ACCESS THE FACTORS AFFECTING PERFORMANCE OF ETF (EXCHANGE TRADED FUNDS) WITH EQUITY MUTUAL FUNDS

Madhu Singh, Charandeep Kaur, Juhi Singh, Dr. Anil Kumar

Abstract: The study employs a quantitative approach to estimate the factors affecting the performance of Exchange-Traded Funds (ETFs) concerning Equity Mutual Funds. This study provides both quantitative and qualitative results The study utilizes secondary data, specifically net asset value (NAV) of equity mutual funds and Jakarta Composite Index, obtained from the official websites of Financial Service Authority and Indonesia Stock Exchange. Additionally, data related to ETFs and equity mutual funds, specifically NAV, is collected from various sources like the Association of Mutual Fund in India (AMFI) and financial websites such as Money Control, Growth, and ET Money. The risk taken by the investor return earned through the investment. To evaluation of the performance of equity mutual fund and ETF, after consideration of the return earned for risk incurred by the investor, various risk adjusted performance parameters such as Sharpe Ratio, Jensen's Alpha, Beta, Treynor ratio and Sortino ratio. The findings suggest that the performance drivers differ between Mutual Funds and ETFs. For Mutual Funds, risk plays a crucial role, while for ETFs, both volatility and fund selection skill are significant factors. This information can be valuable for investors seeking to optimize their portfolio based on the specific characteristics of these investment vehicles.

Keywords: Mutual Fund, Exchange Trade Fund, Affecting Performance, Factor Analysis, Risk adjusted performance, Qualitative Study

INTRODUCTION

A mutual fund is a type of investment plan that pools money from numerous investors, who then direct the fund manager to make additional investments. This collective capital may be used by the fund manager to invest in securities such as equities, bonds, gold, or any combination of these. Every mutual fund is effective around certain investment goals and endeavours to meet those goals. Professional fund managers invest the money raised through mutual fund schemes in stocks, bonds, etc. following the investment goal of the scheme. After deducting any necessary costs and fees, the income or profits from this collective investment scheme are allocated equally among the investors by figuring out the "Net Asset Value" of the scheme, or NAV. Mutual funds demand a little fee in exchange.

A sort of exchange-traded product and investment fund having shares that can be exchanged on a stock exchange is called an exchange-traded fund (ETF). ETFs have several benefits and are intended to give investors exposure to a diverse portfolio of assets, including stocks, bonds, commodities, and other instruments. It's important to remember that although ETFs have many advantages, there are risks involved. Before making an investment, investors should carefully evaluate their investment goals, risk tolerance, and the particular characteristics of the ETF, as the value of an ETF can fluctuate depending on the performance of its underlying assets.

LITERATURE REVIEW

The literature on the economics of open-end mutual funds as well as mutual funds in general is surveyed in this review. Researcher like **Musto, D. K. (2011)** analyse data, even though the dangers associated with this mutual fund design have only lately become widely recognized, it has proven to be a very successful strategy. It also makes it difficult to analyse recently praised performances. Review subjects include transaction costs, risk transfer, tax efficiency, window dressing, governance, marketing, pricing, and issues that pertain to households.

This paper explores the complex decision of buying mutual funds, highlighting the risks and fluctuations of internal and external factors. It aims to help newcomers understand and invest in the capital market, identifying characteristics and factors to consider before investing in a fund, as **Khinchi, Kiran, Kanodia, Monty (2020)** points out.

This paper examines the performance of exchange-traded funds (ETFs) by **Bano, Yasmeen Shanmugam, Vasantha 2012-2017**, focusing on tracking error, active returns, and Jensen's alpha. The research found that ETFs outperformed the market due to a low tracking error, indicating their superior returns compared to fixed deposits, gold, and savings accounts.

This paper analyses mutual fund schemes in India using a rigorous analytical methodology. It examines risk profiles, past returns, and financial performance over various time periods. The study also considers market developments, regulatory changes, and macroeconomic factors, and assesses performance consistency across various market cycles **as Bhojani, Minal V 2016** point out.

In this research paper, the authors use a method called Data Envelopment Analysis (DEA) to evaluate the performance of exchange-traded funds (ETFs) from 2006 to 2009 by Data Envelopment Analysis **Jacky Chu; Frank Chen; Philip Leung**. They focus on different countries in Asia Pacific, Europe, North America, and some emerging markets. The main goal is to understand how the recent financial crisis affected these countries by comparing their country indices to the S&P 500 and using the Sharpe Ratio.

RESEARCH DESIGN

Methodology

Following the existing literature (Gamble, James, 2020; Mahesh, Geethanjali, Dr Lokesh, Dr Srinivasan, Sriram,2023; L. Alamelu, Nisha Goyal,2022; Singh & Kaur,2016; Hoa Thi Nguyen, Joseph Farinella 2018) we estimate the Factors Affecting Performance of ETF (Exchange Traded Funds) With Equity Mutual Funds.

Research Objective

The objective of this study is to examine the factor affecting the performance of ETF with equity mutual fund during the period 2020 to 2022 based on financial statement an annual report forming part of the pre-pandemic period.

Data

The sample of 69 ETF's taken excluding commodity and debt ETF and the sample of 95 Equity Mutual fund have taken from small cap, mid cap, and large cap from 2020 to 2022. The study period is restricted to 3 calendar years belonging to the pre-pandemic period, which was spared from the threat of novel Corona Virus (COVID-19) that led the stock markets to operate under a constant fear of uncertainty. For all 95 Mutual funds we use daily data thus have a total of 69 observations. And for all 69 ETF we used daily data thus have total of 69 observation. The data is primarily collected from Money control, and if necessary supplemented with data from finance.yahoo.com. (Hoa Thi Nguyen, Joseph Farinella 2018).

Tools Used

For this study we have used various techniques and tools for mythologies: - the software we used SPSS and the various official websites of NSE, money control, Association of mutual fund in India (AMFI), Yahoo finance and money control.

Empirical Result and discussion

Mutual fund
Descriptive analysis

Table 3 gives a summary of descriptive statistics of Mutual fund variables. The mean value of Fund Selection skill is 0.24. The average value of risk is 0.75, and Volatility is 0.78. The average value of equity mutual fund return is 0.83. These results indicate that the average of sample equity mutual funds used in this research has a good return.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Volatility	69	0	1	.78	.157
Risk	69	-6	6	.75	1.795
Growth Return	69	-7	7	.83	3.134
Fund Selection Skill	43	0	0	.24	.059
Valid N (listwise)	43				

Table 1

Statistics

		Volatility	Risk	Growth Return	Fund Selection Skill
N	Valid	69	69	69	43
	Missing	0	0	0	26
Skewness		-.864	-.909	.012	-.151
Std. Error of Skewness		.289	.289	.289	.361
Kurtosis		1.108	3.631	.202	-1.074
Std. Error of Kurtosis		.570	.570	.570	.709

Table 2

According to the classical assumption, test results explain that the data are normally distributed based on skewness resulted between –2 to +2 (-.909 and +.012) and kurtosis ratio resulted between -7 to +7(-1.074 and +3.631).

Hypothesis

- Null Hypothesis (H0): None of the independent variables significantly predict the dependent variable.
- Alternative Hypothesis (H1): At least one independent variable significantly predicts the dependent variable.

When to accept or reject hypothesis

- If the p-value obtained from the statistical test is less than or equal to the chosen alpha level (e.g., $p \leq 0.05$), you reject the null hypothesis.
- If the p-value obtained is greater than the chosen alpha level (e.g., $p > 0.05$), you fail to reject the null hypothesis.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-20.292	1.667		-12.169	.000
	Volatility	4.641	1.948	.088	2.382	.022
	Risk	11.111	3.047	.804	3.647	.001
	Fund Selection Skill	12.739	14.850	.193	.858	.396

Dependent Variable: Growth Return

Table 3

The regression equation in this research is formed by using random effect model which was selected through Chow test, Hausman test, and Lagrange Multiplier (LM) tests. The results of the regression are shown in Table 5 above. The results of the regression analysis show that the coefficient which explains the direction of variability is positive for Risk and Fund selection skill and volatility.

Independent Variables	Significance Value	Null Hypothesis
Volatility	0.022	Accept
Risk	0.001	Reject
Fund Selection Skill	0.396	Accept

Table 4

The above table shows whether all three independent variables (Volatility, Risk, Fund Selection Skill) are significantly predicting the dependent variable or not. As we analyze from the above, growth return is depended on risk but not depended upon Volatility and Fund Selection Skill. The significance value of risk is less than p-value (0.05) i.e.0.022, therefore we reject null hypothesis. For Volatility and Fund Selection Skill we failed to reject null hypothesis.

ETF
Descriptive analysis
Table 7 gives a summary of descriptive statistics of ETF variables. The mean value of Fund Selection skill is 0.04. The average value of risk is 0.48, and Volatility is 0.90. The average value of equity mutual fund return is -0.43. These results indicate that the average of sample equity ETF used in this research has an Average return.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Volatility	69	0	1	.90	.273
Risk	69	-1	2	.48	.600
Growth Return	69	-34	9	-.43	4.731
Fund Selection Skill	69	-3	1	.04	.454
Valid N (listwise)	69				

Table 5

Statistics

		Volatility	Risk	Growth Return	Fund Selection Skill
N	Valid	69	69	69	69
	Missing	1	1	1	1
Skewness		-2.589	-1.522	-4.950	-4.030
Std. Error of Skewness		.289	.289	.289	.289
Kurtosis		5.238	2.623	38.395	21.438
Std. Error of Kurtosis		.570	.570	.570	.570

Table 6

According to the classical assumption, test results explain that the data are normally distributed based on skewness resulted between –2 to +2 (-4.950 and) and kurtosis ratio resulted between -7 to +7(and 38).

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.537	1.841		3.551	.001
	Volatility	-8.889	2.122	-.512	-4.188	.000
	Risk	1.743	1.091	.221	1.598	.115
	Fund Selection Skill	4.238	1.375	.407	3.082	.003

Dependent Variable: Growth Return

Table 7

The regression equation in this research is formed by using random effect model which was selected through Chow test, Hausman test, and Lagrange Multiplier (LM) tests. The results of the regression are shown in Table 9 above. The results of the regression analysis show that the coefficient which explains the direction of variability is positive for Risk and Fund selection skill, while it is negative for volatility.

Independent Variables	Significance Value	Hypothesis
Volatility	0.000	Reject
Risk	0.115	Accept
Fund Selection Skill	0.003	Reject

Table 8

The above table shows whether all three independent variables (Volatility, Risk, Fund Selection Skill) are significantly predicting the dependent variable or not. As we analyze from the above, growth return is dependent upon Volatility and Fund Selection Skill but not depended on risk. The significant value of risk is greater than p-value (0.05) i.e.0.115, therefore we failed to reject null hypothesis. For Volatility and Fund Selection Skill we reject null hypothesis.

CONCLUSION

Mutual funds serve as popular investment vehicles that pool funds from numerous investors to be managed by professionals with the aim of achieving specific investment objectives. These funds offer a range of benefits, including diversification, income generation, capital preservation, and potential for growth. Mutual funds are categorized based on their primary investments, such as money market funds, bond funds, equity funds, or hybrid funds. Exchange-Traded Funds (ETFs) have proven to be a transformative force in the financial markets, providing investors with a dynamic and versatile tool for an array of investment strategies. Their unique structure, characterized by shares traded on stock exchanges throughout the day, sets them apart from traditional mutual funds.

These findings suggest that the performance drivers differ between Mutual Funds and ETFs. For Mutual Funds, risk plays a crucial role, while for ETFs, both volatility and fund selection skill are significant factors. This information can be valuable for investors seeking to optimize their portfolio based on the specific characteristics of these investment vehicles.

The result from regression analysis shows that factors affecting are significantly depending on the growth return. The returns are partially determined by volatility, risk, and fund selection ski skill; s we provide detailed examination of all the factors. We also perform descriptive analysis to sort the data and detect the errors. We analyse that the performance of the mutual fund is better than ETF. The last part of the paper examines the AUM (asset under management) and NAV (net assets value) of ETF and equity mutual fund.

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