

## FOREIGN PORTFOLIO INVESTMENT (FPI) & ITS EFFECT ON STOCK MARKET CAPITALIZATION

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DOI: <https://doi.org/10.5281/zenodo.21057886>

Received  
24 April 2026

Accepted  
06 June 2026

Published  
21 June 2026

### ABSTRACT

This study examines the relationship between Foreign Portfolio Investment and its effect on the stock market capitalization in Pakistan. Using time series data of Pakistan from 2010 to 2024, FPI is taken as a key independent variable along with other macroeconomic indicators such as exchange rate, GDP growth, Trade to GDP, and domestic credit to private sector as control variables to account for broader macroeconomic influences. The analysis investigates the impact of these factors on the stock market capitalization. The results suggest that overall research model is statistically significant and FPI has a positive but statistically insignificant relationship, implying that Pakistan's stock market is more influenced by structural macroeconomic conditions rather than short term capital inflows like FPI. Statistical tests like regression analysis, correlation and descriptive statistics were performed to determine the effect of independent variables over the stock market capitalization.

**Keywords:** Foreign Portfolio Investment (FPI), Stock Market Capitalization, Financial Markets, Exchange Rate, Economic Growth, Trade to GDP, Domestic Credit.

## 1. INTRODUCTION

### 1.1 Background of the Study

Globalization and financial liberalization have truly reshaped the financial landscape across the capital markets worldwide, enabling capital to flow borders more freely than ever before. Among the different channels of cross-border investment, Foreign Portfolio Investment (FPI) has emerged as a significant driver of financial market development, particularly in emerging economies. FPI refers to the purchase of foreign financial assets, such as stocks, bonds, and other securities, without obtaining managerial control. These investments are generally short to medium term in nature, allowing foreign investors to respond quickly to global economic changes.

In developing countries like Pakistan, FPI plays a critical role in enhancing financial market

performance and liquidity. It contributes to the growth of stock market capitalization, facilitates price discovery, and improves market efficiency. The Pakistan Stock Exchange (PSX), as the primary platform for equity trading in Pakistan, reflects investor sentiment, macroeconomic performance, and overall financial stability. Over the past twenty years, the PSX has made huge substantial reforms, including technological upgrades, enhanced regulatory and policy framework aimed at attracting foreign investors. Despite these efforts, FPI inflows have remained volatile, influenced by factors such as global financial conditions, domestic political developments, exchange rate fluctuations, and change in monetary policy.

FPI inflows can positively impact the stock market by increasing market capitalization, improving liquidity, and attracting more

investors. However, associated risks may be sudden reversals of foreign capital, often triggered by global shocks or changes in investor sentiment, can result in volatility, market instability, and declining investor confidence. Therefore, analyzing the effects of FPI on stock market indicators such as market capitalization and liquidity is essential to understanding the dual role of foreign investment in emerging economies like Pakistan.

### 1.2 Current State of the Study

Globalization has made the movement of international capital, a defining feature of modern economies. Among, the different forms of capital flows, foreign portfolio investment (FPI) has emerged as a crucial component influencing the growth and performance of financial markets. Unlike foreign direct investment, which involves long-term commitments, FPI consists of short-term investments in financial assets. As such, FPI sometimes act both as a source of financial development and a potential driver of volatility, depending on the host country's economic environment.

Across emerging economies, the relationship between FPI and stock market performance has been widely debated. In countries like India, Brazil, and South Africa, researchers have found that inflows of foreign portfolio investment contribute significantly to market capitalization and liquidity, reflecting higher investor confidence and stronger market participation. However, a cautious counter argument exists that, relying too much on such funds may make markets more vulnerable to sudden withdrawals, especially during global financial uncertainties. Therefore, the overall effect of FPI on stock market development remains circumstantial, varying across regions and time periods.

When viewed in the context of Pakistan, this debate gains particular importance. The country's stock market, represented by the Pakistan Stock Exchange (PSX), has undergone major structural and regulatory changes over the last two decades. Reforms such as automation, improved corporate governance, and enhanced transparency have sought to attract both domestic and foreign investors. Despite these developments, the size and liquidity of Pakistan's stock market still lag behind to those

of many emerging economies. The inflow of foreign portfolio investments has been inconsistent and largely influenced by changes in political stability, exchange rate movements, and broader macroeconomic conditions.

Empirical evidence from Pakistan presents a mixed picture. Some researchers suggest that FPI inflows support market growth by boosting capitalization and trading activity, while others find that such inflows are too volatile to bring long-term stability. The short-term nature of FPI make investors to quickly move funds out of the market in response to global or domestic uncertainties. This tendency exposes the stock market to fluctuations that may affect investor confidence and the broader financial environment. Moreover, global events such as the 2008 financial crisis, the COVID-19 pandemic, and regional geopolitical tensions have had visible impacts on the pattern of FPI inflows and outflows in Pakistan, emphasizing the fragile link between foreign investment and market performance.

In recent years, efforts by the Securities and Exchange Commission of Pakistan (SECP) and the State Bank of Pakistan (SBP) have aimed to strengthen the investment climate and restore investor confidence. Initiatives such as regulatory reforms, improved disclosure standards, and digitalization of trading platforms have helped enhance market efficiency. The performance of the PSX, though periodically strong, continues to depend heavily on external factors such as global oil prices, U.S. interest rate policies, and foreign exchange stability. As a result, foreign investors often adopt a cautious approach, treating Pakistan as a high risk but potentially high return market.

Most studies have focused primarily on foreign portfolio investment (FPI) and its effect on stock market capitalization, often overlooking its impact on market liquidity, which is equally important for financial stability. Liquidity reflects the ease with which assets can be traded without significant price fluctuations and serves as a key measure of market efficiency and investor confidence. Examining both capitalization and liquidity together provides a more complete understanding of the role that FPI plays in shaping the dynamics of Pakistan's capital market.

Additionally, the influence of macroeconomic factors such as exchange rates, inflation, and interest rates is frequently ignored, despite their significant effect on investor behaviour and capital movement. Without considering these variables, the true contribution of FPI to market development may remain unclear. This study addresses these gaps by examining the combined impact of FPI on both market capitalization and liquidity in Pakistan, offering insights into whether foreign investment fosters sustainable growth or introduces short-term fluctuations. The findings aim to guide policymakers, regulators, and investors in enhancing market stability and promoting long-term financial development.

### 1.3 Significance of the Study

This significance of this study lies in multiple perspectives. From an academic perspective, the research contributes growth to the limited literature on the structural impact of FPI on Pakistan's stock market. Unlike previous studies that focus mainly on returns or volatility, this study emphasizes market capitalization and liquidity, offering a deeper understanding of how foreign investment affects overall market efficiency and stability in emerging economies. As per policy perspective, the study offers insights for financial regulators, such as State Bank of Pakistan (SBP), the Securities and Exchange Commission of Pakistan (SECP), and other relevant authorities to identify the influence of FPI on market capitalization and liquidity, which can help policymakers to design strategies and attract foreign investment while mitigating potential risks associated with speculative investment flows. Such initiatives can strengthen investor confidence, improve regulatory frameworks, and enhance financial resilience.

On a practical level, this study benefit investors and provide guidance to both domestic, institutional and international investors to understand how FPI influences market capitalization and liquidity. This understanding enables the investors to make informed decisions regarding portfolio diversification, risk assessment, and timing of entry or exit from the market. Local investors can understand how foreign participation affects trading patterns and liquidity, helping them to navigate market

fluctuations more strategically. Moreover, fund managers and brokerage firms can utilize these insights to improve their market strategies and provision of liquidity.

At a broader level, it holds developmental significance to the broader discourse on financial globalization and emerging markets. A well-functioning and liquid stock market serves as a powerful catalyst for economic growth of a country by mobilizing savings, facilitating investment and enhancing capital allocation efficiency. Pakistan's experience with FPI can serve as a reference for other developing countries aiming to balance the benefits of foreign investment with the need for financial stability.

Ultimately, this study bridges a critical gap in understanding how foreign portfolio investments contribute to the expansion of Pakistan's stock market. The outcomes are expected to guide evidence-based policymaking, investment strategy formulation, and financial market development, thereby promoting a more resilient and competitive financial system in Pakistan.

## 2. REVIEW OF LITERATURE

For developing economies like Pakistan, navigating the flow of international capital represents a persistent and crucial challenge, making the study of its effects vital for financial stability. While existing scholarly work has confirmed the complex impact of various capital inflows on the broader financial market, a dedicated and focused understanding of Foreign Portfolio Investment (FPI) remains essential. FPI, due to its highly liquid and volatile nature, carries the dual capacity to either profoundly strengthen the financial system or undermine instability. By thoroughly reviewing the global and regional findings, this study undertakes a critical synthesis of concerning FPI specific influence on the core metrics measures of stock market health as measured by liquidity.

A recent study by SAJID, A., HASHMI, M. A., Abdullah, A., & HASAN, M. A. (2021) observed the relationship between foreign capital inflows and stock market development in Pakistan from July 2008 to June 2018. Using the ARDL model, the research explores both long-run and short-run linkages among foreign direct investment (FDI), foreign portfolio investment (FPI),

remittances, and the USD-PKR exchange rate, with market capitalization representing stock market development. The findings reveal that in the long run, remittances significantly enhance market capitalization, indicating their positive contribution to stock market growth. Conversely, FDI, FPI, and exchange rate movements show no significant long-term effect. In the short run, FDI and exchange rate fluctuations negatively affect market capitalization, while FPI shows a positive short-term influence. While the Granger causality analysis highlights a causal connection between remittances, exchange rate, and stock market development. Additionally, CUSUM and CUSUM Square tests confirm the stability of the model with no structural breaks, emphasizing the robustness of the results.

Also, Jawaid and Saleem (2017), in their study analyze the impact of foreign capital inflows on Pakistan's economic growth by considering major components such as foreign direct investment (FDI), workers remittances, and external debt over a longer period spanning from 1976-2015. The results of the cointegration analysis confirm a significant long-run relationship between these inflows and economic growth. However, findings from the ordinary least squares (OLS) estimation method reveals that FDI negatively impacts economic growth, while both remittances and external debt exert positive and significant effects. The study further uses sensitivity tests to validate the robustness of the results. Conclusively, the authors recommend policy measures aimed at improving the management of foreign inflows to promote sustainable economic development in Pakistan.

Moreover, Shabbir, M. S., & Muhammad, I. (2019) in their research explore the short run and long run dynamics between foreign portfolio investment and stock prices in Pakistan. Utilizing annual time series data from 1984 to 2016 and applying the autoregressive distributed lag (ARDL) model, the authors examine both long term and short-term linkages between FPI and key policy variables. The findings reveal that most relationships are statistically significant, except for the exchange rate, indicating that variations in FPI meaningfully influence stock prices over time. Furthermore, the diagnostic and stability tests

confirms that the model is well defined and stable.

Furthermore, Khalid and Khan (2017) navigate the influence of macroeconomic indicators such as interest rate, exchange rate, and inflation on Pakistan's stock market using annual data from 1991 to 2017. Applying the Autoregressive Distributed Lag approach bounds testing method and the Error Correction Model (ECM), they examine both the short-run and long-run relationships between these variables and the KSE-100 index. Their empirical findings revealed a negative and significant impact of interest rates on stock market performance, reflecting that an increase in interest rates discourages equity investment. Subsequently, both the exchange rate and inflation showed positive long-run effects on stock market volatility, suggesting that fluctuations in these variables can enhance market activity.

The study also found that nearly 46.53% of market disequilibrium adjusts each year toward long-run equilibrium, showcasing a relatively steady correction process. Based on these insights, the authors suggested that lowering the bank rate and maintaining exchange rate stability could help stimulate stock market growth and attract both local and foreign investors. They further emphasized that a supportive monetary policy can strengthen market confidence, encourage new investments, and promote sustainable financial growth in Pakistan.

Additionally, Aziz, Anwar, and Shahnawaz (2015) examined the key factors affecting foreign portfolio investment (FPI). By using time series data of Pakistan from 2005 to 2014 and applying OLS regression model, their analysis showed that trade openness, real GDP growth, and market capitalization have positive and significant effects on FPI inflows, indicating that a growing and more open economy attracts foreign investors. On the other hand, inflation shows a significant negative impact, maximizing investor confidence. Whereas, the exchange rate showed a positive but statistically insignificant relationship with FPI. The authors suggest that the government should work towards creating a stable and low risk investment climate to encourage both foreign and domestic investors. In a study, Ghani et al. (2022) probed the interaction between systematic risk of stocks and

liquidity within the Pakistan Stock Exchange. Daily observations of 467 non-financial firms were used to estimate the systematic risk and trading volume as a proxy for liquidity from 2014 to 2018. By applying the Capital Asset Pricing Model (CAPM), the study constructed ten liquidity sorted portfolios through the Fama - MacBeth regression framework. The empirical findings from the study reveals that the risk premium among more liquid stocks significantly explains returns, whereas it remains statistically insignificant for less liquidity portfolios. These results suggest that liquidity conditions influence the pricing of systematic risk, with thinly traded stocks exhibiting greater vulnerability to market fluctuations.

### **Foreign Portfolio Investment and Capital Market Development in Nigeria**

Foreign portfolio investment (FPI) has been widely recognized as a critical factor in shaping the development, depth, and efficiency of emerging capital markets, particularly in developing economies such as Nigeria. A number of empirical studies have explored the dynamics of FPI in Nigeria, examining its relationship with stock market performance, macroeconomic variables, market structure, and investor sentiments.

Adumekwe, M. (2023) empirically explored the impact of FPI on Nigeria's capital market using data spanning 1986 to 2021. The study focused on equity, bond, and money market investments as components of FPI and uses descriptive and inferential statistical techniques to assess their influence on market capitalization. The results revealed that, all three components have positive and leads to a great impact to the growth of market capitalization, emphasizing their importance as drivers of market development. Interestingly, macroeconomic variables such as interest rates, inflation, and exchange rate fluctuations were found to have limited influence, indicating that direct investment puts a stronger effect on market performance than short-term economic variations. This finding reinforces the efficient market hypothesis, portfolio diversification theory, and liquidity preference theory in the context of Nigeria.

Complementing these findings, Osuka, Chigbu, and Lucky (2024) examined FPI effect on stock market cap by employing econometric

techniques which includes cointegration, Granger causality, and error correction models. Their findings demonstrated that foreign equity, bonds, and securities directly influence market capitalization, whereas money market investments have an inverse relation. Notably, they identified that there is approximately 64% of the variation in stock market capitalization that represents foreign portfolio investment, highlighting that FPI plays a major role in determining market outcomes. The authors emphasized that external reserves should be strengthened and policies such as competitive coupon rates must be made to attract foreign participation and enhance the market stability. Adumah, Anyanwu, and Nwokoye (2024) navigate the combined role of FPI, exchange rate volatility, and technological advancement on the Nigerian capital market from 1986 to 2023. Johansen co-integration, Vector Error Correction Models (VECM), and Granger causality tests were performed and out turn represents a long-run relationship among the variables but a negative long-term effect of FPI on market capitalization was identified. Additionally, the causality analysis presented a singular directional relationship from capital market development to FPI, suggesting that improvements in market structure and performance attract foreign investments rather than FPI directly driving market growth. The recommendation by authors suggests measures to stabilize exchange rate, enhanced technological infrastructure, and develop policies that allow smooth repatriation of foreign earnings to attract sustained investment. Expanding the perspective to a regional context, Ogbekor, Wale-Awe, and Olubodun (2024) assess the impact of financial market development on FPI in both Nigeria and South Africa from 1995 to 2022. By using panel autoregressive distributed lag (ARDL) approach, they found that stock market turnover ratio remarkably and undoubtedly affects FPI in both the short and long run, emphasizing that market liquidity and active trading is a salient feature in attracting foreign investors. Other indicators, such as stock market capitalization, broad money supply, and real credit to the private sector, showed limited predictive power. The study recommended that regulatory frameworks, facilitating capital inflows and enhancing

oversight mechanisms should be the priority for policymakers to foster investor confidence.

Collectively, these studies highlight several key insights about FPI in Nigeria. First, market activity, active trading, and liquidity consistently emerge as strong elements of FPI, often outweighing traditional macroeconomic variables in significance. Secondly, the evidence suggests a mutually reinforcing relationship where market development attracts FPI, which in turn supports deeper and more efficient capital markets. Third, transparency, technological advancement, and strong regulatory frameworks are crucial to sustaining long-term investment flows and promoting market stability. Lastly, policymakers are encouraged to implement targeted measures such as competitive financial instruments, improved infrastructure, and exchange rate stability to strengthen the attractiveness of Nigeria's capital market to foreign investors.

Moreover, Sultana and Pardhasaradhi (2012) examined the role of foreign direct investment (FDI) and foreign institutional investment (FII) on the Indian stock market. The study highlights that FDI and FII are the key drivers in promoting economic growth and international financial integration, providing capital as well as technology, skills, and innovation capabilities to domestic markets. Using Sensex and Nifty as representative indices and using 11 years of data from 2001 to 2011, the study found that the inflows of FDI and FII move together with the performance of the Indian stock market. The results suggest that both foreign investments play an important role in shaping market dynamics, with their flow strongly correlating with stock market movements. The study concludes that FDI and FII are major determinants of market direction in India, underscoring their importance for policymakers and investors in emerging markets.

Lai, Wu, Xiong, and Zhu (2024) look over the effect of Qualified Foreign Institutional Investors on China's stock liquidity A-share market by using data from 2005 to 2019. The outcome shows that QFII participation actually improves stock liquidity. Higher QFII ownership represents reduction in stock illiquidity and increased trading volume. The authors further illustrate that this improvement is driven by lower information imbalance, as QFII

involvement increases market attention and encourages better corporate disclosure. To strengthen the reliability of the results, the study address endogeneity using fixed effects and instrumental variables. The conclusions remain consistent even when self-selection bias, market fluctuations, and different variable specifications are taken into account.

Similarly, Ding, Nilsson, and Suardi (2013) also look after the Qualified Foreign Institutional Investor (QFII) influence on stock market liquidity in China. Their study shows that participation by foreign institutional investors improves liquidity for both state-owned enterprises (SOE's) and non-SOE's. They find that these investors primarily affect liquidity by easing informational constraints rather than real constraints. It also shows that foreign institutions do not face informational disadvantages when investing in SOE's. Importantly, the positive relationship between foreign institutional participation and market liquidity remains robust before, during, and after the global financial crisis.

Mohd, Rahman, and Yaacob (2018) assessed the asymmetric information on foreign portfolio investment (FPI) flows across eight ASEAN + 3 countries from 2000 to 2011. Using stock market microstructure measures, specifically the amivest liquidity ratio and proportional spread, they evaluate the level of information asymmetry across a large sample of firms. Employing a fixed effect panel data model and using control variables such as GDP, market capitalization, and inflation, the study found that asymmetric information measured through proportional spread has a notable impact on FPI inflows. The findings emphasize the role of market transparency and extend the existing research connecting information asymmetry with foreign investment decisions.

Kim (2013) investigated the link between stock market liquidity and real economic activity in Korea using quarterly data from 1995 to 2011. The study shows a strong positive relationship between market liquidity and future economic growth, showing that high liquidity tends to be associated with stronger GDP growth. The results also indicate that the liquidity arising from small, non-dividend paying and financially less stable firms often characterized by high information opacity provides more useful signals

during slowdown of economic activity. These findings support the view of “flight to quality” view, means the investors move towards investing in safe assets when they anticipate uncertainty.

Evidence from broader emerging markets further supports the importance of liquidity in explaining stock market performance. Jun et al. (2003) analyze 27 emerging equity markets and found that stock returns and market liquidity are positively linked to each other measured by the turnover ratio and trading value. While the time-series relationship between liquidity and returns aligns with the patterns observed in developing markets, the cross-sectional evidence suggests that emerging markets exhibit different liquidity dynamics due to their lower level of integration with global financial markets. This highlights that liquidity behaves differently across market structures and levels of financial development. Chadha (2023) assess the impact of foreign portfolio investment (FPI) and key macroeconomic variables on volatility in India’s banking sector. The study found that FPI fluctuations significantly increase sector volatility, especially during economic downturn or political uncertainty. Macroeconomic factors such as inflation, interest rates, and exchange rates were also strongly linked to volatility. While FPI improves market liquidity, the findings highlight the need for strong regulatory oversight to manage the risks it possess to financial stability.

In a cross-country analysis of nine African economies, Makoni (2020) explored the determinants of foreign portfolio investment between 2009 and 2016 using a fixed effect panel model. His findings indicate that real exchange rates, inflation, and capital openness negatively influence FPI inflows. In contrast, institutional quality, economic growth, stock market development, and previous investment levels positively contribute to attracting foreign portfolio investment. The study emphasizes the role of macroeconomic stability and strong institutions in promoting sustained FPI in developing economies.

### 3. RESEARCH QUESTION

How does the effects of Foreign Portfolio Investment (FPI) influence the stock market capitalization in Pakistan, and what role does

other macroeconomic indicators such as exchange rate, GDP growth, trade to GDP and domestic credit given to private entities play part in stock market development?

### 4. RESEARCH OBJECTIVES

The primary aim of this research is to investigate the impact of FPI on Stock market capitalization in Pakistan. The specific objectives of the study are as follows:

1. To navigate the effect of Foreign Portfolio Investment on stock market capitalization in Pakistan.
2. To examine the short-run and long run impact of FPI on stock market capitalization in Pakistan.
3. To interpret the overall role of FPI in the development of Pakistan’s capital market.
4. To examine whether macroeconomic factors such as exchange rate, inflation, and interest rate and other factors moderate the effect of FPI on market capitalization and liquidity.
5. To provide empirical evidence on whether, FPI stabilizes or destabilizes Pakistan’s stock market.
6. To generate actionable insights for policy makers aimed at strengthening country’s ability to attract sustainable and stable foreign portfolio investment.

### 5. METHODOLOGICAL FRAMEWORK

This study analyses the effect of Foreign Portfolio Investment (FPI) on stock market capitalization in Pakistan. Using a time series econometric approach, an estimation is carried out to examine the relationship between Foreign Portfolio Investment and stock market capitalization while taking GDP growth, trade of GDP, exchange rate, domestic credit to private sector as control/explanatory variables. The objective of this study is to empirically assess how much stock market capitalization is influenced by the foreign investor’s participation.

#### 5.1 Data Source

The data is taken from World Development Indicators (WDI) and State Bank of Pakistan (SBP) website. This study uses time series data from 2010 to 2024. The data covers following dependent and independent variables

Stock Market Capitalization (MCAP) (Rs. in Billion) [Dependent variable]

Foreign Portfolio Investment (FPI - Net) [Independent variable]

Exchange Rate [Controlled variable]

GDP growth (annual %) [Controlled variable]

Trade (% of GDP) [Controlled variable]

Domestic credit to private sector (% of GDP) [Controlled variable]

### 5.2 Research Model

$$MCAP = \beta_0 + \beta_1 FPI + \beta_2 EXR + \beta_3 GDP + \beta_4 TRADE + \beta_5 DCPS + \mu$$

Where;

MCAP = Stock market capitalization

FPI = Foreign Portfolio Investment - Net

EXR = Exchange Rate

GDP = GDP growth (annual %)

TRADE = Trade (% of GDP)

DCPS = Domestic credit to private sector (% of GDP)

$\beta_1$  to  $\beta_5$  = coefficient of determination

$\beta_0$  = Intercept term

$\mu$  = error term

### 5.3 Research Hypothesis:

To evaluate the relationship between both the variables, the following null and alternate hypothesis is formulated:

$H_{01}: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$  (Null Hypothesis)

It means that there is no statistically significant relationship between dependent (Stock Market Capitalization) and independent variables (FPI, Exchange Rate, Trade as % of GDP, GDP Growth and Domestic credit to private sector).

$H_{11}: \beta_1 = \beta_2 = \beta_3 = \beta_4 \neq 0$  (Alternate Hypothesis)

It means that at least one of the independent variables (FPI, Exchange Rate, Trade as % of GDP, GDP Growth and Domestic credit to private sector) have a statistically significant relationship with Stock Market Capitalization in Pakistan.

### 5.4 Statistical Techniques

Following statistical techniques are also used to analyze the data:

- Correlation
- Descriptive Statistics
- Regression Analysis

## 6. RESULTS AND DISCUSSIONS

The results of the following statistical techniques are shown below:

### a) Correlation

	MARKETCAP_PKR_...	FPI_PKR_BILLION	EXCHANGE_RATE	TRADE_GDP	GDP_GROWTH	DOMESTIC_CREDI...
MARK...	1.000000	0.155708	0.455472	-0.724528	0.378806	-0.541423
FPI_...	0.155708	1.000000	-0.416006	-0.100165	0.645722	0.246605
EXCH...	0.455472	-0.416006	1.000000	-0.108605	-0.320377	-0.686107
TRADE...	-0.724528	-0.100165	-0.108605	1.000000	-0.200956	0.343481
GDP_...	0.378806	0.645722	-0.320377	-0.200956	1.000000	0.080220
DOME...	-0.541423	0.246605	-0.686107	0.343481	0.080220	1.000000

The correlation between FPI and market capitalization is weakly positive (0.156), suggesting that foreign portfolio inflows have only a limited direct association with stock market capitalization. FPI is more strongly related to GDP Growth (0.65), indicating that

foreign investors are likely influenced by overall economic performance rather than market size alone. Overall, market capitalization appears to be more closely associated with other macroeconomic factors than with FPI.

b) Descriptive Statistics

	MARKETCA...	FPI_PKR_B...	GDP_GRO...	EXCHANGE...	TRADE_GDP	DOMESTIC...
Mean	6643.562	29.96944	3.481227	142.7376	28.81656	14.97385
Median	6956.508	6.112203	4.116428	105.4552	28.46769	15.03312
Maximum	10374.80	449.9295	6.573838	280.3561	33.03135	19.28544
Minimum	2596.924	-287.7123	-1.274087	85.19382	24.70158	11.46608
Std. Dev.	2305.979	193.2805	2.297883	65.07879	2.601138	1.870564
Skewness	-0.417185	0.572061	-0.579893	1.222469	0.171987	0.224724
Kurtosis	2.399182	2.903519	2.717982	3.217109	1.837737	3.713915
Jarque-Bera	0.660721	0.823951	0.890398	3.765536	0.918233	0.444799
Probability	0.718664	0.662341	0.640697	0.152168	0.631841	0.800595
Sum	99653.44	449.5417	52.21841	2141.064	432.2484	224.6077
Sum Sq. Dev.	74445546	523002.8	73.92376	59293.49	94.72283	48.98612
Observations	15	15	15	15	15	15

The descriptive statistics indicate that the variables used in the study are reasonably distributed over the sample period from 2010 to 2024, Market cap recorded an average value of PKR6,643.56 billion, showing moderate variation over the period. GDP Growth maintained a positive average rate, whereas the Exchange Rate displayed notable variability,

indicating periods of currency instability. The skewness values are generally close to zero. Moreover, all Jarque-Bera probabilities exceed 0.05 (ranging from 0.15 to 0.80), indicating that the variables are approximately normally distributed supporting their suitability for further econometric analysis.

c) Regression Analysis

Dependent Variable: MARKETCAP\_PKR\_BILLION  
Method: Least Squares  
Date: 05/10/26 Time: 16:44  
Sample: 2010 2024  
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17835.29	5219.783	3.416865	0.0077
FPI_PKR_BILLION	0.912684	2.257037	0.404372	0.6954
GDP_GROWTH	387.1126	187.1822	2.068106	0.0686
TRADE_GDP	-505.5019	134.9646	-3.745441	0.0046
EXCHANGE_RATE	18.59083	7.336738	2.533936	0.0320
DOMESTIC_CREDIT_TO_PRIVATE_SEC...	-43.64244	254.2941	-0.171622	0.8675
R-squared	0.829305	Mean dependent var		6643.562
Adjusted R-squared	0.734474	S.D. dependent var		2305.979
S.E. of regression	1188.254	Akaike info criterion		17.28753
Sum squared resid	12707519	Schwarz criterion		17.57075
Log likelihood	-123.6565	Hannan-Quinn criter.		17.28451
F-statistic	8.745094	Durbin-Watson stat		2.488930
Prob(F-statistic)	0.002897			

To check multicollinearity and autocorrelation, VIF and Breusch Godfrey serial correlation LM tests is carried out:

Variance Inflation Factors  
Date: 05/10/26 Time: 16:45  
Sample: 2010 2024  
Included observations: 15

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	27246131	289.4529	NA
FPI_PKR_BILLION	5.094216	1.935570	1.886962
GDP_GROWTH	35037.16	6.345338	1.834403
TRADE_GDP	18215.44	161.9150	1.222014
EXCHANGE_RATE	53.82772	13.91125	2.260449
DOMESTIC_CREDIT...	64665.47	156.2759	2.243506

Breusch-Godfrey Serial Correlation LM Test:  
Null hypothesis: No serial correlation at up to 1 lag

F-statistic	1.010743	Prob. F(1,8)	0.3442
Obs*R-squared	1.682563	Prob. Chi-Square(1)	0.1946

Test Equation:  
Dependent Variable: RESID  
Method: Least Squares  
Date: 05/10/26 Time: 17:36  
Sample: 2010 2024  
Included observations: 15  
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	751.3751	5269.935	0.142578	0.8901
FPI_PKR_BILLION	1.020641	2.473617	0.412611	0.6907
GDP_GROWTH	-86.34985	205.8457	-0.419488	0.6859
TRADE GDP	-61.85241	148.2524	-0.417210	0.6875
EXCHANGE_RATE	1.193140	7.427786	0.160632	0.8764
DOMESTIC_CREDIT_TO_PRIVATE_SEC...	74.16801	264.6333	0.280267	0.7864
RESID(-1)	-0.419840	0.417602	-1.005357	0.3442
R-squared	0.112171	Mean dependent var		1.91E-12
Adjusted R-squared	-0.553701	S.D. dependent var		952.7224
S.E. of regression	1187.545	Akaike info criterion		17.30189
Sum squared resid	11282106	Schwarz criterion		17.63231
Log likelihood	-122.7642	Hannan-Quinn criter.		17.29837
F-statistic	0.168457	Durbin-Watson stat		1.977058
Prob(F-statistic)	0.978277			

The OLS regression results indicate that the model is statistically significant, with R-squared of 0.8293 (82.93%) and an F-statistic p-value of 0.0029, suggesting that the independent variables explain approximately 82.93% of the variation in market capitalization. Among the explanatory variables, the trade-to-GDP ratio has a significant negative effect, while the exchange rate has a significant positive effect. GDP growth shows a positive but marginally significant impact ( $p = 0.0686$ ), whereas Foreign Portfolio Investment (FPI) and Domestic Credit to the Private Sector are statistically insignificant. The Variance Inflation Factor (VIF) values range from 1.22 to 2.26, indicating no multicollinearity problem among the independent variables. Moreover, the Breusch-

Godfrey LM test reports insignificant p-values (Prob F (1.8) = 0.3442), confirming the absence of serial correlation in the residuals. Overall, the diagnostic tests suggest that the estimated OLS model is reliable and satisfies the key assumptions of regression analysis.

## 7. CONCLUSION AND IMPLICATIONS

The results of this study indicate that Foreign Portfolio Investment (FPI) has a positive but statistically insignificant relationship with stock market capitalization in Pakistan over the time period of 2010–2024. This suggests that variations in FPI inflows alone do not significantly influence the overall size of the stock market and it does not have a direct or long-term impact on market capitalization, this

means that FPI has a highly volatile and short-term nature in Pakistan. On the other hand, the exchange rate demonstrates a significant positive effect, whereas the trade to GDP ratio exerts a significant negative impact on market capitalization, highlighting external sector imbalances and currency volatility plays a greater role in shaping market performance than inflows alone. Although GDP growth shows a positive association, its effect is only marginally significant. The diagnostic tests further confirm the robustness of the estimated model by showing no evidence of multicollinearity or serial correlation, ensuring the reliability of the regression estimates. Overall, the findings imply that domestic macroeconomic conditions have a greater influence on stock market capitalization than foreign portfolio investment, highlighting the importance of maintaining a stable economic environment and providing structural economic reforms such as stabilizing the exchange rate, financial market reforms and improvement in trade balance to support the development of Pakistan's capital market.

#### 8. DIRECTIONS FOR FURTHER RESEARCH

This study provides a basis for further investigation by incorporating a longer time horizon and a larger dataset (monthly or quarterly) to capture the long-run dynamics between the variables. Researchers may also explore the influence of other macroeconomic and financial variables, such as interest rates, inflation, political stability, exchange rate volatility, foreign direct investment (FDI), and institutional quality, to provide a more comprehensive understanding of the determinants of market capitalization. Moreover, applying advanced econometric techniques like ARDL, Granger Causality test with large dataset could offer deeper insights into both short-run and long-run relationships. Also, panel data analysis among other emerging economies could provide deeper insights that how FPI affects on stock market development across countries and economic environments.

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