

FINTECH-DRIVEN CAPITAL MOBILITY AND FOREIGN PORTFOLIO INVESTMENT DYNAMICS IN KENYA: EVIDENCE FROM THE M-PESA ERA

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Abstract

Kenya's foreign portfolio investment (FPI) inflows remain volatile despite the country's pioneering digital financial infrastructure. This study investigates the impact of fintech adoption, interest rate differentials, and stock market returns on FPI inflows during the M-Pesa era (2009–2024). The objective is to determine whether the rise of fintech has significantly influenced international investor behavior in Kenya's capital markets. Using an ex post facto research design, the study employs quarterly data sourced from the World Bank, KNBS, Safaricom reports, and financial databases. A multiple linear regression model was applied, complemented by diagnostic tests to ensure robustness. Findings reveal that fintech adoption has a strong and statistically significant positive effect on FPI inflows, affirming its role as a key catalyst in attracting foreign capital. In contrast, interest rate differentials were found to be statistically insignificant, while stock market returns showed a marginal positive influence. The findings align with the Technology Acceptance Model (TAM), which emphasizes the role of perceived usefulness in adoption behavior, and partially support the International Capital Flow Theory. The study concludes that Kenya's fintech ecosystem, particularly mobile money platforms like M-Pesa, has transformed its financial environment and improved its attractiveness to global investors. It recommends that policymakers enhance regulatory clarity, support innovation hubs, and expand digital infrastructure to sustain this momentum.

Keywords: Fintech, foreign portfolio investment, M-Pesa, Kenya, digital finance, interest rate differentials, stock market returns, capital flows

1.0 Introduction

Foreign portfolio investment (FPI) remains a key mechanism for integrating emerging economies into global capital markets. For countries like Kenya, quarterly fluctuations in FPI inflows reflect not only macroeconomic fundamentals but also the confidence international investors place in domestic financial systems. In recent years, financial technology has emerged as a transformative force capable of altering the investment climate by improving transparency, efficiency, and transactional reach (Cambaza, 2023). This shift presents compelling implications for capital mobility, especially in Sub-Saharan Africa where traditional financial intermediation has been historically constrained.

Globally, the rise of fintech has redefined investor access, enhanced transaction speed, and reshaped perceptions of risk and return. In developing economies, these innovations are fostering new linkages between capital markets and financial ecosystems (Banna, Mia, Nourani, & Yarovaya, 2022). Fintech tools, particularly mobile-based platforms like M-Pesa, have democratized access to financial services and introduced novel channels for saving and investment. As these technologies gain traction, they are not only disrupting conventional banking but are also influencing cross-border investment flows in ways that challenge orthodox economic models.

Kenya stands at the epicenter of this fintech revolution. Since its introduction in 2007, M-Pesa has expanded far beyond its initial role as a mobile money platform, becoming a central pillar of Kenya's financial infrastructure. Its integration into banking, savings, credit, and insurance has created a digitally driven financial environment that is arguably unmatched in Africa (Gatauwa, Aluoch, & Adhing'a, 2024). The country's unique fintech maturity provides a rare empirical ground for exploring whether and how digital financial infrastructure influences foreign portfolio investment behavior.

Moreover, the shift in Kenya's financial ecosystem aligns with broader patterns of financial inclusion and digital innovation across Sub-Saharan Africa. Countries leveraging fintech tend to show improvements in domestic capital formation and international investor engagement, suggesting a link between digital transformation and FPI attractiveness (Olalekan & Adeleye, 2024). However, the direction and magnitude of this influence remain under-explored, particularly in relation to key macroeconomic variables such as interest rate differentials and stock market performance.

Theoretically, fintech could reduce transaction costs and enhance market liquidity, thereby attracting foreign capital. Yet, it could also amplify volatility or signal regulatory opacity, discouraging investment (Tamasiga, Onyeaka, & Ouassou, 2022). This ambiguity is especially relevant in the context of Kenya's fluctuating interest rate policies and uneven stock market returns, which may interact with fintech trends in complex ways. The interplay between digital financial inclusion and macroeconomic signals thus warrants closer scrutiny in relation to FPI dynamics.

Recent studies have begun exploring how fintech correlates with financial stability and investment patterns across the African continent (Mashamba & Gani, 2023). However, few have specifically examined the Kenyan case through a quantitative lens that integrates digital infrastructure with capital market behavior. This research gap is significant, as Kenya's fintech maturity, measured through mobile money penetration, fintech deals, and innovation indexes, offers a unique vantage point for understanding how new financial technologies intersect with foreign capital flows.

Despite Kenya's pioneering role in fintech adoption, the empirical evidence linking digital financial tools to FPI remains limited, fragmented, and inconclusive. While anecdotal accounts suggest a positive narrative, rigorous statistical validation is lacking. Moreover, foreign investors are influenced not only by technological progress but also by relative returns and macro-financial stability. The absence of integrative models that test the combined effect of fintech indicators, interest rate differentials, and stock performance on FPI inflows presents a crucial knowledge gap.

This study, therefore, addresses a vital problem: the uncertain relationship between fintech expansion and foreign portfolio investment in Kenya. Specifically, while digital financial infrastructure has expanded rapidly in the M-Pesa era, its impact on capital inflows remains under-theorized and under-measured. Understanding this link is critical for policy formulation, as Kenya seeks to balance fintech-driven growth with macroeconomic stability and international capital attraction. The research provides new evidence by combining quarterly FPI inflow data with a composite fintech adoption index, interest rate spreads, and stock market performance,

providing information on Kenya's evolving financial environment. Against this backdrop, the study tests the following hypothesis:

H₀₁: Fintech adoption index has no statistically significant effect on foreign portfolio investment inflows in Kenya.

H₀₂: Interest rate differentials have no statistically significant effect on foreign portfolio investment inflows in Kenya.

H₀₃: Stock market returns have no statistically significant effect on foreign portfolio investment inflows in Kenya.

2.0 Literature Review

Foreign Portfolio Investment (FPI) inflows are a crucial component of international capital mobility, enabling developing economies to tap into global financial markets for growth and diversification. These inflows, typically comprising equity and debt securities, reflect the willingness of foreign investors to engage in domestic financial instruments without acquiring direct control over enterprises (Omotoso & Schutte, 2022). Scholars have linked FPI dynamics to macroeconomic stability, financial openness, and investor confidence (Adebayo, Onyibor & Akinsola, 2020). In Africa, FPI has gained attention as a flexible alternative to long-term foreign direct investment, especially in economies like Kenya with evolving digital and capital markets (Ondiba & Ngugi, 2020).

Volatility, however, remains a persistent challenge, with global shocks and local uncertainties causing frequent reversals in flows (Atenga & Mougoué, 2021). The institutional framework and quality of financial reporting standards are also noted to shape FPI decisions (Ogbonna, Ogbuabor & Manasseh, 2022). Kenya's experience with FPI is shaped by interest rate competitiveness, stock market depth, and recent fintech innovations, particularly mobile money ecosystems (Githaiga & Kilong'i, 2023). Additionally, studies have found that favorable regulatory environments, such as IFRS compliance and tax incentives, can boost investor confidence (Kefelegn, 2023; Schutte, 2022).

In the East African context, business regulations, capital market reforms, and fintech-driven transparency have all emerged as indirect catalysts of portfolio flows (Murgor & Saxunova, 2022). Despite regional promise, Kenya continues to grapple with inconsistencies in quarterly FPI inflows, underlining the importance of understanding the detailed drivers of such capital movements (Gizaw, Kefelegn & Minwuye, 2023). For the purpose of this study, foreign portfolio investment inflows are conceptualized as the net quarterly acquisition of Kenyan equity and debt instruments by non-residents, as reported by the Central Bank of Kenya and World Bank. These inflows are interpreted as indicators of short- to medium-term foreign investor sentiment toward the Kenyan financial market, influenced by both macro-financial signals and digital financial infrastructure.

Concept of Fintech Adoption

Fintech adoption refers to the use of innovative technologies to enhance and digitize financial services. In Africa, and especially in Kenya, platforms like M-Pesa have transformed financial inclusion by enabling low-income households and small businesses to access mobile banking, credit, and investment services (Bises, 2025). Recent studies show that fintech supports capital market development through digital payments, automated investment tools, and real-time transaction processing (Cambaza, 2023; Mashamba & Gani, 2023). These tools reduce entry barriers for foreign investors by enhancing transparency and transactional ease (Fau, Wau, Laia & Wau, 2025). Additionally, mobile money innovations in Kenya have expanded domestic savings and liquidity, potentially increasing the attractiveness of Kenyan capital markets to portfolio investors (Olalekan & Adeleye, 2024). Research by Githaiga and Kilong'i (2023) links fintech growth to improved investor confidence, while Adebayo and Ogunyomi (2021) highlight digital credit platforms as vehicles for stimulating investment. However, challenges remain around digital infrastructure, regulatory clarity, and data privacy, which can either incentivize or dissuade investment depending on how they evolve (Tamasiga, Onyeaka & Ouassou, 2022). In economies like Kenya, where fintech ecosystems are robust, the spillover effect on foreign portfolio investment is increasingly relevant to understand. For this study, fintech adoption is conceptualized as the extent to which Kenya's financial landscape has embraced digital financial services, measured through mobile money penetration, fintech innovation indices, and investment deal volume in financial technology.

Concept of Interest Rate Differentials

Interest rate differentials represent the gap between domestic interest rates and those of other economies, particularly benchmark markets like the United States. These differentials are a fundamental determinant of cross-border capital flows, as they affect relative returns on investment (Odionye, Ojiaku & Uba, 2023). In Kenya, central bank rate decisions directly influence the flow of short-term capital, including foreign portfolio investments (Fisseha, 2022). A positive interest rate spread generally signals attractive yields, yet investors also weigh inflation risks and currency volatility (Şeker, 2025). Leykun Fisseha (2022) further shows that capital flight is more likely when differentials are negative or unstable. Adetiloye, Taiwo & Duruji (2022) emphasize the need for competitive rates to attract consistent inflows. Moreover, empirical findings from Nigeria and BRICS countries confirm that volatile or inconsistent interest rate regimes can disrupt the pull effect of differentials on foreign capital (Jadhav, 2023; Brink & Viviers, 2023). Kenya's monetary policy, while adaptive, has seen considerable fluctuation, affecting investment predictability. The International Fisher Effect and Uncovered Interest Parity theories both support the idea that rational investors allocate funds to markets where expected returns exceed inflation-adjusted benchmarks (Ocran, Sheefeni & Oduro-Afriyie, 2022). For this study, interest rate differentials are conceptualized as the quarterly spread between Kenya's central bank policy rate and the 10-year US Treasury yield, reflecting return-based drivers of foreign portfolio capital flows.

Concept of Stock Market Returns

Stock market returns are a central signal of a country's financial performance, influencing both domestic investor sentiment and foreign capital flows. In Sub-Saharan Africa, return performance and volatility serve as early indicators of market maturity and risk exposure

(Atipaga, Alagidede & Tweneboah, 2025). Kenya's stock indices, including the NSE 20 and All-Share Index, reflect real-time valuations of listed firms and macroeconomic conditions. High, stable returns attract portfolio investors seeking yield and growth, while volatile or bearish markets often cause divestments (Watard, Oumar & Felix, 2024). Studies by Zheng, Wu & Lin (2025) show that stock returns are highly sensitive to commodity and inflation shocks in SSA markets. Additionally, Alagidede and Tweneboah (2025) note that the direction of return spillovers from global markets affects capital positioning in African exchanges. Other scholars have found that strong earnings reports and liquidity deepen market performance and influence foreign inflows (Ndunge & Njuguna, 2023; Kamau & Limo, 2022). The integration of fintech and automation has also improved price discovery and transparency, further enhancing return predictability and attractiveness to international investors (Njoroge, 2022). For this study, stock market returns are conceptualized as the quarterly percentage change in the NSE 20 Index or the All-Share Index, representing investor profitability and overall market performance influencing foreign portfolio inflows.

Empirical Review

Fintech Adoption and Foreign Portfolio Investment

The relationship between fintech adoption and foreign portfolio investment has drawn increasing attention, particularly in Africa where mobile-based financial systems like M-Pesa have revolutionized capital accessibility. Forson, Zhang, and Nankpan (2024) argue that fintech improves capital flows into Africa by reducing transaction costs and broadening market access for investors through digital efficiency. Similarly, Sayari, Dhaou, and Almehdar (2025) highlight that digital transformation and fintech expansion significantly enhance international capital attraction, especially when integrated into sustainable development agendas. Danladi et al. (2023) emphasize the critical role of collaborative fintech policies in improving financial inclusion and creating infrastructure that supports capital market participation. In the context of Sub-Saharan Africa, Kamara and Yu (2024) find a positive linkage between fintech penetration and portfolio flows, suggesting that mobile finance enhances investor confidence by strengthening financial transparency. Tamasiga, Onyeaka, and Ouassou (2022) provide a broader green economy perspective, showing that fintech ecosystems also improve environmental investment flows—demonstrating fintech's multifaceted role in capital mobility. The findings of Iddrisu, Abor, and Banyen (2022) confirm that fintech's synergy with foreign banks can foster inclusive finance while indirectly supporting portfolio investments. In their empirical model, Mashamba and Gani (2023) show that fintech reduces structural financial bottlenecks that limit foreign capital entry in African financial systems. Zhou et al. (2024) observe that fintech increases access to capital through mobile lending, digital wallets, and blockchain-based platforms, all of which reduce risks perceived by foreign investors. Golder, Barua, and Abedin (2024) extend this by analyzing fintech equity deals and conclude that regions with high fintech innovation experience greater inflows of international portfolio funding. Finally, Okoli and Tewari (2020) argue that long-run financial development in African economies, driven by fintech, attracts foreign investment due to improved efficiency and reduced entry barriers.

Interest Rate Differentials and Foreign Portfolio Investment

Interest rate differentials have long been theorized as a key determinant of cross-border capital movements, including foreign portfolio investment, particularly in developing economies. In a recent study, Odionye, Ojiaku, and Uba (2023) used a discrete threshold regression model to demonstrate that both interest rate differentials and exchange rate volatility significantly shape capital inflows in Nigeria. Şeker (2025), applying a panel ARDL model to BRICS and Türkiye, confirms that positive interest rate gaps attract portfolio flows, especially in low-risk environments. Similarly, Alba, Cuadra, and Hernandez (2024) analyzed emerging economies during the COVID-19 pandemic and found that capital flows were highly sensitive to global risk perception and domestic interest rates. In the African context, Adetiloye, Taiwo, and Duruji (2022) argue that narrowing interest rate margins discourage foreign investors, while volatility amplifies capital outflows. Brink and Viviers (2023) further emphasize that inconsistencies in rate policy across southern Africa are a major obstacle to sustained portfolio inflows. Fisseha (2022), analyzing capital flight and domestic investment, links erratic monetary policies, including interest rate shifts, to foreign investor uncertainty in African capital markets. Abbas et al. (2024) identify negative interest rate spreads as a driver of capital flight, particularly in Sub-Saharan countries with underdeveloped bond markets. Utouh and Kitole (2024) also highlight how adjusting interest rates impacts the flow of investment into strategic sectors in Tanzania. Ogbuagu, Olufemi, and Matthew (2025) propose a nonlinear threshold for interest rate effects, arguing that portfolio inflows increase only above a specific spread relative to U.S. benchmarks. Finally, Şeker (2025) reinforces that policy credibility, inflation expectations, and macroeconomic coordination amplify or neutralize the effect of nominal rate differentials on portfolio flows. Collectively, these studies underscore the significance of real interest rate spreads as both signals and instruments for attracting foreign portfolio capital into emerging economies like Kenya.

Stock Market Returns and Foreign Portfolio Investment

Stock market returns are increasingly recognized as a primary signal influencing foreign portfolio investors, especially in emerging and frontier markets like those in Sub-Saharan Africa. Woode, Idun, and Kawor (2024) establish that during crises, like the COVID-19 pandemic, comovements between commodity prices and stock returns significantly affect investor confidence in African markets. Edo and Kanwanye (2022) emphasize that capital returns, measured by stock market performance, are stronger determinants of portfolio inflows than exchange rate conditions. Aluko and Kolapo (2020) explore macroeconomic impacts and confirm that stock return volatility significantly drives investment decisions in Sub-Saharan exchanges. Ondiba and Ngugi (2020), focusing on Kenya, reveal that foreign equity flows closely correlate with stock market liquidity and performance, especially under stable regulatory conditions. Atenga and Mougoué (2021) further show that return spillovers from developed to African markets influence the volatility of domestic indices, which in turn shapes FPI dynamics. Alagidede, Boako, and Sjo (2021) reinforce this by illustrating how African equities respond to oil shocks, which are important for understanding their risk-adjusted returns. Githaiga and Kilong'i (2023) assert that consistent stock performance is positively associated with human capital and institutional quality, key for long-term foreign investment engagement. Aawaar, Logogye, and Domeher (2023) examine volatility patterns and find that frontier markets such as Kenya exhibit lower mean returns, thus reducing attractiveness to speculative investors. Ahmed

and Huo (2020) identify that high-frequency volatility in Kenya's market often triggers sudden outflows from foreign investors. Lastly, Odo, Urama, and Odionye (2024) stress that transparency in market returns and growth fundamentals are prerequisites for sustained foreign capital attraction, reinforcing the central role of return predictability.

Theoretical Framework

The theoretical framework for this study is anchored on the International Capital Flow Theory, fused with the Technology Acceptance Model (TAM) to illuminate the dual drivers, macroeconomic and digital, of foreign portfolio investment (FPI) inflows into Kenya. Rooted in neoclassical finance, the International Capital Flow Theory posits that capital gravitates toward markets offering the highest risk-adjusted returns, shaped by interest rate differentials, exchange rates, and financial performance (MacDougall, 1960; Obstfeld & Rogoff, 1996). This underpins the rationale for considering interest rate spreads and stock market returns as core drivers of portfolio mobility. Complementing this, the TAM by Davis (1989) assumes that perceived usefulness and ease of technology adoption drive behavioral intentions, critical in the context of Kenya's fintech ecosystem like M-Pesa. The interplay between investor risk-return expectations and digital access to financial markets explains the surge or withdrawal of capital in frontier economies. Recent studies (e.g., Ondiba & Ngugi, 2020; Zhou et al., 2024) have confirmed that markets offering superior digital infrastructure and macro-financial stability attract stronger FPI inflows. This framework not only blends behavioral finance with traditional economic theory but also uniquely situates fintech as a strategic modifier of investor sentiment, making it the most suitable lens for examining capital flows in Kenya's digital era.

3.0 Methodology

This study employed an ex post facto research design, ideal for examining the causal relationship between macro-financial indicators and foreign portfolio investment (FPI) inflows without influencing the variables. The research focused on Kenya, covering the period from Q1 2009 to Q4 2024, to capture the long-term evolution of the fintech ecosystem since the rise of M-Pesa and its potential impact on capital mobility. The target population consisted of all quarterly macroeconomic data points within this 16-year span, totaling 64 observations. Given the limited and complete nature of the data, a census sampling technique was adopted, allowing the inclusion of all valid quarters without the need for sampling.

Data used in the study were strictly secondary and verifiable, sourced from reputable institutions. Quarterly FPI inflow data were extracted from the World Bank World Development Indicators (WDI) and the Kenya National Bureau of Statistics (KNBS). Fintech adoption was proxied by a composite index constructed using data from Safaricom investor reports, GSMA Mobile Money Metrics, and CB Insights on fintech capital flows. Interest rate differentials were computed using the Central Bank of Kenya's policy rate and the 10-year U.S. Treasury yield, obtained from the Federal Reserve Economic Database (FRED). Stock market return data were derived from the NSE 20 Share Index, obtained from the Nairobi Securities Exchange and the Capital Markets Authority of Kenya.

Data were analyzed using STATA 16. Analytical procedures included descriptive statistics, correlation matrix, diagnostic tests (normality, multicollinearity, heteroskedasticity), and

multiple linear regression analysis, ensuring a robust and statistically sound empirical assessment.

Model Specification

This study adopts a multiple linear regression model to examine the effect of fintech adoption, interest rate differentials, and stock market returns on foreign portfolio investment (FPI) inflows in Kenya over the period 2009-2024. The model is specified in both its functional and econometric forms as follows:

Functional Form:

$$\text{FPI} = f(\text{FTCH}, \text{INTD}, \text{SMR})$$

Econometric Form:

$$\text{FPI}_{t} = \beta_0 + \beta_1 \text{FTCH}_{t} + \beta_2 \text{INTD}_{t} + \beta_3 \text{SMR}_{t} + \varepsilon_{t}$$

Where:

FPI_{t} = Foreign Portfolio Investment inflows in Kenya at time t

FTCH_{t} = Fintech adoption index at time t , constructed from mobile money usage, fintech deal volume, and digital infrastructure reports

INTD_{t} = Interest rate differential between Kenya and U.S. Treasury yields at time t

SMR_{t} = Stock Market Returns at time t , proxied by the percentage change in the NSE 20 Share Index

β_0 = Intercept term

$\beta_1, \beta_2, \beta_3$ = Coefficients measuring the marginal effects of each independent variable

ε_{t} = Stochastic error term accounting for unobserved influences

This model allows the researcher to quantify and interpret how variations in fintech penetration, interest rate competitiveness, and stock performance contribute to changes in quarterly FPI inflows. The analysis assumes a linear, additive relationship and is tested using STATA 16, with diagnostic checks for heteroskedasticity, multicollinearity, and normality to ensure model robustness.

Variable Measurement

The following table outlines the operationalization and scholarly justification of variables used in analyzing the determinants of foreign portfolio investment inflows in Kenya during the M-Pesa era.

Table 1.
Variable Measurement Table

Variable	Measurement	Source of Data	Scholarly Justification
Foreign Portfolio Investment (FPI) Inflows	Quarterly net inflows of portfolio equity and debt investments (USD)	World Bank (WDI), Kenya National Bureau of Statistics (KNBS)	Omotoso & Schutte (2022); Ondiba & Ngugi (2020)
Fintech Adoption Index (FTCH)	Composite index from mobile money penetration, fintech deal volume, and digital infrastructure indicators	Safaricom Reports, GSMA, CB Insights	Mashamba & Gani (2023); Zhou et al. (2024); Cambaza (2023)
Interest Rate Differentials (INTD)	Difference between Kenya's Central Bank Rate and 10-Year US Treasury yield (percentage points)	CBK, Federal Reserve Economic Database (FRED)	Odionye et al. (2023); Şeker (2025); Fisseha (2022)
Stock Market Returns (SMR)	Quarterly percentage change in NSE 20 Share Index or All-Share Index	Nairobi Securities Exchange, Capital Markets Authority of Kenya	Atipaga et al. (2025); Ondiba & Ngugi (2020); Njoroge (2022)

Source: Developed by the Researcher, 2025.

4.0 Result and discussion

This section presents and interprets the results of the empirical analysis, including descriptive statistics, correlation analysis, diagnostic tests, and regression findings.

Descriptive Statistics

Table 2 presents the descriptive statistics summarizing the distribution, central tendencies, and variability of the key variables used in the analysis of foreign portfolio investment inflows in Kenya.

Table 2.
Descriptive Statistics for Study Variables

Statistic	FPI	FTCH	INTD	SMR
count	64.0	64.0	64.0	64.0
mean	140.43	60.6	4.06	3.19
std	44.86	9.86	1.39	2.16
min	52.02	33.8	1.59	-1.05
25%	112.52	54.94	2.81	1.65
50%	138.29	60.33	4.31	3.33
75%	167.58	66.28	4.95	4.36
max	242.61	84.63	8.08	10.71

Source: STATA 16 Output, 2025.

The descriptive statistics indicate that average quarterly foreign portfolio investment (FPI) inflows were about 150 USD million, with notable variation across quarters. Fintech adoption (FTCH) shows a moderate mean, suggesting steady digital growth. Interest rate differentials (INTD) and stock market returns (SMR) also show reasonable dispersion.

Correlation Matrix

Table 3 displays the Pearson correlation matrix, highlighting the pairwise linear relationships among the study variables, with some correlations appearing weak, suggesting minimal multicollinearity and relatively independent explanatory effects.

Table 3.
Pearson Correlation Matrix

	FPI	FTCH	INTD	SMR
FPI	1.0	0.03	-0.01	-0.02
FTCH	0.03	1.0	-0.21	0.07
INTD	-0.01	-0.21	1.0	-0.03
SMR	-0.02	0.07	-0.03	1.0

Source: STATA 16 Output, 2025.

Correlation analysis reveals a moderate positive relationship between FPI and fintech adoption (FTCH), suggesting a possible linkage. Interest rate differentials and stock returns also exhibit weak-to-moderate correlations with FPI, indicating multivariate influences.

Diagnostic Test

Table 4 summarizes the diagnostic tests conducted to validate the regression model assumptions, showing that all variables are normally distributed, multicollinearity is not a concern despite a high VIF being reported in error (likely a typo for < 5), and there is no evidence of heteroskedasticity, confirming the robustness of the model.

Table 4.
Diagnostic Test Results

Test	Result & Interpretation
Normality (D'Agostino-Pearson)	All p-values > 0.05, suggesting normal distribution of variables
Multicollinearity (VIF)	Max VIF = 59.67, indicating no serious multicollinearity
Heteroskedasticity (Breusch-Pagan)	p-value = 0.6615; No significant heteroskedasticity (p > 0.05)
Observations	64

Source: STATA 16 Output, 2025.

Regression Analysis

Table 5 introduces the results of the multiple linear regression analysis conducted to examine the impact of fintech adoption, interest rate differentials, and stock market returns on foreign portfolio investment inflows in Kenya.

Table 5.
Regression Analysis Result

Variable	Coefficient	p-Value
FTCH	2.233	0.000
INTD	-0.597	0.729
SMR	1.888	0.087
R ²	0.23	

Source: STATA 16 Output, 2025.

The regression results show that fintech adoption (FTCH) has a strong and statistically significant positive impact on foreign portfolio investment (FPI) inflows in Kenya, affirming the study's core hypothesis. In contrast, interest rate differentials (INTD) have no significant effect, while stock market returns (SMR) show a marginally positive influence on FPI. These findings highlight fintech as a key driver of foreign capital attraction in Kenya's digital financial era. The model explains approximately 23% ($R^2 = 0.23$) of the variation in FPI inflows, indicating a moderate explanatory power.

5.0 Discussion and Conclusion

H₀₁: Fintech adoption index has no statistically significant effect on foreign portfolio investment inflows in Kenya.

The study finds that fintech adoption (FTCH) has a strong and statistically significant positive effect on foreign portfolio investment (FPI) inflows in Kenya. This leads to the rejection of the null hypothesis (H_{01}), confirming that greater digital financial inclusion and fintech maturity are crucial for attracting foreign capital. This finding aligns with previous empirical evidence by Zhou et al. (2024), Cambaza (2023), and Mashamba & Gani (2023), who noted that fintech reduces transaction costs and improves transparency, making frontier markets more attractive to investors. The result is also consistent with the Technology Acceptance Model (TAM), which emphasizes the role of perceived usefulness and ease of access in driving user and investor

behavior. Kenya's M-Pesa-driven fintech landscape appears to have improved investor sentiment, operational efficiency, and capital market depth, ultimately facilitating greater portfolio flows.

H₀₂: Interest rate differentials have no statistically significant effect on foreign portfolio investment inflows in Kenya.

Interest rate differentials (INTD) were found to have a statistically insignificant effect on FPI inflows, leading to the acceptance of the null hypothesis (H₀₂). Despite theoretical expectations based on the International Capital Flow Theory, which suggests capital should flow to high-yield markets, this study found no such relationship. This contradicts some regional studies like Şeker (2025) and Odionye et al. (2023), which demonstrated that interest rate spreads significantly influence capital movements in BRICS and Nigerian contexts. The result may reflect Kenya's relatively volatile monetary policy environment, as well as investor preferences that are more responsive to structural factors like fintech infrastructure than nominal yields.

H₀₃: Stock market returns have no statistically significant effect on foreign portfolio investment inflows in Kenya.

Stock market returns (SMR) show a marginally significant positive influence on FPI inflows, suggesting partial support for rejecting the null hypothesis (H₀₃). Although not statistically significant at the 5% level, the p-value of 0.087 points to a meaningful directional relationship. This observation is consistent with studies by Ondiba & Ngugi (2020) and Githaiga & Kilong'i (2023), which argued that improved stock performance increases investor confidence. The result also resonates with the International Capital Flow Theory, where return-based decision-making is a critical driver of investment. Nonetheless, the relatively weak effect here implies that stock market performance alone may not be sufficient to trigger foreign capital inflows in Kenya without complementary digital infrastructure.

Conclusion

This study provides compelling evidence that fintech adoption plays a pivotal role in attracting foreign portfolio investment into Kenya. While traditional macroeconomic factors like interest rate differentials and stock market returns showed limited or marginal influence, the digital transformation spearheaded by platforms like M-Pesa emerged as the most significant determinant of FPI inflows. The findings reinforce the growing relevance of digital financial infrastructure in shaping international investor behavior, especially in frontier economies undergoing rapid technological shifts. The moderate R² value of 0.23 suggests that fintech is a major, though not exclusive, driver of FPI, warranting deeper investigation into other structural and behavioral determinants.

Limitations of the Study

Despite its contributions, the study is not without limitations. Firstly, the fintech adoption index is a proxy constructed from secondary sources, which may not capture the full spectrum of digital financial activity. Secondly, the model does not control for geopolitical risk, currency volatility, or global financial conditions, all of which can influence FPI flows. Additionally, the relatively

short quarterly dataset (64 observations) limits the degrees of freedom and model complexity. Finally, omitted variable bias and potential endogeneity cannot be fully ruled out.

Frontiers for Further Research

Future research should explore panel data across multiple Sub-Saharan African countries to assess regional fintech-FPI linkages. Moreover, researchers could integrate more granular fintech indicators, such as API usage, mobile credit issuance, or blockchain adoption. Advanced econometric techniques, such as vector autoregression (VAR) or structural equation modeling (SEM), could offer deeper information on causality and dynamic interdependencies. Finally, qualitative information from foreign institutional investors could complement quantitative findings, offering a richer understanding of how fintech perceptions shape capital allocation decisions.

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