

Mutual Fund Participation and Stock Market Development in India: An Econometric Investigation

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Abstract: The Indian stock market has witnessed substantial transformation over the last two decades due to increasing participation of domestic institutional investors, particularly mutual funds and Asset Management Companies (AMCs). Mutual funds play a significant role in mobilizing household savings, improving financial inclusion, enhancing market liquidity, and supporting long-term capital market development. This study empirically investigates the relationship between mutual fund participation and stock market development in India during the period 2009–2024. The research employs econometric techniques including multiple regression analysis, Variance Inflation Factor (VIF), Chow Breakpoint Test, Quandt-Andrews Unknown Breakpoint Test, and Bai-Perron Multiple Breakpoint Test to examine the impact of various mutual fund investment activities on the SENSEX. The findings reveal that Mutual Fund Index Futures (MFIF) exert a statistically significant positive influence on stock market performance, indicating that derivative-based investment activities contribute meaningfully to market growth and liquidity creation. The study further identifies the existence of multiple structural breaks associated with major economic events such as demonetization, UPI expansion, and the COVID-19 pandemic, which significantly altered investor behaviour and financial market dynamics. The results confirm that mutual fund participation contributes positively toward financial market resilience, market stability, and the long-term development of the Indian stock market. The study provides important implications for policymakers, regulators, investors, and AMCs regarding the growing importance of domestic institutional investments in strengthening India's financial ecosystem.

Keywords: Mutual Funds, Asset Management Companies, Indian Stock Market, SENSEX, Market Development, Econometric Analysis, Structural Breaks, Financial Markets, Institutional Investors, Stock Market Performance.

1. Introduction:

The stock market plays a vital role in the economic development of any nation by facilitating capital formation, mobilizing savings, promoting industrial growth, and improving financial efficiency. A well-developed stock market enables businesses to raise long-term capital while simultaneously providing investment opportunities to individuals and institutions. In emerging economies such as India, the stock market has evolved significantly due to economic liberalization, technological advancement, financial reforms, and increasing participation from domestic and foreign institutional investors. Among various institutional participants, mutual

funds and Asset Management Companies (AMCs) have emerged as highly influential contributors to stock market development and financial market stability.

Mutual funds represent professionally managed investment vehicles that pool savings from retail and institutional investors and allocate them across diversified financial assets such as equities, bonds, derivatives, and money market instruments. The primary objective of mutual funds is to provide diversification, professional fund management, liquidity, and risk reduction to investors. In India, the mutual fund industry has witnessed remarkable growth over the last two decades due to increasing financial literacy, digital financial inclusion, rising disposable income, and regulatory support from the Securities and Exchange Board of India (SEBI). The introduction of Systematic Investment Plans (SIPs), digital investment platforms, and fintech innovations has further accelerated retail investor participation within mutual fund schemes.

The Indian mutual fund industry has become an important source of domestic institutional investment in the stock market. Traditionally, Indian stock markets were significantly influenced by Foreign Portfolio Investors (FPIs) and external global financial movements. However, during recent years, domestic mutual funds have increasingly emerged as stabilizing forces capable of counterbalancing volatile foreign capital outflows. The growing Assets Under Management (AUM) of Indian mutual funds indicate rising investor confidence in professionally managed investment mechanisms. This increasing participation of domestic institutional investors contributes toward improving market liquidity, reducing informational asymmetry, enhancing price discovery mechanisms, and promoting financial market resilience.

Mutual funds influence stock market development through multiple channels. Firstly, they increase market liquidity by participating actively in equity and derivative trading activities. Higher liquidity improves transaction efficiency and reduces market volatility. Secondly, mutual funds facilitate efficient capital allocation by directing household savings toward productive corporate investments. Thirdly, professionally managed mutual funds enhance investor confidence by reducing informational disadvantages and investment risks faced by retail investors. Finally, mutual fund participation contributes toward market depth and financial inclusion by enabling small investors to participate in capital markets through diversified investment portfolios.

The relationship between mutual fund activities and stock market performance has become increasingly important within the context of India's rapidly evolving financial ecosystem. The expansion of digital payment systems, online trading platforms, mobile investment applications, and algorithmic trading has transformed investment behaviour across financial markets. Simultaneously, major economic and policy events such as demonetization, the rapid adoption of Unified Payments Interface (UPI), and the COVID-19 pandemic have substantially altered financial market dynamics and investor psychology. These developments have increased the relevance of examining how mutual fund participation influences stock market growth and financial stability during periods of economic uncertainty and structural transformation.

India experienced a major structural economic shift during demonetization in 2016, which significantly impacted liquidity conditions, digital transactions, and investment behaviour. The promotion of digital financial systems and electronic transactions accelerated financial formalization and increased retail participation within financial markets. Similarly, the rapid

growth of UPI-based digital payments transformed the Indian financial ecosystem by improving accessibility, transaction convenience, and financial inclusion. These technological and policy developments indirectly influenced mutual fund investments and stock market participation patterns.

Another major event affecting financial markets was the outbreak of the COVID-19 pandemic in 2020. The pandemic created unprecedented economic disruption, market volatility, liquidity crises, and uncertainty across global financial systems. During this period, mutual funds played an important role in maintaining liquidity and investor participation despite significant market fluctuations. The pandemic also accelerated digital investment behaviour, online financial services, and retail investor engagement in stock markets. Consequently, understanding the relationship between mutual fund participation and stock market development during such structural disruptions becomes highly important for policymakers and financial institutions.

Several theoretical perspectives explain the relationship between institutional investments and stock market development. Efficient Market Hypothesis (EMH) suggests that institutional investors contribute toward market efficiency through better information processing and rational investment decisions. Portfolio Theory emphasizes diversification and risk optimization through professionally managed investment portfolios. Behavioural Finance Theory explains how investor sentiment, herding behaviour, and psychological biases influence mutual fund flows and stock market movements. Additionally, Financial Intermediation Theory highlights the role of mutual funds in mobilizing savings and allocating financial resources efficiently within the economy. These theoretical foundations indicate that increasing mutual fund participation may positively influence stock market growth, liquidity, and financial stability.

The significance of the study lies in its contribution toward understanding the growing role of domestic institutional investors within emerging financial markets. The findings of the study may help policymakers, regulators, financial institutions, and investors formulate strategies for strengthening financial market stability and encouraging sustainable capital market development. Furthermore, the research provides useful insights into how economic disruptions and technological transformations influence institutional investment behaviour and stock market dynamics within the Indian economy.

2. Literature Review

Oh and Parwada (2007) examined the relationship between mutual fund flows and stock market returns in Korea. The study identified a positive association between stock market performance and mutual fund investment flows, indicating that investors respond actively to market movements. The findings revealed that stock purchases by mutual funds increase during bullish market periods, contributing to higher market liquidity and volatility. The research highlighted the dynamic interaction between investor sentiment and market returns in emerging financial markets.

Hung et al. (2010) investigated mutual fund herding behavior and its impact on stock returns in the Taiwan stock market. The study found significant evidence of herding among mutual fund managers, particularly during periods of market uncertainty. The results suggested that collective investment decisions by fund managers influence stock price movements and increase market

volatility. The research concluded that institutional investment behavior can strongly affect stock market efficiency and investor confidence.

Massa (2004) analyzed the impact of mutual fund competition on stock market liquidity. The study argued that increasing competition among mutual fund families enhances trading activities and improves overall market liquidity. The findings demonstrated that higher mutual fund participation contributes positively to price discovery and market efficiency. The study emphasized the importance of institutional investors in strengthening the stability and functioning of financial markets.

Bose (2012) examined the relationship between mutual fund investments, foreign institutional investments (FII), and stock market returns in India. The study revealed a positive relationship between domestic mutual fund investments and stock market performance. It further found that mutual funds often adopt conservative and contrarian investment strategies during volatile periods. The research highlighted the growing importance of domestic institutional investors in stabilizing Indian stock markets.

Thenmozhi and Kumar (2009) studied the dynamic interaction among mutual fund flows, stock market returns, and market volatility in India. The study found bidirectional causality between stock market returns and mutual fund flows. It also reported that higher market volatility significantly influences investor investment decisions in mutual funds. The research emphasized the interconnected nature of mutual fund activity and stock market performance.

Alexandri (2015) investigated whether mutual fund performance is influenced more by stock selection ability or market timing capability. The findings indicated that successful stock selection contributes more significantly to fund performance than market timing strategies. The study also highlighted that fund managers with strong analytical capabilities achieve better portfolio returns. The research provided important insights into performance evaluation techniques for mutual funds.

Ederington and Golubeva (2011) explored the impact of stock market volatility expectations on aggregate mutual fund flows. The study found that investor expectations regarding future market volatility significantly influence mutual fund investment decisions. During periods of high uncertainty, investors tend to reduce equity mutual fund investments. The research demonstrated the behavioral sensitivity of investors toward anticipated market risk.

Shrider (2009) analyzed how poor stock market performance affects determinants of mutual fund flows. The study observed that during bearish market conditions, investors become more cautious and reduce mutual fund investments. The findings suggested that fund flow behavior depends significantly on prevailing market trends and investor confidence. The study concluded that market downturns substantially alter investment decision-making patterns.

Chen et al. (2013) evaluated the market timing and stock selection abilities of mutual fund managers in Taiwan using traditional and conditional approaches. The study found mixed evidence regarding managers' market timing capabilities, while stock selection skills showed relatively better performance. The findings highlighted the importance of managerial expertise in generating superior returns. The research contributed to understanding fund management

efficiency in Asian financial markets.

Kumar et al. (2020) investigated the relationship between stock market returns and mutual fund flows in India. The study identified a significant positive association between market returns and mutual fund investments. The findings indicated that investors tend to increase investments during rising market conditions. The research emphasized the role of investor sentiment and market confidence in influencing mutual fund participation.

3. Methodology

The present research paper adopts a descriptive and empirical research design to examine the impact of mutual fund participation on stock market development in India during the period from December 2009 to July 2024. The study specifically aims to analyse the relationship between various mutual fund investment activities and the performance of the Indian stock market represented by the SENSEX. The study is based on secondary time-series data collected from reliable financial sources including NSE, BSE, SEBI, AMFI, NSDL, and related institutional databases. A purposive sampling technique has been used to select variables directly relevant to the objectives of the study. The dependent variable of the study is the SENSEX, while the independent variables include Mutual Fund Debt Net (MFD), Mutual Fund Equity Net (MFE), Mutual Fund Index Futures (MFIF), Mutual Fund Index Options (MFIO), Mutual Fund Stock Futures (MFSF), and Mutual Fund Stock Options (MFSO). The study employs Multiple Regression Analysis to examine the impact of mutual fund activities on stock market performance. Further, the Variance Inflation Factor (VIF) technique is applied to test multicollinearity among explanatory variables. To identify structural changes caused by major economic events, the study additionally employs Chow Breakpoint Test, Quandt-Andrews Unknown Breakpoint Test, and Bai-Perron Multiple Breakpoint Test. These econometric techniques help in examining structural stability, regime shifts, and dynamic changes in the relationship between mutual fund activities and stock market behaviour during significant events such as demonetization, UPI expansion, and the COVID-19 pandemic. The statistical analysis was conducted using EViews software to ensure reliability, validity, and robustness of the econometric results.

4. Data Analysis

A time-series multiple regression model was estimated to investigate the relationship between mutual fund activities and stock market performance during the period 2009–2024. In this model, SENSEX was treated as the dependent variable, whereas various categories of mutual fund investments and trading activities were considered explanatory variables.

Table 1: Regression Analysis for the period 2009-2024

DEPENDENT VARIABLE	SENSEX		
	COEFFICIENT	t	Sig.
CONSTANT	17.7065	1.9911	0.0466
INDEPENDENT VARIABLES			
MFD	0.0001	0.03843	0.9693

MFE	-0.003	-0.4413	0.6591
MFIF	0.02003	3.42031	0.0006
MFIO	0.00031	0.48417	0.6283
MFSF	-0.0005	-1.896	0.058
MFSO	0.00297	0.5004	0.6168
		0.00481	
R ²			
F- value		2.69271	
Sig. F		0.01309	

The estimated regression results provide important insights into the association between mutual fund investment activities and stock market performance in India. The intercept term is positive and statistically significant, indicating that the market index maintains a positive base value even in the absence of explanatory variables.

Among all the independent variables included in the model, Mutual Fund Index Futures (MFIF) emerge as the only variable exerting a statistically significant positive influence on the SENSEX. The coefficient value of 0.0200 and probability value below 0.05 suggest that an increase in index futures trading activity by mutual funds contributes positively to stock market growth. This indicates that derivative-based investment participation by AMCs plays a meaningful role in supporting market expansion and liquidity creation.

In contrast, variables such as MFD, MFE, MFIO, and MFSO fail to exhibit statistically significant relationships with the SENSEX because their probability values remain higher than the prescribed significance level. This suggests that these forms of mutual fund investment activities do not individually influence stock market movements in a measurable manner during the study period. Further, MFSF shows a weak negative coefficient with marginal significance, implying a limited inverse association with market performance.

The coefficient of determination (R^2) remains relatively low, implying that mutual fund variables alone explain only a small proportion of changes in the SENSEX. This indicates that stock market movements are simultaneously affected by various macroeconomic, political, global, and behavioural factors. Nevertheless, the statistically significant F-statistic confirms the overall validity of the regression model.

Table 2: Variance Inflation Factor

Variable	Coefficient Variance	Uncentred VIF	Centred VIF
C	79.08167	1.722706	NA
MFD	7.06E-06	1.236220	1.028996
MFE	4.67E-05	1.152540	1.071591
MFIF1	3.43E-05	1.919129	1.919118
MFIO	4.11E-07	1.481754	1.015767
MFSF1	7.18E-08	1.698318	1.698309
MFSO1	3.53E-05	1.364674	1.364674

To verify the existence of multicollinearity among explanatory variables, the Variance Inflation Factor (VIF) technique was applied. Multicollinearity refers to a condition where independent

variables are highly correlated with one another, which may distort regression estimates and reduce the reliability of statistical results.

The VIF analysis confirms that the regression model does not suffer from multicollinearity issues. All centred VIF values are considerably below the commonly accepted threshold of 10, indicating low correlation among explanatory variables. The highest VIF value is associated with MFIF, but it still remains within acceptable limits. Therefore, the independent variables included in the model are statistically appropriate, and the estimated regression coefficients can be considered stable and reliable.

Table 3: Chow Breakpoint Test

Chow Breakpoint Test: 8/11/2016

Null Hypothesis: No breaks at specified breakpoints

Varying regressors: All equation variables

Equation Sample: 12/02/2009 7/31/2024

F-statistic	12.5454	Prob. F(7,3338)	0
Log likelihood ratio	87.04605	Prob. Chi-Square(7)	0
Wald Statistic	87.8178	Prob. Chi-Square(7)	0

Table 4: Chow Breakpoint Test

Chow Breakpoint Test: 1/02/2020

Null Hypothesis: No breaks at specified breakpoints

Varying regressors: All equation variables

Equation Sample: 12/02/2009 7/31/2024

F-statistic	13.51353	Prob. F(7,3338)	0.0000
Log likelihood ratio	93.67035	Prob. Chi-Square(7)	0.0000
Wald Statistic	94.59468	Prob. Chi-Square(7)	0.0000

The Chow Breakpoint Test was employed to identify whether major economic and policy events caused structural changes in the relationship between mutual fund activities and stock market performance. The test examines whether regression coefficients remain stable before and after a specific economic event.

The results indicate the presence of a significant structural break during the demonetization and UPI implementation period in India. The highly significant probability values reveal that this economic event substantially altered the relationship between mutual fund activities and stock market behaviour. The rapid expansion of digital payment systems, shifts in investor behaviour, and changes in transaction patterns contributed to a transformation in financial market dynamics during this period.

The second breakpoint analysis corresponds to the outbreak of the COVID-19 pandemic. The statistically significant results confirm the existence of a major structural shift during this

period. Lockdowns, economic uncertainty, market volatility, and changing investment behaviour significantly affected stock market operations and mutual fund investment patterns. These findings suggest that the pandemic disrupted existing financial relationships and introduced a new behavioural pattern within the Indian stock market.

Table 5: Quandt-Andrews unknown breakpoint test

Null Hypothesis: No breakpoints within 15% trimmed data

Varying regressors: All equation variables

Equation Sample: 12/02/2009 7/31/2024

Test Sample: 5/25/2012 6/21/2022

Number of breaks compared: 2347

Statistic	Value	Prob.
Maximum LR F-statistic (3/24/2020)	15.38539	0.0000
Maximum Wald F-statistic (3/24/2020)	107.6977	0.0000
Exp LR F-statistic	5.852808	
Exp Wald F-statistic	48.69018	0.0000
Ave LR F-statistic	8.337975	0.0000
Ave Wald F-statistic	58.36582	0.0000

Note: probabilities calculated using Hansen's (1997) method

The Quandt-Andrews Unknown Breakpoint Test was used to identify structural breaks without pre-determining the exact breakpoint date. The technique evaluates multiple possible breakpoints throughout the study period and identifies the most statistically significant structural change. The Quandt-Andrews test identifies a highly significant structural break around March 2020, which corresponds to the nationwide lockdown phase during the COVID-19 pandemic. The low probability values strongly reject the null hypothesis of no structural break. These findings indicate that the pandemic drastically changed the relationship between mutual fund activities and stock market performance. The disruption influenced investor sentiment, market volatility, liquidity conditions, and financial decision-making across the economy.

Table 6: Bai-Perron Multiple breakpoint test

Bai-Perron tests of L+1 vs. L sequentially determined breaks

Date: 11/11/24 Time: 13:12, Sample: 12/01/2009 7/31/2024

Included observations: 3352

Breaking variables: C MFD MFE MFIF1 MFIO MFSF1 MFSO1

Break test options: Trimming 0.15, Max. breaks 5, Sig. level 0.05

Sequential F-statistic determined breaks: 3

Break Test	F-statistic	Scaled F-statistic	Critical Value**
0 vs. 1 *	15.38539	107.6977	21.87
1 vs. 2 *	15.40839	107.8588	24.17
2 vs. 3 *	4.261640	29.83148	25.13
3 vs. 4	2.464441	17.25109	26.03

* Significant at the 0.05 level.

** Bai-Perron (Econometric Journal, 2003) critical values.

Sr.	Break Dates	
	Sequential	Repartition
1	3/24/2020	2/23/2017
2	2/23/2017	3/24/2020
3	6/17/2022	6/17/2022

The Bai-Perron Multiple Breakpoint Test was further applied to identify multiple structural shifts occurring across the study period. This method is particularly useful in detecting several regime changes in long-term financial and economic data.

The Bai-Perron analysis confirms the existence of multiple structural breaks in the relationship between mutual fund activities and stock market performance. The first major structural shift observed in March 2020 is associated with the economic disruption caused by the COVID-19 pandemic. The second breakpoint in February 2017 reflects the long-term consequences of demonetization and rapid digital financial transformation in India. The third breakpoint identified in June 2022 represents market adjustments during the post-pandemic recovery period, including inflationary pressures, monetary tightening, and global economic uncertainty. These structural breaks highlight the dynamic nature of financial markets and indicate that external economic and policy shocks significantly influence the relationship between mutual fund investment behaviour and stock market performance.

5. Major Findings

1. The empirical analysis reveals that Mutual Fund Index Futures (MFIF) exert a statistically significant positive impact on the Indian stock market, indicating that derivative-based trading activities of AMCs contribute meaningfully toward market growth and liquidity generation.
2. Other mutual fund investment categories such as MFD, MFE, MFIO, and MFSO do not individually demonstrate significant effects on stock market performance during the study period.
3. The VIF analysis confirms the absence of serious multicollinearity among explanatory variables, ensuring the reliability of regression estimates.
4. The Chow Breakpoint Tests reveal that major economic events such as demonetization, UPI expansion, and the COVID-19 pandemic created substantial structural changes in the Indian financial system and stock market behaviour.
5. The Quandt-Andrews and Bai-Perron tests further validate the existence of statistically significant structural shifts, especially during the COVID-19 period.
6. Overall, the findings suggest that growing mutual fund participation has increasingly contributed toward market stability, financial resilience, and the long-term development of the Indian stock market.

6. Conclusion

The present study examined the relationship between mutual fund participation and stock market development in India using econometric techniques for the period 2009–2024. The empirical findings reveal that Mutual Fund Index Futures (MFIF) have a statistically significant positive influence on the SENSEX, indicating that derivative-based participation of Asset Management Companies contributes meaningfully toward market growth, liquidity creation, and financial market development. However, other categories of mutual fund activities such as MFD, MFE, MFIO, and MFSD did not individually exhibit statistically significant effects on stock market performance during the study period. The VIF analysis confirmed the absence of serious multicollinearity among explanatory variables, thereby ensuring the reliability of the regression estimates. Further, the Chow Breakpoint Test, Quandt-Andrews Test, and Bai-Perron Multiple Breakpoint Test identified significant structural shifts in the Indian financial system during major economic events including demonetization, digital financial transformation through UPI expansion, and the COVID-19 pandemic. These structural breaks demonstrate that investor behaviour, market liquidity, and stock market dynamics are highly sensitive to economic disruptions and policy changes. Overall, the study concludes that increasing mutual fund participation has contributed positively toward enhancing market resilience, supporting financial stability, and strengthening the long-term development of the Indian stock market. The findings of the study provide useful implications for policymakers, regulators, investors, and financial institutions in promoting sustainable and stable capital market growth in India.

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