

The Impact of Foreign Institutional Investment, Economic Growth, And Inflation on The Indian Capital Market: An Empirical Investigation

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Abstract

The Indian capital market is crucial in mobilising savings, facilitating investment and fostering economic growth. Examining the connections between FII, GDP growth, inflation, and the health of India's stock market is the primary objective of this research. The study was conducted on secondary data which is processed and analysed on an annual basis from 2005–06 to 2023–24. The capital-market performance was measured by the BSE Sensex. Through descriptive statistics, the study uses multiple regression and Pearson correlation to look for relationships between the selected variables. The results show positive and significant correlation between FII and capital-market performance; positive but insignificant correlation between economic growth and capital-market performance; and negative but significant correlation between inflation and the capital-market performance. Overall, the regression model captures 58.1% of the variation in the performance of capital markets and is statistically significant. The study concludes that foreign investment, economic growth are beneficial to capital market performance, while inflation could limit market returns. The conclusion clearly underlines the significance of macroeconomic stability and an investment-friendly environment in creating sustainable capital market development in India.

Keywords: Foreign Institutional Investment, Economic Growth, Inflation, Indian Capital Market, Sensex, Stock Market, FII.

1. INTRODUCTION

The capital market plays a crucial role in a nation's financial system by allowing people to pool their savings and participate in productive projects. The Indian capital market has come a long way in a short period since the economic liberalisation, financial reforms, technological progress, and increased involvement of local and foreign investors.

Foreign Institutional Investment (FII) is one of the crucial aspects of the Indian capital market. Foreign investors can add to the volume of trading and market liquidity, and they put their money to work based on economic activity, investment returns, inflation, interest rates, exchange rates and world events. Therefore, the stock market's performance might be affected by changes in FII flows.

Economic growth also affects capital-market performance through enhanced business opportunities, corporate profits and investor confidence. Conversely, if inflation is at high or persistent levels, production costs may increase, purchasing power may drop, and interest rates could be impacted, all of which could have a negative impact on equity-market returns.

The Indian capital market is becoming more and more linked to international financial activities, thus the role of FIIs and the macroeconomic factors of India are gaining significance. Hence, the present study investigates the relationship between these factors namely FII, economic growth, inflation and Indian capital market performance to gain an empirical understanding of them.

1.1. Objectives of the Study

The study aims to:

- To investigate the connection between the Indian capital market and FII.
- To examine the connection between Indian capital-market performance and economic growth.
- To investigate how the Indian capital market is affected by inflation.
- To analyse the combined influence of FII, economic growth, and inflation on capital-market performance.

2. LITERATURE REVIEW

Azam et al. (2016) analysed ARDL-based yearly data from 1991 to 2012 to determine the correlation between stock market growth and GDP expansion in Singapore, Bangladesh, India, and China. Economic growth, inflation, stock market development, and foreign investment all have long run relationships, according to the study. There was a favourable correlation between the expansion of stock markets and GDP growth, especially in China and India. The study emphasizes the significance of

foreign investment, economic growth and inflation as the factors of understanding the development of the capital market.

Jana et al. (2019) analyzed the impact of FDI on economic growth in India on sectoral level. The research findings revealed the effects of foreign investment can vary between sectors and that foreign investment can help economic development in three ways: as investment, production and business activity. The study gives relevant background to understand the role of foreign investment in the economic and financial development of India.

Islam and Beloucif (2024) researched the factors that influence foreign direct investment (FDI) using 112 empirical papers. The study found that several important factors influencing FDI include market size, trade openness, infrastructure, labour costs, human capital, growth prospects, macroeconomic stability, and trade openness. Furthermore, it emphasised that in order to attract investments from outside, a stable macroeconomic climate and optimistic economic forecast are necessary. The correlation between FDI and GDP growth and inflation can be better understood with these findings as a starting point.

Sharma et al. (2018) analysed ARDL data and yearly data from 1971 to 2016 to determine the effect of macroeconomic variables on India's economic development. Other factors included in the study were FDI, inflation, exchange rates, trade openness, human capital and others. The results emphasize that domestic and external factors affect the economic performance of India which is why foreign investment, economic development and inflation were included in the current study.

3. METHODOLOGY

3.1. Research Design

The study adopts a quantitative, descriptive and explanatory research design based on secondary annual data. The descriptive component presents the basic characteristics and trends of Foreign Institutional Investment (FII), economic growth, inflation, and Indian capital-market performance. The explanatory component examines the relationships between these variables and determines their combined influence on capital-market performance through Pearson correlation and multiple regression analysis. The study is empirical in nature because it uses numerical data and statistical techniques to analyse the selected relationships.

3.2. Nature and Sources of Data

The study is based on secondary annual data collected from reliable sources such as the Reserve Bank of India (RBI), Database on Indian Economy (DBIE), Bombay Stock Exchange (BSE), National Stock Exchange (NSE), and relevant Government of India publications. The study covers the period from 2005–06 to 2023–24.

The selected period includes 19 financial years, namely 2005–06, 2006–07, 2007–08, 2008–09, 2009–10, 2010–11, 2011–12, 2012–13, 2013–14, 2014–15, 2015–16, 2016–17, 2017–18, 2018–19, 2019–20, 2020–21, 2021–22, 2022–23, and 2023–24. Thus, the set of data for the study consists of 19 annual observations for each variable. The time period chosen to investigate the link between foreign investment, economic growth, inflation and capital-market performance was sufficiently long to encompass a range of economic and market conditions.

3.3. Variables of the Study

The study includes one dependent variable and three explanatory variables.

Table 1: Variables of the Study

Variable	Symbol	Measurement
Indian Capital Market	CAM	Annual Sensex return (%)
Foreign Institutional Investment	FII	Net annual FII/FPI investment
Economic Growth	GDP	Annual GDP growth (%)
Inflation	INF	Annual CPI inflation (%)

The BSE Sensex is used as an indicator of Indian capital-market performance as it shows the performance of big listed companies and is a market well followed index.

3.4. Data Processing and Analysis

Data are appropriately collected and analysed for the various year groups. After that, the standard deviation, minimum, and maximum values, as well as the mean and variance, are displayed using

descriptive statistics. The direction and intensity of the association among the capital-market performance and explanatory variables can be verified using Pearson correlation. As a last step, we utilise multiple regression analysis to look at how capital market performance is affected by FII, GDP growth, and inflation, both separately and together.

3.5. Regression Model

To examine the combined impact of the chosen variables, the study employs the following multiple regression model:

$$CAM_t = \beta_0 + \beta_1 FII_t + \beta_2 GDP_t + \beta_3 INF_t + \varepsilon_t$$

Where:

- CAM_t = Indian capital-market performance in year t
- FII_t = Foreign Institutional Investment in year t
- GDP_t = Economic growth in year t
- INF_t = Inflation in year t
- β_0 = Constant term
- $\beta_1, \beta_2, \beta_3$ = Regression coefficients
- ε_t = Error term

3.6. Model Evaluation

To assess the regression model, one uses the following tools: R^2 , regression coefficients, t-values, significance levels, and F-test. The R^2 number indicates the extent to which FII, GDP growth, and inflation explain the variation in capital market performances. When looking at the overall significance of the regression model, the F-test is employed, and when looking at the significance of individual factors explaining the model, the t-test is utilised.

3.7. Study Period and Observations

The study covers the financial years 2005–06 to 2023–24, resulting in 19 annual observations for each study variable. Each financial year provides one observation for the analysis, as this is the only data examined. Therefore, the number of observations is not determined through a survey sample but is based on availability of comparable annual observations. In order to maintain uniformity in the analysis, the period of 19 years has been used for FII, GDP growth, inflation and Sensex return.

4. RESULTS AND ANALYSIS

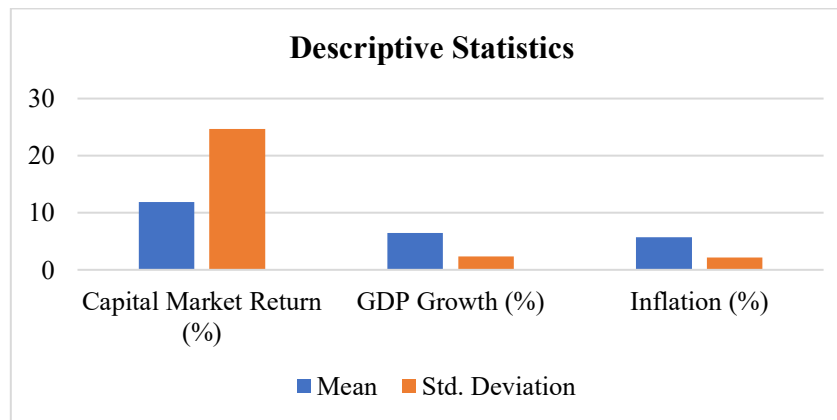
This section gives the empirical results of the study on the relationship between Foreign Institutional Investment (FII), economic growth, inflation and performance of the Indian capital market. The analysis is started with descriptive statistics that provide information on the distribution and variation in the study variables, and then followed by correlation analysis to investigate relations between variables. The combined effect of FII, economic growth and inflation on the performance of capital market is then examined by the use of multiple regression analysis. To measure the model's data-explanation efficacy, and additionally investigate the regression model's overall significance.

4.1. Descriptive Statistics

Table 2 displays the mean, standard deviation, minimum and maximum values of capital market returns, FII, GDP growth, and inflation, as well as descriptive statistics that paint a picture of the study's variables and their central tendency and variability.

Table 2: Descriptive Statistics

Variable	Mean	Std. Deviation	Minimum	Maximum
Capital Market Return (%)	11.84	24.71	-52.45	76.46
FII (₹ billion)	421.36	548.27	-279.67	1556.86
GDP Growth (%)	6.43	2.31	-5.78	8.48
Inflation (%)	5.72	2.15	3.33	11.99

**Figure 1:** Visual Representation of Descriptive Statistics

The mean of the capital-market returns is 11.84%, with the relatively large standard deviation suggesting a high degree of volatility in the capital market's performance during the test period. The fluctuations of FII are also relatively high, representing the movement of foreign investments with respect to each year. The average GDP growth rate of the country is 6.43%, which is comparatively high for India during the majority of the period under study. The average inflation is 5.72% but there are some variations from year to year.

4.2. Correlation Analysis

Following the descriptive analysis, the direction and level of the correlations among the explanatory variables and capital-market performance were examined using Pearson correlation. Table 3 contains the correlation coefficients.

Table 3: Correlation Matrix

Variables	Capital Market	FII	GDP Growth	Inflation
Capital Market	1.000	0.61**	0.48*	-0.31
FII	0.61**	1.000	0.35	-0.18
GDP Growth	0.48*	0.35	1.000	-0.29
Inflation	-0.31	-0.18	-0.29	1.000

*Note: * $p < 0.05$; * $p < 0.01$.

A correlation study found that FII has a positive effect on stock market performance. The coefficient of 0.61 suggests a moderately strong positive association. This means that more bull markets are linked to more positive foreign investment performance of the stock market. The capital market also has a positive correlation with GDP growth, which is 0.48. This suggests that better economic performance tends to be accompanied by favourable capital-market conditions. The capital-market performance and inflation have a negative correlation of -0.31. The negative sign in the relationship is weaker, but it indicates that the higher the inflation, the lower the stock-market returns.

4.3. Regression Model Summary

A multiple regression study was performed to delve deeper into the interconnected nature of FII, GDP growth, inflation, and capital-market performance. Tabulated in Table 4 are the aggregate model outcomes.

Table 4: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of Estimate
1	0.762	0.581	0.497	17.52

With an R-value of 0.762, the overall correlation between the explanatory factors and the performance of the capital markets is quite significant. The model's inclusion of FII, economic growth, and inflation accounts for approximately 58.1% of the variance in the capital market's performance, as indicated by the R² value of 0.581.

The other variation may relate to other factors that have not been part of the study, including interest rates, exchange rates, crude-oil prices, movements in the global market, political events and investor sentiment.

4.4. Regression Coefficients

Using the regression coefficients, we can dissect the impact of FII, GDP growth, and inflation on the capital market performance. Table 5 displays the estimated coefficients, together with their standard

errors, t-values, and significance levels.

Table 5: Multiple Regression Results

Variable	Coefficient	Std. Error	t-value	Significance
Constant	-21.436	10.214	-2.099	0.053
FII	0.018	0.006	3.214	0.005
GDP Growth	2.746	1.021	2.689	0.016
Inflation	-1.583	0.721	-2.195	0.043

The regression output shows that the coefficient of FII is positive i.e. 0.018. All else being equal, this shows that capital market performance is positively impacted by foreign institutional investment. The relation is statistically significant on the traditional level of 5%. The co-efficient of GDP growth is also positive and equal to 2.746. This suggests that economic growth is associated with better capital market performance. Positive economic growth may boost the profitability of companies and investors' confidence, potentially aiding market valuations. Inflation has a negative coefficient of -1.583. This means that inflation and lower capital-market returns go hand in hand. The negative correlation might be attributed to higher business expenses, lower purchasing power and possibly tighter monetary policies resulting from inflationary pressure.

4.5. Overall Significance of the Model

Table 6 shows that the results of these experiments are within the acceptable limits for the survival of seeds.

Table 6: ANOVA

Source	Sum of Squares	df	Mean Square	F-value	Significance
Regression	6361.42	3	2120.47	6.92	0.003
Residual	4595.28	15	306.35		
Total	10956.70	18			

With an F-value of 6.92 and a significance level of 0.003, the overall regression model is found to be statistically significant. This implies that FII, GDP growth and inflation together offer significant explanatory power for performance of the Indian capital market. Growth of GDP and FII shows the highest positive correlation amongst the individual variables with the performance of capital markets. Inflation demonstrates a negative relationship.

5. DISCUSSION

The study results reveal that there are significant relationships between FII, economic growth and inflation and the Indian capital market. From the results, it can be concluded that the relation between FII and GDP growth is positive, and the relation between inflation and performance of the capital market is negative.

Return on capital market is positively and statistically significantly correlated with FII. The positive values of the regression coefficient (0.018) and correlation coefficient ($r = 0.61$) indicate that FII has a favourable relationship with market performance. Reasons for this could include confidence among investors, investment activity, and liquidity. This finding agrees with earlier studies that found a positive relationship between FDI and stock market growth.

GDP growth also positively and significantly influences the performance of the capital market. The correlation coefficient is 0.48 and the regression coefficient 2.746, indicating that the better the economic growth, the better the market returns. Stock market performance can be supported by increased economic growth, which can improve investor confidence and corporate earnings. The capital market is negatively related with inflation.

The correlation coefficient is -0.31 and the regression coefficient is -1.583, which is statistically significant. Businesses can be impacted by higher inflation through higher costs, reduced purchasing power and uncertainty, impacting investment and market performance.

Overall, the regression model is statistically significant with a R^2 of 0.581, meaning that the factors that were chosen explain 58.1% of the variation in capital market returns. The findings show that capital markets can be positively affected by economic growth and foreign investment, but they can be negatively affected by inflation. But, the interest rates, exchange rates, market conditions, and investor psychology may also have an impact on the Indian capital market.

6. CONCLUSION

The study concluded that the Foreign Institutional Investment (FII), economic growth and inflation are significant factors related to the performance of the capital market in India. The findings indicate that the relationships between FII, GDP growth and capital market performance are all positive and significant and the relationship with inflation is negative. The regression analysis also suggests that all three factors together account for 58.1% of the variance in the performance of the capital market, which further shows that these factors are relevant to understanding the movement of the capital market. The results indicate that increased foreign investment and economic development are conducive to investor confidence and good market performance, while on-going inflationary pressures can exert pressure on the return of investment. The growth of the Indian capital market can thus be influenced by macroeconomic stability, foreign investment, and sustained economic expansion. Other factors like interest rates, exchange rates, the global market and investor sentiments can also have an impact on market performance.

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