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RESEARCH ARTICLE

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COMPARATIVE STUDY BETWEEN DIRECT EQUITY AND MUTUAL FUND - AN EMPIRICAL ANALYSIS

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ABSTRACT

Exposure to heavy The present paper is based on the study of comparing and analyzing the equity investing in respect of risk and return. Further the paper compares and analyzes the mutual fund schemes in respect of risk and return. The main objective of this research work is to study relationship between the risk and return of equity shares and mutual fund through the statistical parameters such as (returns, alpha, beta, standard deviation, Sharpe ratio, Treynor ratio and Jensen ratio, CAPM). The study is based on secondary data which is collected from the BSE official website and money control website. In research study the monthly closing price of 5 years from 1stJan 2016 to 31stDec 2020 of companies are taken. Top Ten companies as per market capitalization in equities as per 2021 on each monthly basis are selected and for Benchmark BSE SENSEX have been taken as a sample and ten mutual funds are selected as per large cap/Blue-chip fund. The need of the study arises because the investors are confused to take right decision on investment. Since investments are risky in nature, investors have to consider various factors before investing in equity share or else in mutual fund. The findings of this study is Kotak and HUL have performed the best among the selected equity shares and Axis Bluechip Fund and CanaraRobecoBluechip Equity Fund is at top among all analysed funds in terms of performance during the last financial year 2016-2020.

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INTRODUCTION

A stock market is a platform where investors come to trade in financial instruments like shares, bonds, and derivatives. The stock exchange works as a facilitator of this transaction and enables the buying and selling of shares. Stock markets form the largest avenues for investments. There are primarily two stock exchanges in India, the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). Companies list their shares for the first time in the primary market and in the secondary markets investors can buy and sell their shares during an Initial Public Offering. The regulation and supervision of the stocks markets in India rest with the Securities and Exchange Board of India.

SEBI was formed as an independent identity under the SEBI Act of 1992 and has the power to conduct inspections of the stock exchanges. The inspections review the operations of the market and the organizational structure along with aspects of administrative control. An investment is an asset or item acquired with the goal of generating income or appreciation. An equity investment is money that is invested in a company by purchasing shares of that company in the stock market. These shares are traded on stock exchanges. Investors park their surplus into stocks mainly for capital appreciation, dividends, and also for voting rights, which allows them to be a part of key company decisions. As per SEBI Regulation, 1996, Mutual Fund can be defined as "A fund established in form of a trust to raise money through the sale of units to public or a section of public under one or more schemes for investing in securities, including money market instruments". Sharpe (1966) explains in a modern portfolio theory context that the expected return on an efficient portfolio and its associated risk (unsystematic risk) are linearly related. A portfolio is the total collection of all investments held by an

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individual or institution, including stocks, bonds, real estate, options, futures, and alternative investments, such as gold or limited partnerships. Most portfolios are diversified to protect against the risk of single securities or class of securities. Hence, portfolio analysis consists of analysing the portfolio as a whole rather than relying exclusively on security analysis, which is the analysis of specific types of securities. To assemble an efficient portfolio, one needs to know how to calculate the returns and risks of a portfolio, and how to minimize risks through diversification.

LITERATURE REVIEW

Dibin K. K., Alfiathaha (2017) examined about Mutual Funds, Stocks and Banks: A Study on the Changing Perspectives of Investments. The aim of this study was 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. Survey method was Financial data of 10 years have been collected for the purpose of evaluation from the Financial Year (FY) starting 2007 to 2017. 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. The findings of this study was revealed that a mutual fund 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. The real return from the Mutual funds with an average half yearly return of 7.15% is an exemption.

Ankitasharma, Deepak Kumar Adhana (2020), studied about

A study on performance evaluation of equity share and mutual funds. The aim of this study was to analyze the average return and the risk involved in investing in the mutual funds. Survey method was descriptive research study and total ten companies selected where 5 companies of equities are listed in BSE 500 benchmark and rest other 5 mutual fund Companies who were also listed in BSE 500 Benchmark. The finding of this study was revealed that the result of Sharpe's Ratio shows that Sharpe's performance index it is not necessary fund with higher return is always well performing fund standard first time. ANOVA result shows that Null $h(0)$ hypothesis is Accepted because there is no significant difference between the return and risk of equity and mutual fund Mutual funds have average Return of 1.4% and Equity shares have average return of 17.2% Ehsan Khan, PallaviGedamkar(2015), examined about Performance Evaluation of Equity Shares and Mutual Funds with Respect to their Risk and Return. The aim of this study was to analysis financial performance of selected equity shares and mutual fund schemes through the statistical parameters. Survey method was Exploratory Research and Non probability judgmental sampling (purposive sampling/ authoritative sampling). The study covers 5 selected stocks out of 30 BSE and 5 mutual fund schemes out of mutual fund industry in India for comparison. The finding of this study was revealed that Performance evaluation measurement ratios i.e. Treynor's, Sharpe's and Jensen's alpha are mostly used by fund managers to take decision of investment and to diversify portfolio and for new investors mutual funds is advantageous in terms of portfolio diversification, high liquidity, lesser risk, low transaction cost, professional management, choice of schemes, transparency & safety, flexibility.

Sushil Moar (2014) examined about A Comparative Study on Stock Market and Mutual Fund Industry. The aim of this study was to compare the stock market and mutual fund. Survey method was secondary data and research design is descriptive data. The finding of this study was revealed that mutual fund is a low risk low profit form of investment, the stock market is a high risk high profit one and the stock market is full of risks but if manage to overcome it, then become successful.

OBJECTIVES

To evaluate the dynamics of relationship between equity investing and mutual fund investing in India for the period of 5 years from 2016-2020.

To study relationship between the risk and return of equity shares and mutual fund. Risk free rate is assumed to be 3.85% (which is rate of return of 364 days Treasury Bills in India as on 12th, March 2021) for the calculation purpose. Market index is assumed to be 0.686. Index return is assumed to be 7.505¹

Table 1. Showing selected equities and their benchmark as per top 10 market capitalization during 2016-2020

Equities	Benchmark
Reliance	BSE SENSEX
TCS	BSE SENSEX
HDFC Bank	BSE SENSEX
Infosys	BSE SENSEX
HUL	BSE SENSEX
Housing Development Finance Corporation	BSE SENSEX
ICICI Bank	BSE SENSEX
Kotak Mahindra	BSE SENSEX
SBI	BSE SENSEX
Bajaj Finance	BSE SENSEX

Source: www.bseindia.com

Table 2. Showing selected mutual fund and their benchmark as per large cap funds

Mutual Funds	Benchmark
Aditya Birla Sun Frontline Equity Fund	Nifty 50
Axis Bluechip Fund	Nifty 50
Baroda largeCap Fund	Nifty 100
CanaraRobecoBluechip Equity Fund	S&P BSE 100
ICICI Prudential Bluechip Fund	Nifty 100
IDFC Largecap Fund	S&P BSE 100
KotakBluechip Fund	Nifty 50
Franklin India Bluechip fund	Nifty 50
Mirae Asset Largecap Fund	Nifty 100
SBI Bluechip Fund	S&P BSE 100

Source: www.bseindia.com, www.nseindia.com

RESEARCH METHODOLOGY

The present study made an attempt to analyze the performance of the selected equity shares and mutual fund schemes with the market during the period of the study. In order to achieve the objectives an analysis has been made to compare these schemes with the market on the basis of risk and return. Different statistical and financial tools are used to evaluate the performance of these equity shares and mutual fund schemes under the present study.

¹Source: www.rbi.org.in

Note: Here all the data are considered up to the date of Monthly data from Jan. 2016 to March 2020

Hypothesis

H₀= There is no significant difference in the return and risk from equity and mutual fund

H₁= There is no significant relationship between the performance of equity and mutual fund

Data Collection: The study is primarily based on secondary data. The period of data collection is for 5 years of top 10 equity share and top 10 mutual funds in India for 5 years in terms of market capitalization. The source of data is collected from BSE website and mutual fund website.

Research Design: Research design is explorative study and it is used for investigate a problem which is not clarified defined. To evaluate the performances of equity capital and mutual fund schemes in respect of their risk, return and liquidity.

Sampling Method

Relative population-30 BSE sensitivity index companies and mutual fund industry in India. **Sample size-** Ten top companies in terms of market capitalization from different sectors are selected for equities and 10 AMC's mutual funds which are open ended equity diversified direct funds without any bias towards any particular sector or theme.

Sample Technique: The samples are selected based on Non-probability sampling technique-Judgmental sampling which involves the choice of equity share and mutual funds based on the market capitalization.

DATA ANALYSIS: FINANCIAL INDICATORS METHODS

Standard deviation: is used to measure the risk of a stock. It evaluates the volatility of the fund. A higher SD number indicates more volatile and lower SD number indicates less risky.

Alpha: Alpha is used to measure the performance of all the funds. Alpha is a measure of an investment's performance on a risk-adjusted basis. A positive alpha means the fund has outperformed its benchmark index, whereas a negative alpha indicates an underperformance of the fund. The more positive an alpha the healthier for investors.

Beta: Beta is calculated to know whether investment in the companies is risky or not. Aggressive investors can opt to invest in equities and mutual fund schemes which have higher beta value for higher returns taking more risk.

Sharpe ratio: It helps in understanding the average return per unit in excess of the risk free return. This ratio helps an investor to know whether it is a safe bet to invest in this fund by taking the quantum of risk. The higher the Sharpe ratio (SR), the better a fund's return relative to the amount of risk taken. A negative Sharpe ratio indicates that a risk-free asset would perform better than the fund being analyzed. Sharpe ratio = (Mean portfolio return – Risk-free rate)/Standard deviation of portfolio return)

Treynor ratio: It 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. Treynor ratio= (Average Return of a Portfolio – Average Return of the Risk-Free Rate)/Beta of the Portfolio.

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. Jensen's Alpha = $R(i) - (R(f) + B \times (R(m) - R(f)))$.

Portfolio return according to CAPM Model: 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.

DATA ANALYSIS AND INTERPRETATION

Analysis of selected Equity Shares

Interpretation of selected equity shares: The above table no.3 shows the summary statistic of selected the equity shares company>Returns: Kotak gives highest return i.e. 7.641% and Bajaj gives lowest return i.e. 6.936% from 2016 to 2020. Standard deviation: Above table 3 shows that Bajaj is more volatile as it indicates more risky whereas HUL is less volatile as it indicates less risky. Alpha: Above table3 shows that Reliance, HUL, HDFC, and Kotak has positive alpha as it indicates outperformed shares whereas TCS, HDFC Bank, Infosys, ICICI Bank, SBI has negative alpha as it indicates underperformed shares. Thus, more positive an alpha the healthier for investors.Beta: Above table 3 shows that Reliance, HDFC Bank, Infosys, HDFC, ICICI Bank, Kotak, SBI and Bajaj ratio is higher than 1 as it indicates that the security's price tends to be more volatile than the market whereas TCS and HUL is lower than 1 as it indicates that the security's price tends to be less volatile than the market. Sharpe, Treynor and Jensen ratio: Above table 4 shows performance of selected equities by using Sharpe, Treynor and Jensen ratio. Now the funds can be ranked according to these ratios, higher ratio of fund gets higher rank and higher return. Portfolio return according to CAPM Model: CAPM shows the return of a security is equal to the risk free return plus a risk premium. Thus, the return of ten equity share portfolio gives return of 16.90%.

Analysis of selected Mutual Fund: Interpretation of selected mutual fund in terms of returns: The table 5 shows the absolute return during the time period of 1 year, 2 year, 3 year and 5 year of mutual fund. In the 1 year (2020), Kotakbluechip fund gives 64.14% which is highest return after that SBI bluechip fund gives 61.13% return and other funds give comparative less returns. In the 2 year (2019), CanaraRobecobluechip Equity Fund gives 19.98% which is highest return after that Axis bluechip fund gives 17.34% return and other funds give comparative less returns. In the 3 year(2018), CanaraRobecobluechip Equity Fund gives 16.71% which is highest return after that Axis bluechip fund gives 15.37% return and other funds give comparative less returns. In the 5 year(2020), CanaraRobecobluechip Equity Fund gives 17.23% which is highest return after that Axis bluechip fund gives 17.09% return and other funds give comparative less returns.

Table 3. Showing the risk-return matrix of top ten companies as per market capitalization during 2016-2020

Security Name	Return	SD	Alpha	Beta	Sharpe	Treynor	Jensen
Reliance	7.512	1.795	0.006	1.278	-0.030	27.25	-0.017
TCS	7.474	1.444	-0.043	0.729	0.527	7.117	0.239
HDFC Bank	7.439	1.435	-0.059	1.132	0.164	6.542	0.074
Infosys	7.395	1.651	-0.103	1.061	0.133	6.271	0.069
HUL	7.55	0.675	0.23	0.195	1.915	7.302	0.406
HDFC	7.537	1.043	0.026	1.227	0.322	6.710	0.105
ICICI Bank	7.493	1.768	-0.006	2.091	-1.647	7.664	-0.915
Kotak	7.641	1.055	0.124	1.095	1.355	7.256	0.449
SBI	7.205	2.028	-0.133	2.251	-1.103	7.585	-0.703
Bajaj	6.936	3.817	-0.24	2.369	-0.118	8.063	-0.142

Table 4. Showing the ranking of top ten companies as per market capitalization during 2016-2020

Rank	Sharperatio	Rank	Treynor ratio	Rank	Jensen ratio
1	HUL	1	Reliance	1	Kotak
2	Kotak	2	Bajaj	2	HUL
3	TCS	3	ICICI Bank	3	TCS
4	HDFC	4	SBI	4	HDFC
5	HDFC Bank	5	HUL	5	HDFC Bank
6	Infosys	6	Kotak	6	Infosys
7	Bajaj	7	TCS	7	ICICI Bank
8	Reliance	8	HDFC	8	SBI
9	ICICI Bank	9	HDFC Bank	9	Bajaj
10	SBI	10	Infosys	10	Reliance

Thus, it can be evaluated that CanaraRobecobluechip Equity Fund and Axis bluechip fund can good for long term investment and Kotakbluechip fund and SBI bluechip fund can good for short term investment. Interpretation of selected mutual fund: The table no. 6 represents the summary statistics of selected the mutual funds companies. The statistics consists of mean which shows the typical return of every company, Standard Deviation which analyses the danger factor associated with each company share, and Beta measure of a stock's volatility in reference to the general market, Alpha the active return on an investment and the performance of an investment against a market index or benchmark that's considered to represent the market's movement as an entire and Sharpe ratio is that the most vital tools to live the performance of any fund or investment. Sharpe ratio helps in getting the proper analysis of the funds and enhancing the returns on investment. Beta is a measure of a stock's volatility in relation to the overall market. So High-beta stocks are supposed to be riskier but provide higher return potential; low-beta stocks pose less risk but also lower returns. So, except Axis bluechip fund is less volatility i.e. 0.84% comparatively others funds are more volatile.

Canara Robecobluechip Equity fund gives higher average rate of return i.e. 27.71% after that Kotakbluechip fund gives return of 26.86% whereas lowest return given by Aditya Birla Sun frontline equity fund i.e. 23.57% and Baroda largecap fund i.e. 22.28%. Standard deviation measures the absolute variability of a distribution. So, SBI i.e. 25.44 reflects highest standard deviation as it indicates high risky and more volatility whereas CanaraRobecobluechip Equity fund i.e. 19.53 reflects lowest standard deviation as it indicates less risky and less volatility. Sharpe and is used to help investors understand the return of an investment compared to its risk, negative Sharpe ratio, means the risk-free rate is greater than the portfolio's return. All selected fund are given similar Sharpe ratio i.e 1.12 it indicates positive Sharpe ratio which means risk free rate is lesser than the portfolio return. Above table 7 shows performance of selected equities by using Treynor and Jensen ratio.

Now the funds can be ranked according to these ratios, higher ratio of fund gets higher rank and so on. The following table shows rank of funds according to both ratios.

FINDINGS AND CONCLUSION OF THE STUDY

The objective of the study is to measure the mean return and risk of the stocks and mutual fund. Kotak and HUL have performed the best among the selected equity shares and Axis Bluechip Fund and CanaraRobecoBluechip Equity Fund is at top among all analysed funds in terms of performance during the last financial year 2016-2020. According to Treynor and Jensen, Axis Bluechip Fund, CanaraRobecoBluechip Equity Fund, Baroda largeCap fund secured higher ranking in investing in mutual fund in terms of returns and volatility. Thus, it was found that equity share schemes have higher risk with higher return and mutual funds schemes have lower risk with lower return, there are some companies who can give positive returns to their investors, the annualized returns of Kotak, HUL, HDFC, Axis Bluechip Fund, Canara Robeco Bluechip Equity Fund, Baroda largeCap fund are positive and the investor get the good return. The returns are positive but with minimum amount and difference and the mean return of other company is negative.

The main aim of the study was to examine the comparative analysis of Risk and Return for the Equity and Mutual Funds Companies. For this secondary data has been collected from reliable database. The data has been analysed and result has interpreted of this study are reported below: The study revealed that as a new investor, one would like to get maximum returns on his investments, but it is important to devote time to study the stock market and to keep track of them. Also a lot knowledge and research is required for a good portfolio management. Mutual fund is subject to market risk, despite of that it have low risk than stock market. Performance evaluation measurement ratios i.e. Treynor's, Sharpe's and Jensen's alpha are mostly used by fund managers to take decision of investment and to diversify portfolio.

Table 5. Showing the SIP Absolute returns of Mutual Fund during 2016-2020

Year/ Scheme	Nifty largecap 250 TRI (Total Return Index)	SIP Absolute return (%)									
		Aditya Birla Sun Frontline Equity Fund	Axis Bluechip Fund	Baroda large Cap Fund	Canara Robeco Bluechip Equity Fund	ICICI Prudential Bluechip Fund	IDFC Largecap Fund	Kotak Bluechip Fund	Franklin India Bluechip fund	Mirae Asset Largecap Fund	SBI Bluechip Fund
1 year (2020)	47.40	59.93	47.24	51.91	56.93	58.47	56.14	64.14	61.13	59.21	63.79
2 year (2019)	11.20	11.43	17.34	12.79	19.98	12.18	13.56	15.81	12.05	13.05	14.7
3 year (2018)	9.30	9.85	15.37	11.31	16.71	10.64	11.21	13.03	10.68	12.77	10.79
5 year (2016)	12.80	13.06	17.09	13.11	17.23	14.58	14.01	14.46	11.95	16.44	13.58

Table 6. Showing the various measurement of Mutual Fund during 2016-2020

Portfolio of selected mutual fund											
	Aditya Birla Sun Frontline Equity Fund	Axis Bluechip Fund	Baroda largeCap Fund	CanaraRobecoBluechip Equity Fund	ICICI Prudential Bluechip Fund	IDFC Largecap Fund	KotakBluechip Fund	Franklin India Bluechip fund	Mirae Asset Largecap Fund	SBI Bluechip Fund	
Beta	1.33	0.84	1.08	1.07	1.27	1.19	1.36	1.36	1.24	1.40	
Average Return	23.57	24.26	22.28	27.71	23.97	23.73	26.86	23.95	25.37	25.72	
S.D.	24.28	15.35	19.77	19.53	23.06	21.64	24.88	24.79	22.62	25.44	
Risk free rate of return	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
Sharpe	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	
Treynor	17.62	28.72	20.46	25.88	18.86	19.91	19.64	17.56	20.37	18.38	
Jensen	220.55	230.41	225.53	225.88	221.88	223.46	219.93	220.01	222.38	219.30	
Alpha	-3.33	7.27	0.39	6.17	-1.58	-0.24	-0.65	-3.47	0.32	-2.43	
CAPM	26.87	17.00	21.88	21.54	25.53	23.96	27.48	27.40	25.03	28.11	

Table 7. Showing the ranking of mutual fund by using Treynor and Jensen

Rank	Treynor	Rank	Jensen
1	Axis Bluechip Fund	1	Axis Bluechip Fund
2	CanaraRobecoBluechip Equity Fund	2	CanaraRobecoBluechip Equity Fund
3	Baroda largeCap Fund	3	Baroda largeCap Fund
4	MiraeAsset Largecap Fund	4	IDFC Largecap Fund
5	IDFC Largecap Fund	5	MiraeAsset Largecap Fund
6	KotakBluechip Fund	6	ICICI Prudential Bluechip Fund
7	ICICI Prudential Bluechip Fund	7	AdityaBirla Sun Frontline Equity Fund
8	SBI Bluechip Fund	8	Franklin India Bluechip fund
9	AdityaBirla Sun Frontline Equity Fund	9	KotakBluechip Fund
10	Franklin India Bluechip fund	10	SBI Bluechip Fund

Performance analysis should be done with a multi-criteria approach integrating all its various aspects, i.e. including calculations over different time periods (short term, medium term and long term), and including the three dimensions of performance evaluation (relative performance, beta exposure and manager skill). So, analyzing the performance of companies with the help of fundamental Analysis is also very important before investing. Thus, Investment in both equity and mutual funds are subjected to market risk.

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