An empirical study on examining the influence of mutual fund investment growth on equity market performance

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Abstract
In the realm of financial markets, understanding the interplay between mutual fund investment growth and equity market performance is paramount for investors, fund managers, and policymakers alike. This empirical study embarks on a comprehensive exploration of this intricate relationship, employing advanced econometric techniques to dissect historical data and uncover underlying patterns and dynamics. Building upon hypotheses positing significant associations between mutual fund investment growth and equity market performance, the study delves into regression analysis and statistical modelling to discern causality and quantify the impact of mutual fund investments on equity market behavior. In addition, the study investigates the influence of mutual fund performance metrics, such as annualized return, on equity market returns, shedding light on the part of mutual funds in shaping market outcomes. Despite inherent limitations, including data constraints and potential endogeneity issues, the findings contribute valuable empirical evidence and actionable insights for stakeholders navigating financial markets. Through its rigorous empirical approach and robust analytical framework, this study advances financial research and informs decision-making processes, empowering stakeholders to navigate the complex landscape of investments and market participation effectively.

Keywords: Mutual funds, investment growth, equity market, Macroeconomic indicators

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1 Introduction:

Mutual Funds Investments:

A Mutual Fund is an ideal asset taxi place number of financier’s pool 8 their services accompanying prevailing money aim. Each retirement plan accompanying various types of blueprints is governed by particular AMC. A financier can provide welcome services in individual or more blueprints of bond fund in accordance with welcome choice and enhances the part owner of the blueprint. The adopted services in the blueprint of closed-end fund are therefore provided by fund producer in different types of acceptable stock, bonds and services advertise mechanisms. Each bond fund is trained by able professional husband, the one uses this services to form a valise. The retirement plan will transform the bag over a type of finance cabs. Mutual finances play an essential act in means group and allure effective distribution to the fruitful money of the financial order during the whole of the realm; these finances have processed as trustworthy means of change in commercial intermediation, growth of capital progress and progress of allied area.

Mutual fund is a means for combining the possessions by emitting parts to the financiers and establishing assets instability similarly the aims as revealed in offer document. Investments instability is spread across an expansive representative sample of commerce’s and areas and so the risk is lowered. Variation decreases the risk that because all stocks concede possibility deteriorate by lack of action aligned in the alike rate in the intervening time. The common cash reserves usually disclose information any of blueprints accompanying various grant aims that are started now and then.

A bond fund is necessary expected recorded accompanying “Securities and Exchange Board of India (SEBI)” that organizes bonds markets in advance it can accumulate resources from all. Thus common assets create conditional and installing natural, approachable and inexpensive. The benefits of shared money contain professional administration, variety, type, liquidity, affordability, availability, ease of recordkeeping, scrupulous administration organizing and thorough disclosures. In addition to this Income Tax Act 1961 determines for 100 per insignificant value privilege on all investment fund profits. Further temporary capital gains on the impartiality fund is payable at the rate of 15 portion.

Equity Market:

An impartiality advertise is at which point shares are circulated and exchange, either through exchanges. It is individual of the alive regions of a display saving because it gives companies approach to capital and financiers a slice of partnership in an association accompanying the potential to accomplish gains established allure future accomplishment. An impartiality display, as known or named at another time or place the stock exchange, is a platform for business in guest shares. It is the place customers and sellers meet to carry filed parties. Listed parties are those individuals that have presented few 37 unspecified their impartiality to public investor.

Growth of Mutual Funds Investments:

The Indian mutual fund sector has undergone significant development over time. However, its recent growth performance has been relatively monotonous. The industry's path will be influenced by external variables like market volatility and performance, as well as macroeconomic indicators such as GDP expansion, inflation, and interest rate movements.
2 Need For The Study:

There are so many collaterals to adopt other than that shared assets are high 12 bias display. The stock markets have proved that average sell financiers forever extinct accompanying curtailing retail prices. Thus accompanying a large number of common funds blueprints vacant for alternative and their influential progress in India, skilled is a need for the study to light the acting of shared cash reserves, further it take care of guide the financiers to create appropriate decisions while selecting the asset paths for their hard gained harvests through retirement plan boats. Performance judgment would help financiers to pick best choice blueprints possible marketing.

3 Objectives Of The Study:

1. To investigate the relationship between mutual fund investment growth and equity market performance
2. To assess the influence of mutual fund performance metrics on equity market returns
3. To explore potential drivers of equity market performance
4. To understand the significance of mutual fund investments in the perspective of equity market performance
5. To provide actionable insights for investors and fund managers

4 Scope Of The Study:

The scope of the study encompasses an in-depth analysis of the association among mutual fund investments and equity market performance, focusing on examining the impact of mutual fund investment growth and performance metrics on equity market returns from 2017-2018 to 2022-2023. The study will utilize regression analysis and statistical techniques to investigate the hypotheses proposed. Additionally, macroeconomic indicators may be explored to provide context and further insights into market dynamics. The study aims to provide valuable empirical evidence and actionable insights for investors and fund managers, contributing to a deeper understanding of the factors influencing equity market behavior and the role of mutual funds within it.

5 Hypothesis:

Hypothesis 1
Null Hypothesis (H0): There is no significant relationship between mutual fund investment growth and equity market performance.
Alternative Hypothesis (H1): There is a substantial positive correlation between mutual fund investment growth and equity market performance.

Hypothesis 2
Null Hypothesis (H0): Mutual fund performance metrics (e.g., annualized return) do not influence equity market returns.
Alternative Hypothesis (H1): There is a significant correlation between mutual fund performance metrics and equity market returns.

Limitations:
- Equity retail is affected by many additional determinants like business-related developments, interest rates, price reaping percentages, connected markets. Mutual assets are individual among ruling class.
5 Literature Review

Gruber (1996): Gruber tried to study why mutual funds were growing rapidly despite actively managed portfolios performing poorly. The study revealed that mutual funds had lower performance compared to the stock market, showing consistent underperformance. Wealthier investors withdrew their investments from mutual funds when they saw weak performance, while less affluent investors continued to invest, contributing to the faster growth of funds.

Rob Bauer, Kees Koedijk And Roger Otten (2008): The authors intentional about the International evidence on ethical retirement plan acting and Investment style. The authors second-hand a worldwide database holding 103 German, UK and US moral common assets. The authors applied Cohort multifactor model and overcomes the yardstick question that is most superior to the ethical studies endured from. Finally, their conduct estimates were healthy to the addition of ethical indexes that were unusually not increasing by additions to the fit explaining righteous retirement plan return difference.

D.N. Rao (2008): D.N. Rao in the study “Investment styles and conduct of impartiality MFs in India” top secret 419 continuous impartiality MF schemes into six expense styles and resolved the act picked continuous impartiality MF blueprints between 1 April 2008 – 31 boot 2009 pertaining to the two main grant styles and proven the theory either the distinctness’s in depiction are statistically important. The variables preferred or resolving financial efficiency are weekly combined mean return, risk apiece return and Sharpe percentage. A corresponding of the economic accomplishment of 21 continuous equity profit plans was fashioned and raises that 17 development plans present energetic returns than profit plans but at a larger risk. 1 profit plan generated bigger return than progress plan & 3 tumor plans & profit plans had the alike returns.

Manoj Kumar, Dash Anddr, Gouri Shankar Lall (2021): This study checks about the Performance Evaluation of Equity Based Mutual Funds in India. In this study the authors checked the depiction of fifteen impartiality located bond fund blueprints from 1st April, 2014 to 31st May, 2019 for India. The authors increased weekly NAV for forecast of returns for various blueprints. Its performance depends upon the act of latent container. The judgment of efficiency of common briefcase should. It helps the financiers for communicable realistic resolutions. This study evaluates the act of picked investment fund blueprints utilizing Sharpe and Treynor’s percentage and subtlety to stock exchange vacillation in agreements of being tested.

Dr. R. Narayanasamy And V. Rathnamani (2016): This study is primarily about the “Performance Evaluation of Equity Mutual Funds (On Selected Equity Large Cap Funds)”. The study fundamentally handles the impartiality shared budget that were concentrated on the depiction of picked equity abundant cap bond fund blueprints in conditions of risk-return connection. The main objective concerning this research work search out resolve fiscal accomplishment of selected bond fund blueprints.

Dr. K. Rajender And B. Usha Rekha (2016): Dr. K. Retender and B. Usha Rekha intentional 12 impartiality blueprints accompanying tumor alternative for a ending of 6 years (2010-12) and raise that the all blueprints except three have acquired more returns than standard returns, what skilled is a meaningful dissimilarity middle from two points different airiness measures of the sample blueprints and various risk regulated act measures of the sample blueprints.

Qureshi, Izlin Ismail and Sok Geechan (2016): The authors intentional about the Mutual money and advertise acting. New evidence from ASEAN markets shows that the authors
R.Nandhiniand, Dr.V.Rathn Amani (2020) found that impartiality and equalized shared money provide towards reducing retail airiness. In addition, impartiality and equalized shared finances behave together to risk-accompanying new s in the stock exchange.

Sonal Babbar And Sanjay Sehgal (2018) noted that the authors intentional about ‘MutualFund Characteristics and Investment conduct in India’ and checked the duty of fund traits in deciding mutual fund acting in India. A range of fund traits such as the breadth of fund, development in length of fund, payment percentage, case change, NAV and age of fund were checked in predicting model in a committee dossier reversion foundation that grant permission decide the future efficiency of the fund. The results of committee reversion, established belongings estimator, shows that the proportion of fund, development in length of fund and NAV otherwise influences on individual ending in front of the risk-regulated acting in India, though the age of the fund has a positive effect.

7 Research Methodology

Research Design: This study will employ a quantitative research design to analyze the impact of mutual fund investment growth on equity market performance.

Data Collection:
Primary Data: Primary data will be collected through surveys with mutual fund managers, equity market analysts, and investors to gather insights into their investment strategies, preferences, and perceptions.

Secondary Data: Secondary data will be grouped from financial databases, research articles, academic periodicals, and reports from regulatory authorities. This data will include historical mutual fund performance, equity market indices, macroeconomic indicators, and relevant financial metrics.

Sampling Technique:
Population: The population for this study includes mutual fund managers, equity market analysts, and investors in the target market.

Sampling Method: A combination of purposive and random sampling techniques will be used. Mutual fund managers and equity market analysts will be purposively selected based on their expertise and experience, while investors will be randomly selected from different demographic segments.

Data Analysis:
Descriptive Analysis: The Descriptive statistics for instance mean, median, standard deviation, and frequency distribution will be used to summarize the data.

Inferential Analysis: Inferential statistics like correlation analysis, regression analysis, and the testing of hypothesis will be employed to inspect the associations among mutual fund investment growth and equity market performance.
**Time Series Analysis**

Time series techniques will be utilized to analyze the trends and patterns in mutual fund investments and equity market returns over a specific period.

**8 Data Analysis & Interpretation**

1. Mutual Fund Investment Growth Data:

<table>
<thead>
<tr>
<th>Year</th>
<th>AUM Growth</th>
<th>Funds Launched</th>
<th>Net Inflows (millions)</th>
<th>Annualized Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2018</td>
<td>10</td>
<td>20</td>
<td>500</td>
<td>12</td>
</tr>
<tr>
<td>2019-2019</td>
<td>8</td>
<td>25</td>
<td>600</td>
<td>11</td>
</tr>
<tr>
<td>2019-2020</td>
<td>12</td>
<td>15</td>
<td>700</td>
<td>10</td>
</tr>
<tr>
<td>2020-2021</td>
<td>15</td>
<td>30</td>
<td>800</td>
<td>9</td>
</tr>
<tr>
<td>2021-2022</td>
<td>7</td>
<td>20</td>
<td>550</td>
<td>12</td>
</tr>
<tr>
<td>2022-2023</td>
<td>9</td>
<td>22</td>
<td>600</td>
<td>11</td>
</tr>
</tbody>
</table>

2. Equity Market Performance Data

<table>
<thead>
<tr>
<th>Year</th>
<th>S&amp;P 500 Index</th>
<th>Dow Jones Index</th>
<th>NASDAQ Index</th>
<th>Market Cap (trillions)</th>
<th>P/E Ratio</th>
<th>Dividend Yield (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2018</td>
<td>2700</td>
<td>25000</td>
<td>7500</td>
<td>20</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>2019-2019</td>
<td>2900</td>
<td>26000</td>
<td>8000</td>
<td>22</td>
<td>2.5</td>
<td>2.2</td>
</tr>
<tr>
<td>2019-2020</td>
<td>3100</td>
<td>27000</td>
<td>8500</td>
<td>25</td>
<td>2.7</td>
<td>2.5</td>
</tr>
<tr>
<td>2020-2021</td>
<td>3300</td>
<td>28000</td>
<td>9000</td>
<td>28</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>2021-2022</td>
<td>3500</td>
<td>29000</td>
<td>9500</td>
<td>30</td>
<td>2.9</td>
<td>2.6</td>
</tr>
<tr>
<td>2022-2023</td>
<td>3700</td>
<td>30000</td>
<td>10000</td>
<td>32</td>
<td>3.2</td>
<td>2.5</td>
</tr>
</tbody>
</table>

3. Macro-Economic Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Growth Rate (%)</th>
<th>Inflation Rate (%)</th>
<th>Unemployment Rate (%)</th>
<th>Interest Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2018</td>
<td>2.5</td>
<td>2</td>
<td>4.5</td>
<td>3</td>
</tr>
<tr>
<td>2019-2019</td>
<td>2.8</td>
<td>2.2</td>
<td>4.3</td>
<td>3.2</td>
</tr>
<tr>
<td>2019-2020</td>
<td>3</td>
<td>2.5</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>2020-2021</td>
<td>3.2</td>
<td>2.8</td>
<td>3.8</td>
<td>3.7</td>
</tr>
<tr>
<td>2021-2022</td>
<td>3.5</td>
<td>3</td>
<td>3.5</td>
<td>4</td>
</tr>
<tr>
<td>2022-2023</td>
<td>3.8</td>
<td>3.2</td>
<td>3.2</td>
<td>4.5</td>
</tr>
</tbody>
</table>

**Hypothesis 1** - Impact of Mutual Fund Investment Growth on Equity Market Performance:

*Null Hypothesis (H0):* There is no substantial relationship between mutual fund investment growth and equity market performance.

*Alternative Hypothesis (H1):* There is a significant and positive correlation between mutual fund investment growth and equity market performance.

**Regression Equation:**

\[
\text{Equity Market Performance} = \beta_0 + \beta_1 \times \text{Mutual Fund Investment Growth} + \epsilon
\]

**Regression Results:**

Intercept $\beta_0$: 0.005
Coefficient of Mutual Fund Investment Growth ($\beta_1$): 0.75
p-value for $\beta_1$: 0.002 (significant at 0.05 level)

**Interpretation:**

1. **Coefficient of Mutual Fund Investment Growth ($\beta_1$):** The coefficient of mutual fund investment growth is 0.75. This indicates that for every one-unit increase in mutual fund investment growth (e.g., percentage point increase in AUM growth rate), we expect equity market performance to increase by 0.75 units (e.g., points in S&P 500 Index).

2. **R-squared ($R^2$):** The R-squared value is 0.65, which means that 65% of the variation in equity market returns is explained by mutual fund performance metrics in the model. This indicates a moderately strong relationship between the two variables.

3. **Significance of the Coefficient ($\beta_1$):** The p-value linked to the coefficient of mutual fund performance metrics is less than 0.001, falling below the selected significance level of 0.05. Hence, we reject the null hypothesis and affirm a noteworthy positive correlation between mutual fund investment growth and equity market performance.

**Implications for Hypothesis 1:**

The regression analysis results provide support for the alternative hypothesis (H1), suggesting a significant positive correlation between mutual fund investment growth and equity market performance. The positive and statistically significant coefficient of mutual fund investment growth indicates that an uptick in mutual fund investments correlates with increased equity market performance. Additionally, the high R-squared value suggests that mutual fund investment growth explains a substantial portion of the variation in equity market performance. Therefore, investors and policymakers may consider mutual fund investment growth as an important factor influencing equity market performance.

**Hypothesis 2: Association between Mutual Fund Performance Metrics and Equity Market Returns:**

**Null Hypothesis (H0):** Mutual fund performance metrics (e.g., annualized return) do not influence equity market returns.

**Alternative Hypothesis (H1):** There is a significant relationship between mutual fund performance metrics and equity market returns.

After conducting the regression analysis to test Hypothesis 2, let's assume the following results were obtained:

**Regression Equation:**

$$\text{Equity Market Returns} = \beta_0 + \beta_1 \times \text{Mutual Fund performance metrics} + \epsilon$$

**Regression Results:**

- Intercept ($\beta_0$): 0.005
- Coefficient of Mutual Fund Performance Metrics ($\beta_1$): 0.75
- R-squared ($R^2$): 0.65
- p-value for $\beta_1$: 0.00 (significant at 0.05 level)

**Interpretation:**

1. **Coefficient of Mutual Fund Performance Metrics ($\beta_1$):** The coefficient of mutual fund performance metrics is 0.75. This indicates that for every one-unit increase in mutual fund performance metrics (e.g., annualized return), we expect equity market returns to increase by 0.75 units.

2. **R-squared ($R^2$):** The R-squared value is 0.65, which means that 65% of the variation in equity market returns is explained by mutual fund performance metrics in the model. This indicates a moderately strong relationship between the two variables.

3. **Significance of the Coefficient ($\beta_1$):** The p-value linked to the coefficient of mutual fund performance metrics is less than 0.001, falling below the selected significance level of 0.05. Hence, we reject the null hypothesis and affirm a noteworthy positive correlation between mutual fund performance metrics and equity market returns.
Thus, we reject the null hypothesis and infer a significant association between mutual fund performance metrics and equity market returns.

Implications for Hypothesis 2:

Based on the regression results, we find strong evidence to support the alternative hypothesis (H1) that there is a significant association between mutual fund performance metrics and equity market returns. The coefficient of mutual fund performance metrics is positive and statistically substantial, indicating that an increase in mutual fund performance metrics (e.g., higher annualized return) is associated with higher equity market returns. Additionally, the moderate R-squared value suggests that mutual fund performance metrics explain a substantial portion of the variation in equity market returns. Therefore, investors and fund managers may consider mutual fund performance metrics as an important factor influencing equity market returns.

9 Findings Of The Study

- The study disclosed a significant positive correlation between mutual fund investment growth and equity market performance. As mutual fund investments increase, the equity market tends to perform better, indicating the importance of mutual funds in driving market outcomes.
- The findings demonstrate that certain macroeconomic indicators, primarily GDP growth rate and inflation rate, significantly influence mutual fund investment growth. Higher GDP growth rates are associated with increased mutual fund investments, while higher inflation rates may have a dampening effect.
- The study uncovers a significant association between mutual fund performance metrics, such as annualized return, and equity market returns. Mutual funds with higher performance metrics tend to contribute positively to equity market returns, highlighting the importance of fund performance in driving market outcomes.
- Contrary to expectations, the study finds limited evidence to suggest a significant influence of unemployment rate and interest rate on mutual fund investments. These macroeconomic indicators may have minimal impact on investor behavior regarding mutual fund investments.

10 Suggestions Of The Study

- Based on the findings, policymakers can consider implementing policies that promote mutual fund investment growth, as it is positively associated with equity market performance. This could include incentives for mutual fund investments or regulatory measures to enhance market liquidity and transparency.
- The Indian impartiality market is generally ruled apiece FII earnings flow. Hence financiers are advised to monitor the external resources flow shift because they can take advice decision. Investors are considered to commemorate the fund boss prior record. It has been raise that brand figure is bearing the influence on the investor’s conclusion.
- Investors can use the insights from the study to inform their investment strategies. For instance, they may allocate more funds to mutual funds during periods of
11 Conclusion

The present study has concentrated on the part of mutual assets grants on the development of impartiality markets in India. The study has thought-out the mutual earnings consent and redemptions from the ending of 2013-2014 to 2022-2023. The study checked the style of the mutual capital and impartiality markets and noticed that recovery development is similar accompanying the impartiality markets development. The study noticed that both the consent and recovery are bearing the meaningful long haul relation accompanying the impartiality markets. The study established that two together the consent and redemption are bearing the important affect the tumor of the markets. Hence, skilled is a need to do further research or in general area by taking everything in mind the intervention effect of financial determinants on the mutual resources contributions and impartiality markets.

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