio
L & T Tax Advantage Fund	16.24	0.96	9.17	3.16	0.32	-5.48
Franklin India Tax shield Fund	16.57	0.98	9.6	3.58	0.34	5.91
Total Equity	20.57	1.17	11.54	5.05	0.37	-6.48

P/E Fund						
DSP Blackrock Opportunities Fund	16.74	0.98	9.13	3.07	0.31	5.31
UTI Balanced Fund	12.06	0.71	6.75	1.27	0.23	-3.96
Franklin India Balanced Fund	11.1	0.62	7.2	1.92	0.29	5.26
IDFC Ultra Short Term Fund	0.93	-0.02	3.89	0.01	-0.04	-1.77
Tata Ultra Short Term Fund	0.32	0.02	4.35	0.38	1.31	27.43
UTI Gilt Advantage Fund	3.33	-0.05	4.7	0.88	0.23	15.01
IDFC G Sec- PF Plan Fund	2.44	-0.03	5.09	1.23	0.48	-34.74
Average	10.03	0.53	7.14	2.06	0.38	0.65

FIG: 2 Representing The Various Risk And Return Related Parameters Of Mutual Funds.



- It is evident from the analysis that the average half yearly return from the mutual funds was 7.14% in comparison with 4.31% from the selected stocks of BSE. This is primarily because of the increase in the exposure of small and midcap shares. *The mutual fund industry has offloaded humongous funds into the small and mid cap companies which has helped them in getting decent return in comparison with blue-chip shares.*
- Maintaining a beta average of 0.53 in spite of economic disasters like subprime crisis and global slowdown prove that the portfolio selection of the fund managers was balanced and unbiased.
- Nine out of 10 mutual funds are showing a positive Sharpe ratio. Tata Ultra Short Term Fund being the best with 1.31:1. This indicates that the incremental

risk taken by the investors have yielded result. *The increase in the return for per unit risk taken might be because of the quantitative easing policy initiated by the US which has led the FII's to invest the cheaply available funds in the emerging markets and India being their favorite destination.*

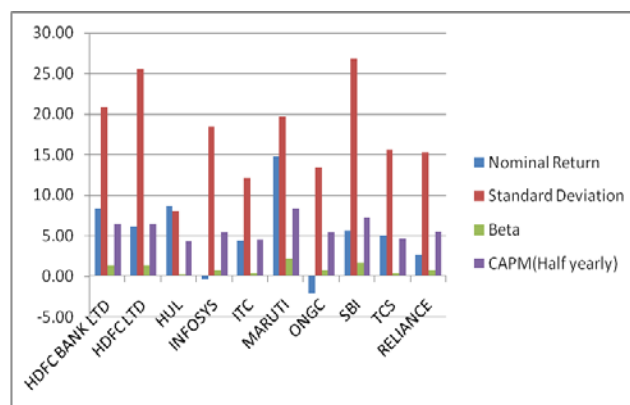
- Jensen Alpha average of 2.06 shows that the mutual funds have outperformed the stock and banking sector and the volume is picking up the general perception about mutual funds. With an Alpha value of 5.05 and 0.01, the total equity P/E fund and IDFC ultra short term fund were the best and worst performing funds respectively.
- IDFC G-Sec has shown a negative Treynor ratio of -34.74, thereby interpreting that even after taking the excess risk the expected return is similar to that of the risk free investment.

Stock Market as an Investment Avenue

TABLE 3: SHOWING THE RISK-RETURN MATRIX OF DIFFERENT COMPANIES (HALF YEARLY)

Company	Nominal Return	SD	Beta	CAPM
HDFC Bank Ltd	8.35	20.84	1.25	6.44
HDFC Ltd	6.1	25.51	1.24	6.42
HUL	8.61	7.95	0.14	4.21
Infosys	-0.42	18.45	0.73	5.39
ITC	4.41	12.06	0.25	4.43
Maruti	14.69	19.69	2.19	8.33
ONGC	-2.15	13.39	0.72	5.37
SBI	5.62	26.8	1.65	7.25
TCS	4.98	15.6	0.32	4.58
Reliance	2.54	15.3	0.75	5.45
Average	5.27	17.56	0.92	5.79

FIGURE 3: Representing The Risk-Return Matrix Of Various Companies In The Stock Market



- When compared with the CAPM model, the stocks like HDFC Bank, HUL and Maruti has surpassed the market expectation.
- The stocks like Infosys & ONGC has underperformed with reference to the CAPM model. The probable reasons could be
 - Infosys – the major chunk of the revenue are coming from the US. As a result of the global turmoil in the previous decade the revenue from the overseas market came down drastically.
 - ONGC - the price of the crude and oil had skyrocketed as result of global slowdown which reduced the bottom line of ONGC.
- The average CAPM value of 5.79 and the average return of 5.27 from the selected samples show that the selected shares have largely performed in line with the market expectation.
- There shows a huge difference between the Standard deviation and beta value of the stocks selected, which demonstrates that unsystematic risk plays a crucial role in deciding the fate of stock market returns.

Inferences of Hypothesis –

Hypothesis 1 - There is no significant difference in the real return from banks, mutual funds and stock markets. (M1=M2=M3)

Kruskal Wallis H Test Result:

Ranks			
	GROUP	N	Mean Rank
REALRETURN	1.00	10	18.50
	2.00	10	15.00
	3.00	10	13.00

	Total	30	
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	N	10	10
STOCKS	Pearson Correlation	.893**	1
	Sig. (2-tailed)	.001	
	N	10	10
**. Correlation is significant at the 0.01 level (2-tailed).			

Test Statistics ^{a,b}	
	REALRETURN
Chi-Square	2.001
Df	2
Asymp. Sig.	.368
a. Kruskal Wallis Test	
b. Grouping Variable: GROUP	

The results show that there exist a strong positive relationship between performance of mutual funds and stocks. In short, the returns from the mutual funds are directly proportional with the return obtained from the stock markets.

Correlation			
		BANKS	STOCKS
BANKS	Pearson Correlation	1	-.253
	Sig. (2-tailed)		.481
	N	10	10
STOCKS	Pearson Correlation	-.253	1
	Sig. (2-tailed)	.481	
	N	10	10

Inference:

The distribution of real return is same across all the groups; hence the null hypothesis is retained.

The hypothesis is retained because of negative returns across all the investment avenues which indicate the policy maker's inability to control inflation.

Hypothesis 2 - There is no significant relationship between the performance of mutual funds and stock markets.

Tested using correlation -

Correlation			
		MUTUAL FUNDS	STOCKS
MUTUAL FUNDS	Pearson Correlation	1	.893**
	Sig. (2-tailed)		.001

Correlation			
		MUTUAL FUNDS	BANKS
MUTUAL FUNDS	Pearson Correlation	1	-.107
	Sig. (2-tailed)		.768
	N	10	10
BANKS	Pearson Correlation	-.107	1
	Sig. (2-tailed)	.768	
	N	10	10

There is no relationship in the movements as the null hypothesis stands accepted for -

- Mutual Funds & Banks
- Banks & Stocks

VIII. LIMITATIONS OF THE STUDY

- The overall performance of the stock market is not reflected in the study as the sample size was limited to 10 and this may generate biased results. The stock splits and bonus issue of shares were not taken into consideration for this paper.

- The NAV history of the mutual funds was unavailable for most of the schemes which was again a demerit for a wide study.

IX. SCOPE FOR FURTHER STUDY

Increase in the sample size could have made the study more elaborate and accurate.

X. CONCLUSION

As per the study conducted, it was found that mutual funds has outperformed among the other investment alternatives in terms of return and risk and the reason behind this could be the entry of millennial investors. These investors of India have helped in infusing huge volumes of funds into the market which resulted in consistency of returns.

The untamed inflation has hindered the real return from investment avenues like stock markets and bank FDs. The real return from the Mutual funds with an average half yearly return of 7.15% is an exemption. Further to this, the mutual funds are in demand because of the various reforms initiated by the government such as tax exemptions (80 C deductions) for bringing in depth to the capital markets which drives the GDP growth engine.

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