

**Major Research Project Report**

**IMPACT OF FOREIGN PORTFOLIO  
INVESTMENTS ON INDIAN EQUITY MARKETS**

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# CERTIFICATE

This is to certify that **Mr. Gautam Saini**, roll no. **2K22/DMBA/44** has submitted the Major Research Project Report titled “**A Study IMPACT OF FOREIGN PORTFOLIO INVESTMENTS ON INDIAN EQUITY MARKETS**” in fulfilment of the requirements for the award of degree of Master of Business Administration (MBA) from Delhi School of Management, Delhi Technological University, New Delhi during the academic year 2023-24.

**Dr. Vikas Gupta**  
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# **DECLARATION**

I, Gautam Saini, student of Delhi School of Management, Delhi Technological University, New Delhi solemnly declare that the study titled, “Impact of Foreign Portfolio Investments on Indian Equity Market” is entirely based on my original own research work and my gratitude towards other works has been duly acknowledged at the appropriate places in this study. Further I assure that, this work has not been submitted earlier for the award of any other degree. I assert the statements made and conclusions drawn are an outcome of my research work. I have duly followed all the necessary guidelines provided by the University in writing the report. All the information and sources of data used have given their respective details in the references.

**Gautam Saini**  
**(2K22/DMBA/44)**

## **ACKNOWLEDGEMENT**

The success and outcome of this project required a lot of guidance and assistance from many people and I am extremely privileged to have got this all along the completion of my project. All that I have done is only due to such supervision and assistance and I would not forget to thank them.

I owe my deep gratitude to my project supervisor Dr. Vikas Gupta, who took keen interest in my project work and guided me all along, till the completion of my project work by providing all the necessary information to complete the project. I am thankful to and fortunate enough to get constant encouragement, support and guidance from all teaching staff of Delhi School of Management, Delhi Technological University, New Delhi who helped me in successfully completing my project work.

# EXECUTIVE SUMMARY

The Two-Sided Coin of Foreign Portfolio Investment in India- Foreign portfolio investment (FPI) has become an increasingly important player in the Indian economy. It acts as a bridge, channeling funds from international investors into Indian financial markets. This influx of foreign capital offers significant advantages, but also carries potential risks that need careful consideration.

## **Benefits of FPI:**

Increased Capital Inflows: FPI provides a vital source of external finance, bridging the gap between domestic savings and investment. This allows for increased funding for infrastructure development, job creation, and economic growth.

Improved Market Efficiency: FPI inflows lead to higher liquidity in the Indian stock market. This increased competition among investors can lead to more efficient price discovery and potentially lower costs of capital for Indian companies.

Boosted Foreign Exchange Reserves: FPI inflows contribute to India's foreign exchange reserves, which are crucial for maintaining exchange rate stability and managing external shocks.

Technological Transfer and Innovation: FPI can facilitate the transfer of technology and knowledge from foreign investors to domestic companies. This can lead to increased innovation and productivity within the Indian economy.

Improved Corporate Governance: The presence of foreign investors can put pressure on Indian companies to improve corporate governance practices, leading to greater transparency and accountability.

## **Risks of FPI:**

Market Volatility: FPI can be volatile, and sudden outflows can trigger sharp declines in stock prices and currency depreciation. This volatility can negatively impact economic stability.

Exchange Rate Fluctuations: FPI inflows can appreciate the rupee, making Indian exports less competitive in the global market. This can create challenges for Indian exporters.

Asset Price Bubbles: Excessive FPI inflows can lead to asset price bubbles in the stock market and real estate sector. If these bubbles burst, it can trigger a financial crisis.

Limited Impact on Real Sector: While FPI benefits the financial sector, its direct impact on the real sector (manufacturing and agriculture) might be limited. Targeted policies are needed to ensure FPI translates into increased investment in these sectors.

### **Policy Recommendations:**

Develop a Stable Regulatory Framework: Stability in regulatory environment and predictable regulated environment is essential to attract and retain foreign investors. This includes clear guidelines for FPI entry, repatriation of funds, and taxation.

Invest in Infrastructure Development: Investing in infrastructure will enhance India's attractiveness for foreign investors and further facilitate long-term economic growth.

Diversify the Investor Base: India should diversify its investor base beyond traditional sources to mitigate the risk of sudden outflows from any single region.

Develop the Domestic Capital Market: A robust domestic capital market, with a wider range of investment products, can reduce dependence on FPI and promote long-term investment in productive sectors.

In conclusion, FPI presents a double-edged sword for the Indian economy. On one hand, it offers a much-needed source of capital, fosters market efficiency, and encourages better corporate governance. On the other hand, it carries the risk of market volatility, reduced export competitiveness, and uneven distribution of benefits. To fully harness the potential of FPI and mitigate its risks, India needs to create a stable regulatory environment for foreign investors, diversify its investor base, and implement targeted policies that ensure FPI translates into long-term and sustainable growth across all sectors of the economy.

FPI can be a valuable source of finance for India's economic development. However, it is crucial to manage the associated risks through effective policies. By implementing the recommendations outlined in this report, India can harness the benefits of FPI while mitigating its potential downsides, fostering a more stable and sustainable economic growth trajectory.

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# CHAPTER 1

## INTRODUCTION

Foreign portfolio investors (FPIs) are entities, such as pension funds, mutual funds, hedge funds, or other institutional investors, that invest in financial assets such as Company's shares, securities, bonds, and other securities in countries other than their own. FPIs may invest directly in a particular company or in a diversified portfolio of assets in the foreign market.

FPIs are significant contributors to global capital flows and play a crucial role in the international financial system. They bring in foreign currency and provide liquidity to the domestic markets, which can stimulate economic growth. FPIs also help to diversify investment portfolios and provide access to new markets for investors.

FPIs are subject to regulations and restrictions imposed by the host country, such as limits on the percentage of ownership in a company, disclosure requirements, and taxes. Additionally, FPIs are exposed to foreign exchange risk, political risk, and market volatility, which can affect their investment returns.

Overall, FPIs play a vital role in the global economy, promoting investment and diversification while also introducing potential risks and challenges.

Foreign portfolio investment (FPI) in India has a relatively short history, beginning early in the 1990s when India started to liberalize its economy and getting open up for foreign investment. Prior to this, India had followed a policy of import substitution and strict capital controls, which limited foreign investment in the country.

By this, the government of India introduced a series of economic reforms in 1991, which included significant liberalization of the country's foreign investment policies. This included the introduction of a new Foreign Exchange Management Act (FEMA) to replace the earlier Foreign Exchange Regulation Act (FERA). The new act aimed to promote foreign investment and simplify foreign exchange regulations in India.



In 1992, the Securities and Exchange Board of India (SEBI) was established as a regulatory body for the securities market in India. The SEBI introduced regulations to allow foreign institutional investors (FIIs) to invest in the Indian stock market. The term FPI was introduced later, in 2014, to include all categories of foreign investors, including FIIs, their sub-accounts, and Qualified Foreign Investors (QFIs).

Over the years, the Indian government has continued to liberalize its foreign investment policies, and FPIs have become an important source of foreign investment in India. As of March 2022, FPIs held about 27% of the total market capitalization of the Indian stock market, making them a significant contributor to the country's capital markets.

The government has also introduced various measures to make it easier for FPIs to invest in India, such as simplifying the registration process and allowing FPIs to invest in a wider range of securities. However, FPIs are subject to certain restrictions, such as limits on the percentage of ownership in a company and disclosure requirements.

Overall, FPIs bring foreign investments to India and in same way it has played an important role in the development of Indian Capital Markets and have helped to bring in foreign investment and expertise to the country. However, they are also subject to risks and challenges such as currency fluctuations, market volatility, and regulatory changes.

## 1.1 Objectives of the Study

- To study and analyze the trends and patterns of Foreign Portfolio Investments in India
- To study and analyze the impact of Foreign Portfolio Investments on Indian Stockmarket.

### NET FPIs in Equity market (2002-2022)

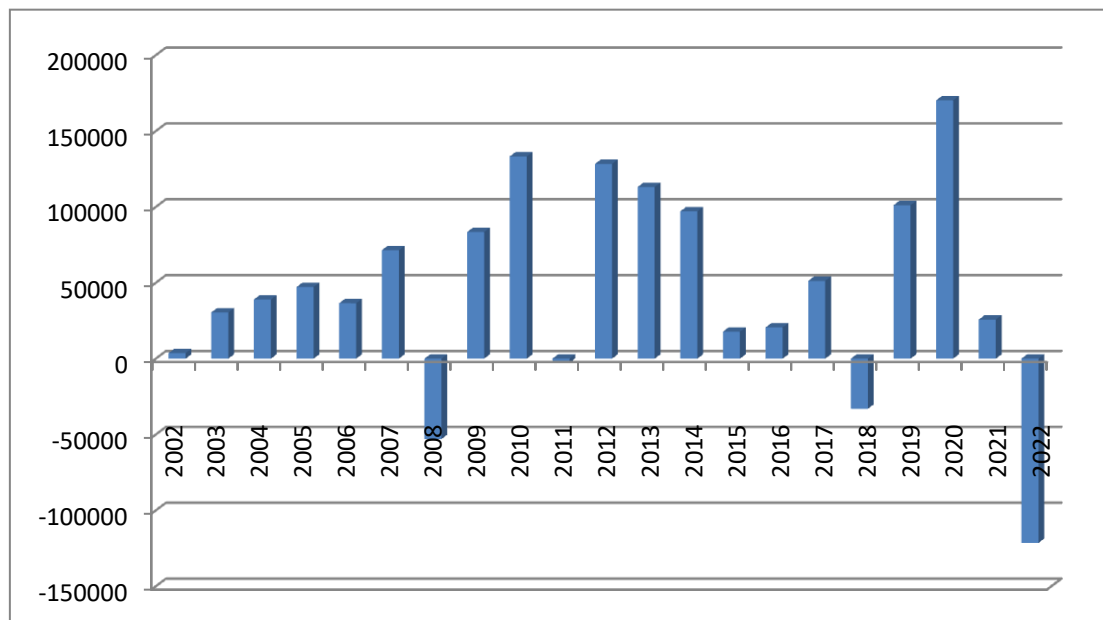


Figure 1  
Source: NSDL

# Regulation related to Foreign Portfolio Investments in India

Foreign Portfolio Investments (FPIs) in India are regulated by the Securities and Exchange Board of India (SEBI), which is the regulatory body for the securities market in India. The regulations for FPIs have evolved over time, and the current framework is known as the FPI Regulations, 2019.

The FPI Regulations, 2019, prescribe the eligibility criteria, investment limits, registration process and compliance requirements for FPIs in India. Some of the key provisions of the regulations are:

**Eligibility criteria** - FPIs must meet certain eligibility criteria, such as being a resident of a country which is a member of the Financial Action Task Force (FATF) or having a track record of compliance with anti-money laundering rules and combating the financing of terrorism (AML/CFT) standards.

**Registration process** - FPIs are required to register with SEBI and obtain a Unique Identification Number (UIN). The registration process involves submitting various documents, such as incorporation documents, regulatory approvals, and background information.

**Investment limits** - FPIs are subject to investment limits in various securities and sectors. The investment limits are prescribed by SEBI from time to time, and FPIs are required to comply with them.

**Compliance requirements** - FPIs are required to comply with various regulated and reporting requirements, such as filing periodic reports with SEBI, maintaining books of accounts and records, and adhering to AML/CFT guidelines.

In addition to the FPI Regulations, 2019, FPIs may also be subject to other regulations, rules and guidelines issued by the Reserve Bank of India (RBI), SEBI and other regulatory authorities. For example, the RBI regulates foreign exchange transactions and may impose restrictions on the repatriation of funds by FPIs. SEBI periodically reviews and updates the FPI Regulations to ensure that they are aligned with the changing regulatory environment and market dynamics.

# Impact of Foreign Portfolio Investments on Indian Capital Market

Foreign Portfolio Investments (FPIs) have a significant impact on the Indian capital market. Here are some ways in which FPIs affect the Indian capital market:

**Liquidity:** FPIs bring in large amounts of foreign capital into the Indian market, which increases liquidity and depth of the market. This increased liquidity helps in lowering the cost of capital for Indian companies, thereby increasing their ability to raise capital at lower costs.

**Market capitalization:** FPIs invest in a wide range of Indian stocks and bonds, which increases the market capitalization of Indian companies. This increased market capitalization helps in attracting more foreign investment into the Indian market, thereby contributing to the growth and development of the economy.

**Exchange rate:** The inflow of foreign currency through FPIs also affects the exchange rate of the Indian currency. As FPIs invest in Indian securities, the demand for Indian currency increases, further leading to an appreciation of the currency.

**Volatility:** FPIs can contribute to the volatility in Indian capital market due to their large-scale investments and tendency to move capital quickly in and out of the market. However, this can also provide opportunities for investors to take advantage of short-term price fluctuations.

**Policy changes:** FPIs have a significant impact on policy changes in the Indian market. As FPIs invest in Indian securities, their feedback and suggestions are often taken into account by policy-makers and regulators.

Overall, FPIs play a vital role in the Indian capital market by bringing in foreign capital, increasing liquidity, and contributing to the growth of the economy. However, their investments can also have a significant impact on market volatility, which requires regulators to carefully monitor their activities to ensure the stability of the market.

## CHAPTER 2

# LITERATURE REVIEW

**Misra and Prakash (2018)** conducted a study titled "Impact of Foreign Portfolio Investment on Indian Equity Market: An Empirical Study". Objective of the research was to study and analyze the impact of foreign portfolio investment (FPI) on the returns of the Indian stock market.

To conduct their analysis, the authors collected monthly data on FPI inflows and outflows, as well as stock market returns for the period of April 2007 to March 2017. They used econometric techniques such as cointegration analysis and vector error correction model (VECM) to examine the relationship between FPI flows and stock market returns.

The findings of the study suggest that FPI inflows have a significant positive impact on the returns of the Indian stock market. The authors noted that this positive impact was particularly pronounced in the short term. They suggested that the positive impact of FPI flows on market returns may be due to the fact that foreign investors have a more diverse investment portfolio, leading to a greater demand for Indian stocks.

Furthermore, the study found that FPI outflows have a negative impact on the returns of the Indian stock market, although this negative impact was less significant than the positive impact of FPI inflows.

Overall, the findings of the study suggest that FPI flows have a positive impact on the Indian equity market, providing some evidence in support of the notion that foreign investment can have a stabilizing effect on emerging markets. However, the authors cautioned that the impact of FPI flows on the Indian market may vary depending on factors such as the overall economic conditions, political stability, and investor sentiment.

**Verma and Kumar (2016)** conducted a study titled "Foreign Portfolio Investment and Indian Stock Market Volatility: A Study of Nifty 50". The objective of this study was to investigate the impact of foreign portfolio investment (FPI) on the volatility of the Indian stock market.

To conduct their analysis, the authors collected daily data on FPI inflows and outflows, as well as Nifty 50 index returns for the period of January 2011 to December 2015. They used econometric techniques such as GARCH (1,1) model to examine the relationship between FPI flows and stock market volatility.

The findings of the study suggest that FPI inflows increase the volatility of the Indian stock market, particularly during periods of high FPI inflows. The authors suggested that this may be due to the herding behavior of foreign investors, as well as the fact that FPI inflows may increase the liquidity of the Indian market, making it more susceptible to sudden changes in investor sentiment.

Furthermore, the study found that FPI outflows also increase the volatility of the Indian stock market, indicating that foreign flows have a significant impact on market volatility in both directions.

Overall, the findings of the study suggest that FPI flows have a significant impact on the volatility of the Indian equity market. While FPI inflows may lead to higher returns in the short term, they also increase market volatility, indicating that foreign flows may have both positive and negative effects on the Indian equity market. The authors suggested that policymakers should be aware of the potential impact of FPI flows on market volatility and take steps to manage the risks associated with foreign investment.

**Panigrahi and Jha (2020)** conducted a study titled "Foreign Portfolio Investment and Indian Stock Market: A Study of Volatility and Causality". The objective of this study was to investigate the impact of foreign portfolio investment (FPI) on the Indian stock market volatility and causality between FPI and stock market returns.

To conduct their analysis, the authors collected monthly data on FPI inflows and outflows, as well as stock market returns for the period of April 2013 to March 2018. They used econometric techniques such as ARCH-GARCH model to examine the relationship between FPI flows and stock market volatility, and Granger causality test to examine the causality between FPI and stock market returns.

The findings of the study suggest that FPI inflows have a positive impact on the volatility of the Indian stock market. However, the authors noted that this impact was not significant in the long run. They suggested that this positive impact of FPI inflows on market volatility may be due to the fact that foreign investors have access to more information and resources, allowing them to take advantage of market opportunities and drive-up volatility.

Furthermore, the study found that there is bidirectional causality between FPI and stock market returns, indicating that FPI and stock market returns are mutually dependent on each other. The authors suggested that this bidirectional causality may be due to the fact that foreign investors react to market conditions and changes in stock prices, while also influencing stock prices through their investment decisions.

Overall, the findings of the study suggest that FPI flows have a significant impact on the Indian equity market, both in terms of market volatility and stock market returns. The authors suggested that policymakers should be aware of the potential impact of FPI flows on the Indian equity market and take steps to manage the risks associated with foreign investment.

**Gordon and Gupta (2003)** conducted a study titled "Foreign Institutional Investors and Stock Market Development: Evidence from India". The objective of this study was to investigate the impact of foreign institutional investors (FIIs) on the development of the Indian stock market.

To conduct their analysis, the authors collected data on FII investment, market capitalization, trading volume, and turnover for the period of 1993 to 2001. They used econometric techniques such as regression analysis to examine the relationship between FII investment and stock market development.

The findings of the study suggest that FII investment has a positive impact on the development of the Indian stock market, particularly in terms of market capitalization and trading volume. The authors suggested that this positive impact of FII investment may be due to the fact that FIIs bring in much-needed foreign capital, increasing liquidity and market depth.

Furthermore, the study found that FII investment has a significant impact on the volatility of the Indian stock market, particularly during periods of high FII inflows or outflows. The authors suggested that this impact may be due to the fact that FIIs may be more prone to herd behavior and may react strongly to changes in market conditions.

Overall, the findings of the study suggest that FII investment has played an important role in the development of the Indian stock market, particularly in terms of market capitalization and trading volume. The authors suggested that policymakers should encourage foreign investment in the Indian market, while also taking steps to manage the risks associated with FII investment, such as market volatility.

**Joshi and Saxena (2011)** conducted a study titled "Impact of FII Flows on Indian Stock Market: A Sectoral Study". The objective of this study was to investigate the impact of foreign institutional investor (FII) flows on the Indian stock market, with a particular focus on different sectors of the market.

To conduct their analysis, the authors collected data on FII investment, stock market returns, and trading volumes for the period of 2000 to 2009. They used econometric techniques such as regression analysis and Granger causality test to examine the relationship between FII flows and stock market returns, as well as the impact of FII flows on different sectors of the Indian stock market.

The findings of the study suggest that FII flows have a significant impact on the Indian stock market, particularly in terms of stock returns and trading volumes. The authors suggested that this impact may be due to the fact that FIIs bring in much-needed foreign capital, increasing liquidity and market depth.

Furthermore, the study found that FII flows have a differential impact on different sectors of the Indian stock market. Specifically, the authors found that FII flows have a positive impact on the returns of sectors such as Information Technology, Pharmaceuticals, and Banking, while having a negative impact on the returns of sectors such as FMCG and Cement. The authors suggested that this differential impact may be due to differences in the growth prospects and risk profiles of different sectors.

Overall, the findings of the study suggest that FII flows have a significant impact on the Indian stock market, with differential effects on different sectors. The authors suggested that policymakers and investors should be aware of these differential effects when making investment decisions, and take steps to manage the risks associated with FII investment.



# CHAPTER 3

## RESEARCH METHODOLOGY

### **1. Tools used:**

For this study various statistical and econometric tools have been used. Which includes the descriptive statistics, test of significance, correlation and regression and econometric techniques include unit root test, Homoskedasticity. All these tests are run with help of Stata and Excel.

All Inferences were made on the basis of analysis of data. Before the analysis process, all Nifty50 data has been converted into nifty return. For Unit root test Dickey Fuller Test is used. Homoskedasticity test are applied to find out the variance of the errors in a regression model is constant across all levels of the independent variable(s). In this research paper, Dickey Fuller Test for Unit root test and white Test is used to check for Homoskedasticity.

### **2. Test for correlation:**

This Test is done to check correlation among the variables.

### **3. Test for Stationarity**

#### **Unit root test**

When a non-stationary series is regressed on another nonstationary time series, the result might be a spurious regression. Unit root test is done to check whether series is stationary or not. Unit root tests have various power and size properties. Dickey Fuller test is considered as one of appropriate method for checking the integration order of the variables.

#### 4. Test for Homoskedasticity

Homoskedasticity is the assumption that the variance of the errors in a regression model is constant across all levels of the independent variable(s). In other words, it means that the spread of the residuals (the differences between the actual values and the predicted values) is roughly constant across the range of predicted values.

To test for homoskedasticity, there are several tests that can be used:

**Scatter plot:** One simple way to detect heteroskedasticity is to plot the residuals against the predicted values. If there is a pattern in the plot, such as the spread of the residuals increasing or decreasing with the predicted values, this may indicate heteroskedasticity.

**White's test:** White's test is a formal statistical test for heteroskedasticity. The test involves regressing the squared residuals on the predicted values and their square terms. If the regression is significant, it indicates the presence of heteroskedasticity.

# **CHAPTER 4**

## **DATA COLLECTION**

The nature of the study is empirical which is based on secondary data relating to FPIs, and NSE (National Stock Exchange) Nifty50 and BSE (SENSEX). The data related to FPI inflows has been collected from Reserve Bank of India, NSDL website and Government of India. The Nifty50 and SENSEX data have been collected from the website of [www.nseindia.com](http://www.nseindia.com) and [www.bseindia.com](http://www.bseindia.com) respectively.

# DATA ANALYSIS

## DESCRIPTIVE ANALYSIS

	<i>NET FPIs</i>	<i>NSE RETURN</i>	<i>SENSEX RETURN</i>
Mean	3823.438247	0.012506	0.012848
Standard Error	889.480119	0.002932	0.002943
Median	3143.000000	0.014730	0.014005
Mode	4645.000000	#N/A	#N/A
Standard Deviation	14092.015302	0.046455	0.046621
Sample Variance	198584895.271171	0.002158	0.002174
Kurtosis	5.143788	3.320776	2.628915
Skewness	-0.115443	-0.311656	-0.076063
Range	123989.000000	0.397048	0.382012
Minimum	-61973.000000	-0.177665	-0.147420
Maximum	62016.000000	0.219383	0.234592
Sum	959683.000000	3.139045	3.224735
Count	251.000000	251.000000	251.000000

Figure 2

This table contains summary statistics for three variables: NET FPIs, NSE RETURN, and SENSEX RETURN. Here is a summary of the statistics:

**NET FPIs:** The mean value of NET FPIs is 3823.44, with a standard deviation of 14092.02. The minimum value is -61973 and the maximum value is 62016. There are 251 observations in the sample.

**NSE RETURN:** The mean value of NSE RETURN is 0.0125, with a standard deviation of 0.0465. The minimum value is -0.1777 and the maximum value is 0.2194.

**SENSEX RETURN:** The mean value of SENSEX RETURN is 0.0128, with a standard deviation of 0.0466. The minimum value is -0.1474 and the maximum value is 0.2346.

The table also includes other summary statistics such as standard error, median, mode, sample variance, kurtosis, skewness, range, sum, and count. These statistics provide information about the distribution, shape, and central tendency of the variables.

## **CORRELATION ANALYSIS**

	<i>FPIs</i>	<i>NSE RETURN</i>	<i>SENSEX RETURN</i>
<i>FPIs</i>	1		
<i>NSE RETURN</i>	0.483159229	1	
<i>SENSEX RETURN</i>	0.438648564	0.951157679	1

Figure 3

The table represents a correlation matrix between three variables: FPIs, NSE return, and Sensex return. Each cell represents the correlation coefficient between two variables.

- The correlation coefficient between FPIs and NSE return is 0.483, indicating a positive correlation between the two variables.
- The correlation coefficient between FPIs and Sensex return is 0.439, also indicating a positive correlation between the two variables.
- The correlation coefficient between NSE return and Sensex return is 0.951, indicating a very strong positive correlation between the two variables.

Overall, the table suggests that there is a positive relationship between FPIs and both NSE return and Sensex return. Additionally, there is a very strong positive relationship between NSE return and Sensex return, which indicates that they tend to move together in the same direction.

## Simple Regression Analysis

Below tables show simple regression test results. Simple regression results have been carried out by the help of ordinary least square (OLS) method, taking foreign portfolio investments as independent variable and stock price indices (Nifty) returns as dependent variables.

Estimation Equation: Nifty return = C (1) + C (2) \* FPIs

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.483159229							
R Square	0.233442841							
Adjusted R Squa	0.230364298							
Standard Error	0.040754197							
Observations	251							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	0.12594474	0.125945	75.829006	4.36115E-16			
Residual	249	0.413565231	0.001661					
Total	250	0.539509971						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.006416384	0.002665748	2.406973	0.016814	0.001166095	0.0116667	0.00116609	0.0116667
FPIs	1.59275E-06	1.82907E-07	8.707985	4.361E-16	1.23251E-06	1.953E-06	1.2325E-06	1.953E-06

Figure 4

This table shows the results of a linear regression analysis. The regression model seeks to predict the value of the dependent variable (y) based on the value of the independent variable (x).

The first section of the table provides regression statistics, including the multiple correlation coefficient (R), the coefficient of determination (R-squared), the adjusted R-squared, the standard error of the estimate, and the number of observations. The R-squared value of 0.233 indicates that 23.3% of the variance in the dependent variable is explained by the independent variable.

The second section of the table presents the results of an analysis of variance (ANOVA) test. This test is used to determine whether the regression model is statistically significant. The F-statistic of 75.83 with a corresponding p-value of 4.36115E-16 indicates that the regression model is statistically significant at the 5% level of significance.

The third section of the table provides information on the coefficients of the regression equation. The intercept coefficient represents the value of the dependent variable when the independent variable is zero. In this case, the intercept value is 0.0064. The coefficient for the independent variable (FPIs) is 1.59275E-06, indicating that a unit increase in FPIs is associated with an increase in the dependent variable. The t-statistic of 8.71 and p-value of 4.36115E-16 indicate that the coefficient for FPIs is statistically significant at the 5% level of significance.

The lower and upper 95% confidence interval limits are also provided for each coefficient.

**Regression equation:**

$$\text{Nifty50 return} = 0.0064 + 1.59275\text{E-}06 * \text{FPIs}$$

# Unit Root Test

For evaluating long-term relationship between Nifty return and foreign portfolio investments, we have to check whether the data is stationary or not. In this study using Dickey-Fuller unit root test at the level to check stationarity of series. Dickey-Fuller test for unit root is shown in table below:

```
. dfuller NSERETURN
```

Dickey-Fuller test for unit root		Number of obs = 250		
Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-8.950	-3.460	-2.880	-2.570

MacKinnon approximate p-value for Z(t) = 0.0000

```
. dfuller FPI
```

Dickey-Fuller test for unit root		Number of obs = 250		
Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-10.095	-3.460	-2.880	-2.570

MacKinnon approximate p-value for Z(t) = 0.0000

Figure 5

From above table we can see that NIFTY RETURN and FPI have their prob. Valueless than 0.05. So, these series are stationary.



# Test for Homoskedasticity

## White test

```
. estat imtest, white
```

White's test for Ho: homoskedasticity  
against Ha: unrestricted heteroskedasticity

chi2(2) = 0.79  
Prob > chi2 = 0.6732

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	0.79	2	0.6732
Skewness	5.47	1	0.0193
Kurtosis	4.05	1	0.0442
Total	10.31	4	0.0355

Figure 6

This test is done using Stata. Here, the null hypothesis is homoskedasticity. Since the p value is 0.67 that means this is not significant at 95% confidence interval. So, null hypothesis is not rejected which means that the error term is homoscedastic.

# CHAPTER 5

## CONCLUSION

After conducting a study to investigate the relationship between Foreign Portfolio Investments (FPIs) and the return in the Indian equity market, it has been found that there is a positive correlation between these two variables. Regression analysis was performed to further explore this relationship, and the results indicate that a 1% increase in FPIs in India leads to a 1.59275E-06 percent increase in Nifty return. Before conducting the regression analysis, the data was checked for stationarity using the Dickey-Fuller unit root test, which showed that the data is stationary.

Based on these findings, it can be concluded that the positive correlation between FPIs and Nifty returns suggests that foreign investments contribute positively to the performance of the Indian equity market. This relationship can be attributed to several factors:

**Market Liquidity:** FPIs enhance market liquidity by bringing in substantial capital, making it easier for investors to buy and sell stocks without significantly affecting the stock prices. Higher liquidity often leads to more efficient price discovery and reduces volatility, thereby fostering a more stable investment environment.

**Investor Confidence:** The inflow of FPIs is often seen as a vote of confidence in the Indian economy and its growth prospects. This can boost the morale of domestic investors, leading to increased investment activities and higher stock prices.

**Economic Growth:** FPIs can contribute to economic growth by providing the capital needed for businesses to expand and innovate. This growth, in turn, reflects positively on the stock market, as companies' improved performance leads to higher stock valuations.

**Risk Diversification:** Foreign investors often seek to diversify their portfolios by investing in emerging markets like India. This diversification can mitigate risks for global investors and stabilize the local market by reducing dependency on domestic capital flows.

Overall, the study demonstrates a significant positive correlation between Foreign Portfolio Investments and Nifty returns in the Indian equity market. The findings highlight the substantial role FPIs play in enhancing market performance, liquidity, and investor confidence. These insights are invaluable for investors looking to navigate the complexities of the Indian market and for policymakers aiming to foster a favorable investment climate. While the study provides a robust foundation, further research is essential to unravel the intricate dynamics of FPIs and their broader implications for the Indian economy. By continuing to explore this relationship, stakeholders can better harness the benefits of FPIs and mitigate potential risks, contributing to a more resilient and prosperous equity market.

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