Nexus between Financial Liberalization and Financial Market Performance: A Testing of Convergence Hypothesis

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Abstract

This paper investigates the impact of financial liberalization, economic growth, and political instability on financial market performance from 1990 to 2021. The dependent variable is financial market performance, while financial liberalization, economic growth, and political instability are treated as independent variables. Monetary and fiscal freedom are included as control variables. The study employs various empirical methods, including descriptive statistics, correlation matrices, panel least squares, and panel autoregressive distributed lag models. Monetary freedom exhibits a statistically insignificant negative effect on financial market performance. In contrast, fiscal freedom shows a strong negative correlation with financial market performance. Financial liberalization has a statistically significant positive effect on financial market performance. Economic growth also exerts a substantial positive impact on financial market performance. Political instability, however, has a statistically significant negative influence on financial market performance. These findings lend support to the convergence hypothesis. Policymakers must strike a balance between regulatory intervention and market autonomy. This can be achieved by implementing policies that promote fiscal freedom, eliminate unnecessary constraints on economic activity (particularly in the financial sector), and encourage greater financial sector openness. Additionally, policies should prioritize economic growth through investment promotion, support for innovation, facilitation of entrepreneurship, and infrastructure development.

Keywords: financial liberalization, financial market performance, convergence hypothesis

Introduction

Among the most significant financial indicators disclosed by businesses is net income, commonly referred to as "earnings." Stock markets are highly influenced by earnings surprises, as earnings are a key metric for evaluating a firm (Audi et al., 2025). In accrual-based financial accounts, earnings like most other expenditures are merely estimates of reality. As such, earnings are calculated using various estimates, some of which, such as bad debt charges and depreciation expenses, can significantly impact

value assessments. For this reason, understanding the concept of earnings quality is essential. Profitability is a crucial element in assessing a company's performance. Since it can influence shareholders' and management's financial decisions, the firm's income should be analyzed to determine whether earnings are a reliable reflection of actual performance (Ahmad, 2013; Ismail & Saeed, 2019; Adjasi & Yu, 2021; Ali & Mohsin, 2023; Idris, 2023; Munir et al., 2024; Musa, 2024). Financial statement users may find it difficult to assess managerial effectiveness if earnings fail to represent underlying results. Profit expansion refers to the increase or decrease in profit, and an increase in business profits will affect this measure. According to the signaling theory, rising company profits send a positive signal to the industry and may suggest future growth potential. Large firms, in particular, can achieve greater profit expansion due to their larger asset base, which enhances the likelihood of profitable operations and supports the sustainability of the business. As business profits rise, earnings information becomes more attractive to shareholders for capital investments. Consequently, the efficiency of corporate earnings improves with sustained profit growth (Ahmad, 2016; Ali & Sajid, 2020; Huseyin, 2023; Audi & Yu, 2024).

Financial liberalization—the removal of restrictions and regulations within the financial sector—is a prominent feature of globalization (Bekaert et al., 2013; Ahmad & Mmolainyane, 2014; Wali, 2018; Fatima & Zaman, 2020; Roy & Madheswaran, 2020; Ali, 2022; Kar & Dasgupta, 2024). This concept has become increasingly important in the contemporary global economy. It includes a broad range of policies and strategies designed to reduce government intervention in financial markets. Such measures encompass the removal of capital controls, deregulation of interest rates, relaxation of foreign investment restrictions, and the opening of domestic financial institutions to international competition. Advocates contend that liberalization promotes economic development and improves financial market performance by enhancing efficiency and attracting foreign capital (Aisen & Veiga, 2013; Iqbal, 2018; Sever, 2019; Zubair & Hayat, 2020; Ahmed and Mmolainyane, 2014; Ali, 2022; Ahmad & Rura, 2024). However, critics argue that excessive liberalization can introduce vulnerabilities and amplify the effects of economic shocks, especially in emerging economies with underdeveloped regulatory systems. The Asian financial crisis of the late 1990s exemplifies how rapid liberalization, when paired with inadequate oversight, can trigger severe financial crises (Eichengreen and Hausmann, 1999; Ake, 2010; Wang & Huang, 2024).

Economic growth stands as one of the cornerstones of a healthy financial market ecosystem, a fact well-established in a substantial body of research (Alesina & Perotti, 1996; Rajan & Zingales, 1998; Ziolo et al., 2017; Sumaira, 2020; Khan, 2022). Its significance lies in its far-reaching impact, encompassing various aspects of financial market dynamics. Primarily, economic growth plays a pivotal role in bolstering investor confidence (Levine & Zervos, 1998; Andersen & Tarp, 2003; Andrianaivo & Yartey,

2010; Anwar & Nguyen, 2011; Server, 2019). As economies expand, individuals and institutional investors tend to exhibit greater faith in the stability and growth prospects of financial markets. This heightened confidence often translates into increased investment activity, as investors become more inclined to allocate their resources across a broader spectrum of assets (Alesina & Tabellini, 1990; Al-Yousif, 2002; Jammzai & Mokni, 2021; Ali, 2022). Consequently, financial markets experience enhanced liquidity and trading volumes, contributing to their vibrancy. Moreover, the relationship between economic growth and financial market performance extends beyond confidence. A burgeoning economy typically offers a plethora of new investment opportunities spanning various sectors and asset classes. This diversification of investment prospects equips investors with a broader array of choices for judiciously deploying their funds. Consequently, investors are better positioned to manage risk through portfolio diversification, potentially yielding improved investment outcomes. Nevertheless, it is imperative to acknowledge that the influence of economic growth on financial markets is not uniform under all circumstances.

Political instability, characterized by recurrent government turnovers, unpredictable policy shifts, and civil unrest, stands as an enduring and pressing concern for the stability of financial markets. The capacity of political uncertainty to deter investors, disrupt economic policymaking and pose a significant threat to overall financial market functionality cannot be understated (Henisz, 2000; Omri, 2022; van Zanden, 2023; Ahmed & Alvi, 2024; Dhmani & Makram, 2024; Bozic & Bozic, 2025). Investigating the intricate connections between political stability and financial market performance is imperative, given the paramount importance of comprehending the resilience and longevity of financial markets in an increasingly turbulent global landscape. The repercussions of political turmoil on financial markets extend far beyond its immediate consequences.

The convergence hypothesis, a widely recognized theory in finance, posits that financial markets tend to converge over time, leading to greater similarity in their structures and behaviors across nations (La Porta et al., 1998). This theory holds substantial implications for both policymakers and investors. In the scenario of converging markets, the benefits of diversification and risk mitigation through international investments may diminish over time. Conversely, if markets are diverging, there could be untapped opportunities for global investors seeking distinct returns. The convergence hypothesis emerges as a theoretical framework that sheds light on the gradual process by which financial markets in various nations tend to converge, becoming progressively more alike over time, amid the diverse forces at play in global financial markets (Levine, 1997). This paper embarks on a challenging investigative journey to empirically test the convergence theory.

Literature Review

Soumaré and Tchana (2015) explored the causal relationship between foreign direct investment (FDI) and financial market development in emerging markets. Their study, based on panel data, considered bidirectional causality between FDI and stock market development indicators. Data were sourced from various databases, including the World Bank's World Development Indicators and Global Development Finance, and the International Monetary Fund's International Financial Statistics. The study conducted causality tests, Wald-type tests, unit root tests, and Chi-square tests. The results indicated a positive impact of FDI and stock market development indicators on each other. However, when using banking sector development indicators to measure financial market development, causality became ambiguous and inconclusive.

Kovalenko et al. (2019) analyze the competitive strategies of banks in the context of financial market development. They emphasize the interplay between the competitiveness of banks and their products and services, highlighting the need for flexibility and risk management in strategy development. However, the study lacks specific empirical findings or data-driven insights to support their claims. Neyapti (2003) explores the relationship between budget deficits and inflation, considering the influence of monetary and financial institutions. While the study provides empirical analysis and findings suggesting a positive effect of budget deficits on inflation, it does not delve into the implications of these results or their broader significance for economic policy.

Ahmed (2016) examines the impact of international financial integration on economic performance in Sub-Saharan African countries. Although the study identifies a positive association between international financial integration and financial development, it could provide more insights into how this integration affects economic growth and the relevance of these findings for policymakers. Niroomand et al. (2014) explore the relationship between financial market development and trade openness. While they find a significant effect, the study could delve deeper into the specific channels through which financial market development influences trade openness and consider potential policy implications.

Levine and Zervos (1996) investigate the impact of stock market development on long-run economic growth. While they find a positive association between stock market development and economic growth, the study could provide a more comprehensive analysis of the mechanisms underlying this relationship and the policy implications for countries seeking to promote economic growth through stock market development. Greenwood and Smith (1997) analyze the relationship between markets and economic growth, emphasizing endogenous market formation. While the study presents two models and discusses the role of financial markets and specialization, it lacks an in-depth exploration of the specific factors that drive market formation and the practical implications of their findings for policymakers.

Thangavelu and Beng Jiunn (2004) examine the effective relationship between financial development

and economic growth in Australia in terms of bank-based and market-based financial structures. This paper employs a time series approach, using a vector autoregressive model, to provide evidence for the dynamic relationship. Three variables are used for constructing the model: economic growth, financial development, and interest rates. Economic growth is measured using real gross domestic product per capita (Y), while financial development is assessed using bank claims on private sectors to nominal gross domestic product and domestic bank deposit liabilities to nominal gross domestic product (D), as well as equities turnover to nominal gross domestic product (E) to measure the level of financial development in Australia. Data for all variables were collected quarterly from 1960 to 1999. Equities turnover data (E) were obtained from the Reserve Bank of Australia, while the remaining data came from the International Financial Statistics dataset spanning from 1960 to 1999. This paper utilizes Granger causality, Augmented Dickey-Fuller tests, and Phillips-Perron tests. The results suggest that financial intermediaries and financial markets have different impacts on economic growth due to their distinct roles in the domestic economy.

Shen and Lee (2006) revisit the relationship between financial development and real gross domestic product per capita growth. The dependent variable is growth, proxied by real per capita gross domestic product growth. The independent variables include the depth of the banking industry (bank) and the depth of the equity market (stock). Conditional variables consist of financial liberalization and two sets of country development dummies, along with crises in banking and currency dummies. The dataset covers 48 countries from 1976 to 2001, with data collected from the International Financial Statistics published by the International Monetary Fund and the Financial Structure and Economic Development Database. The study applies the Hausman test and F-test. Results demonstrate that conditional variables, such as financial liberalization, high-income levels, and good shareholder protection, mitigate the negative impacts of banking development on growth.

Durusu-Ciftci et al. (2017) contribute to understanding the role of financial development in economic growth, both theoretically and empirically. The study shows that debt from credit markets and equity from stock markets are two long-run determinants of gross domestic product per capita. The empirical analysis employs a panel of 40 countries from 1989 to 2011, using Augmented Mean Group and Common-Correlated Effects methods, which allow for cross-sectional dependencies. Cross-sectional findings vary across countries, but panel data analyses reveal that both channels have positive long-run effects on the steady-state level of gross domestic product per capita, with credit markets having a substantially greater contribution. Policymakers are urged to focus on implementing policies that deepen financial markets, including institutional and legal measures to strengthen creditor and investor rights and contract enforcement, to accelerate economic growth.

Khan and Senhadji (2000) examine the impact of financial development on economic growth and study

the empirical relationship between financial depth and growth by estimating a standard growth equation with financial development indicators. The independent variables include the indicator of financial depth, stock market capitalization as a share of gross domestic product, investment over gross domestic product, the growth rate of population, the growth rate of terms of trade, and the log of initial income. The dataset includes 159 countries, covering both industrial and developing countries from 1960 to 1999. Growth is estimated using both a pure cross-section sample and five-year-average panels. The results are robust across four different financial depth indicators covering the banking system and the stock and bond markets. The findings reveal a strong, positive, and statistically significant relationship between financial depth and growth in the cross-section analysis. The size of the effect varies with different indicators of financial development, estimation methods, data frequency, and the functional form of the relationship.

While the nexus between financial liberalization and financial market performance has attracted significant scholarly interest, critical gaps remain in understanding how these dynamics unfold in the long run, particularly under the lens of the convergence hypothesis. Existing literature widely acknowledges the transformative potential of financial liberalization in enhancing efficiency, stimulating capital flows, and promoting market vibrancy (Bekaert et al., 2013; Aisen & Veiga, 2013; Ahmad & Mmolainyane, 2014; Tansuchat & Thaicharo, 2025; Sulehri et al., 2025). However, the empirical inquiry into whether liberalization also fosters structural alignment among financial markets—thus validating the convergence hypothesis—remains underdeveloped. The convergence hypothesis suggests that financial markets across nations tend to grow increasingly similar in structure and function due to globalization, liberalization, and policy harmonization (La Porta et al., 1998; Levine, 1997; Mbodi & Laye, 2025). Despite its relevance for international investors and policymakers, few empirical studies test this hypothesis in the context of financial reforms, deregulation, and capital mobility. Soumaré and Tchana Tchana (2015) explored causal links between foreign direct investment and financial development in emerging economies but did not assess structural convergence. Similarly, Niroomand et al. (2014) found a significant link between trade openness and financial market development, but the broader question of cross-country market harmonization was left unaddressed.

The empirical literature has predominantly focused on the linear relationships between financial development and economic performance. For instance, Levine and Zervos (1996) and Greenwood and Smith (1997) examined how stock market development and specialization contribute to long-run growth. Yet, these studies fell short of evaluating whether liberalization-induced development converges across markets. Even Durusu-Ciftci et al. (2017), who applied robust panel techniques across 40 countries, primarily assessed the long-run contributions of credit and equity markets to GDP per capita, without extending the discussion to structural market similarities over time. Moreover, political factors, although widely recognized as influential, are often treated as peripheral. Henisz (2000) emphasized how political

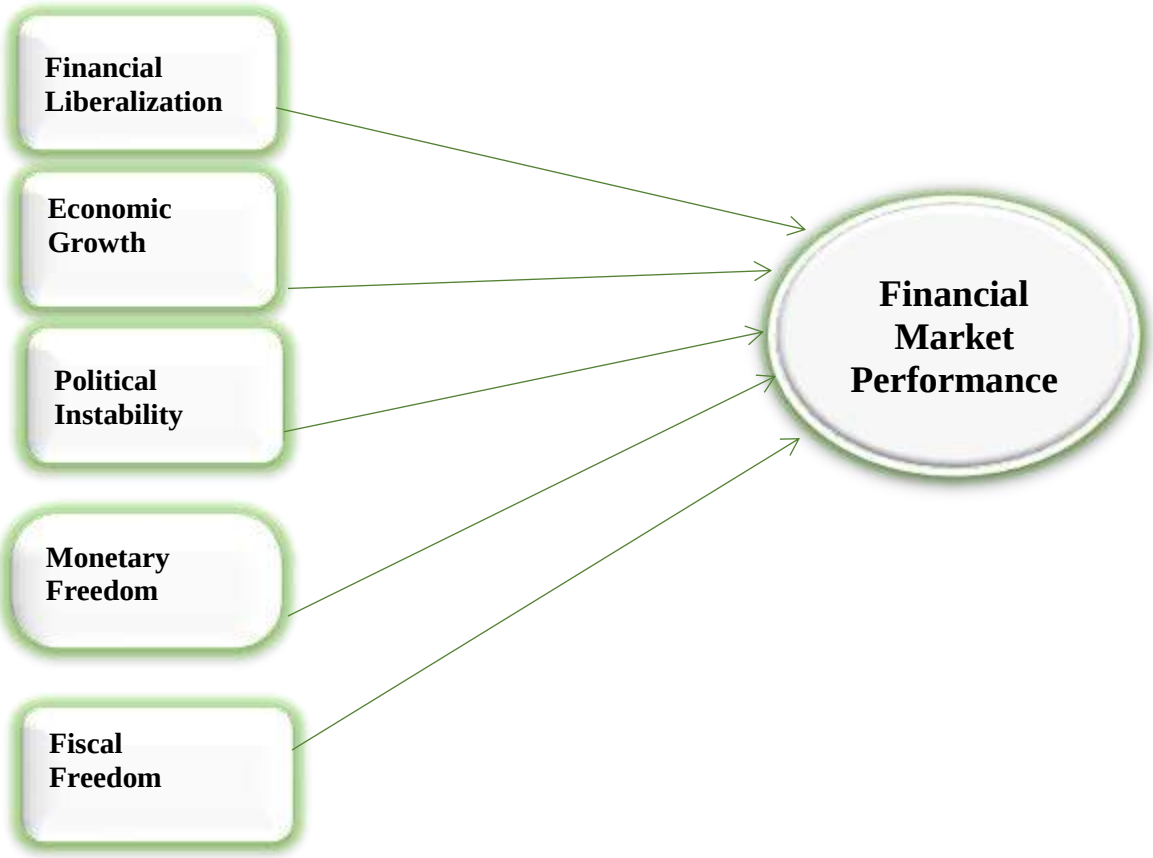
instability can deter investors and disrupt financial systems, but there is limited integration of political risk into convergence-based analyses. This study addresses that omission by incorporating political volatility as a mediating factor in market performance under liberalization. Furthermore, while Ahmad (2013, 2016) emphasized earnings quality and profitability as key indicators of financial performance, prior works have not examined how these firm-level outcomes interact with liberalization trends to indicate structural market alignment. The signaling theory, as discussed by Ahmad (2016), suggests that rising profits act as cues for investors and policymakers; however, the implications of these signals on the convergence of financial markets remain unexplored. Thangavelu and Beng Jiunn (2004) and Shen and Lee (2006) also provide insights into the interplay between bank-based and market-based systems, yet their national focus lacks the cross-border scope needed to address convergence. Kovalenko et al. (2019), while offering strategic insights on banking competition, do not empirically evaluate how such dynamics shape market homogeneity across countries. Hence, this study introduces a novel framework by integrating financial liberalization, firm-level performance indicators, political stability, and cross-country convergence analysis. It bridges theoretical and empirical gaps by not only reassessing traditional development metrics but also testing the convergence hypothesis in the evolving global financial landscape—an area insufficiently addressed in the current literature.

The Model

The theoretical foundation of this study is grounded in the convergence hypothesis, which posits that financial markets, driven by liberalization and economic integration, tend to align in structure and behavior across countries over time (La Porta et al., 1998; Levine, 1997; Bozic & Bozic, 2025). This convergence reflects deeper institutional harmonization and growing interdependence facilitated by globalization and policy reform. Financial liberalization, characterized by deregulation, capital mobility, and diminished state intervention (Bekaert et al., 2013; Ahmed & Mmolainyane, 2014), plays a pivotal role in this process by reshaping domestic markets to resemble more competitive and integrated systems. The theoretical model assumes that liberalization enhances efficiency, attracts foreign capital, and increases information flow, thereby reducing arbitrage opportunities and leading to market alignment. Economic growth further strengthens this model by serving as a reinforcing mechanism. As shown by Levine and Zervos (1996) and Greenwood and Smith (1997), economic expansion promotes stock market development and endogenous market formation. The dynamic interaction between growth and financial development introduces structural similarities, especially when policy frameworks support innovation, investor protection, and market depth (Thangavelu et al., 2004; Shen & Lee, 2006; Fatima & Zaman, 2020). Furthermore, firm-level profitability, acting as a signal to investors, underpins market confidence and performance alignment, consistent with signaling theory (Ahmed, 2016; Munir et al., 2024).

However, the model also incorporates political instability as a disruptive force. According to Henisz (2000), political uncertainty undermines investor trust and hampers financial integration, potentially stalling convergence. This is further supported by Dahmani and Makram (2024), who stress the detrimental role of political fragmentation in sustaining financial volatility. Therefore, this study's framework acknowledges both integrative and disintegrative forces, aligning with Durusu-Ciftci et al. (2017), who emphasized that financial development's impact is context-dependent. By merging firm-level dynamics, macroeconomic growth, political conditions, and liberalization processes, the model offers a comprehensive lens to empirically examine whether financial markets are converging under contemporary reforms or diverging due to structural asymmetries. Based on the highlighted studies, the conceptual model of our study becomes as:

Conceptual Model



Based on the conceptual framework, the functional form of the model without moderation becomes as:

$FMP_{it}=F(MP_{it}, FP_{it}, FL_{it}, ECO_{it}, POL_{it})$

For examining the coefficients of the selected variables, based on the functional form the econometric model without moderation can be written as:

$$FMP_{it}= \alpha + \beta_1 MP_{it} + \beta_2 FP_{it} + \beta_3 FL_{it} + \beta_4 ECO_{it} + \beta_5 POL_{it} + e_i$$

FMP=Financial Market performance = "Stock market return is the growth rate of the annual average stock market index. An annual average stock market index is constructed by taking the average of the daily stock market indexes. The data source for financial performance is the Global Economy Databases."

FP= Fiscal freedom scores are calculated with a quadratic cost function to reflect the diminishing revenue returns from very high rates of taxation. The data for each factor are converted to a 100-point scale using the following equation: $\text{Fiscal Freedom}_{ij} = 100 - \alpha\,(\text{Factor}_{ij})^2$

MP= "Monetary freedom combines a measure of price stability with an assessment of price controls. Both inflation and price controls distort market activity. The two equations used to convert inflation rates into the monetary freedom score are:

$\text{Weighted Avg. Inflation}_i = \theta_1\ \text{Inflation}_{it} + \theta_2 \text{Inflation}_{it-1} + \theta_3\ \text{Inflation}_{it-2}$

$\text{Monetary Freedom}_i = 100 - \alpha\ \sqrt{\text{Weighted Avg. Inflation}_i} - \text{PC penalty}_i$

FL = "Financial liberalization (FL is measured with the help of the financial governance index which is based on the assets and liabilities of the countries). The data source of financial integration is the KOF index of globalization.

ECO= Economic growth = "Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for the depreciation of fabricated assets or for the depletion and degradation of natural resources. The data source for economic growth is the World Development Indicators (WDI) database.

POL= "Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Percentile rank indicates the country's rank among all countries covered by the aggregate indicator, with 0 corresponding to the lowest rank, and 100 to the highest rank. Percentile ranks have been adjusted to correct for changes over time in the composition of the countries covered by the WGI. The data source of political instability is the Transparency International database."

i= set of cross-sections (31 developed and developing countries)

t= selected period (1990-2021)

We employed the panel autoregressive distributed lag method to investigate the long-term relationship among the indicators. For the short-term relationship among elements and variables of the model, we applied panel residual correction procedures. Co-integrated series follow the same path in the long-run equilibrium, and this concept was initially introduced by Granger (1981) and further developed by Engle and Granger (1987). To address the challenges posed by traditional methods, some scholars have introduced the concept of panel co-integration. This approach combines both cross-sectional and time

series data when dealing with non-stationary variables. Given the limitations of traditional methods, this paper employs panel Autoregressive Distributed Lag (ARDL) analysis. The test procedures for panel ARDL are as follows:

Panel-v-statistic":

$$Z_v = \left(\sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \hat{\ell}_{i,t-1}^{2} \right)^{-1}$$

The panel t statistic:

$$Z_p = \left(\sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \hat{\ell}_{i,t-1}^{2} \right)^{-1} \sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \left(\hat{\ell}_{i,t-1} \Delta \hat{\ell}_{i,t} - \hat{\lambda}_i \right)$$

3 The panel t statistic (Non-parametric):

$$Z_i \equiv \left(\hat{\sigma}_{N,T}^{2} \sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \hat{\ell}_{i,t-1}^{2} \right)^{-1\backslash 2} \sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \left(\hat{\ell}_{i,t-1} \Delta \hat{\ell}_{i,t} - \hat{\lambda}_i \right)$$

The panel t statistic (parametric):

$$\overset{*}{Z}_t \equiv \left(\hat{S}_{N,T}^{*2} \sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \hat{\ell}_{i,t-1}^{*2} \right)^{-1\backslash 2} \sum_{i=1}^{N} \sum_{t=1}^{T} \hat{L}_{11i}^{-2} \left(\hat{\ell}_{i,t-1}^{*} \Delta \hat{\ell}_{i,t}^{*} \right)$$

The group t statistic (parametric):

$$\hat{Z}_P \equiv TN^{-1\backslash 2} \sum_{i=1}^{N} \left(\sum_{t=1}^{T} \hat{\ell}_{i,t-1}^{2} \right)^{-1} \sum_{t=1}^{T} \left(\hat{\ell}_{i,t-1} \Delta \hat{\ell}_{i,t} - \hat{\lambda}_i \right)$$

The group t statistic (non-parametric):

$$\hat{Z}_t \equiv N^{-1\backslash 2} \sum_{i=1}^{N} \left(\hat{\sigma}_i^{2} \sum_{t=1}^{T} \hat{\ell}_{i,t-1}^{2} \right)^{-1\backslash 2} \sum_{t=1}^{T} \left(\hat{\ell}_{i,t-1} \Delta \hat{\ell}_{i,t} - \hat{\lambda}_i \right)$$

The group t statistic (parametric):

$$\overset{\square*}{Z}_t \equiv N^{-1\backslash 2} \sum_{i=1}^{N} \left(\sum_{t=1}^{T} \overset{\wedge *2}{S}_i \overset{\wedge *2}{\ell}_{i,t-1} \right)^{-1\backslash 2} \sum_{t=1}^{T} \left(\overset{\wedge *}{\ell}_{i,t-1} \Delta \overset{\wedge *}{\ell}_{i,t} \right)$$

where $\lambda \hat{}_i$ presents a steady estimator, which is based on long-run variance.

$$\overset{\wedge 2}{L}_{11} = \frac{1}{T} \sum_{t-1}^{T} \overset{\wedge 2}{\eta}_{i,t} + \frac{2}{T} \sum_{s=1}^{ki} \left(1 - \frac{S}{K_1 + 1} \right) \sum \hat{\eta}_{i,t} \hat{\eta}_{i,t-s,} \quad \sigma_i^{\wedge 2} = S_i + 2 \hat{\lambda}_i, \hat{S}_i = \frac{1}{T} \sum_{t=1}^{T} \eta_{it,}$$

$$\sigma^2_{N,T} = \frac{1}{N} \sum_{t=1}^{N} \overset{\wedge 2}{L}_{11} \overset{\wedge 2}{\sigma}_i \overset{\wedge *2}{S}_i = \frac{1}{t} \sum_{t=1}^{T} \overset{\wedge -2 \square *2}{\eta}_{i,t} S$$

"The residuals $\eta \hat{}_{I,\, t,\, and}$ $\eta \hat{}^{*}_{I,\, t}$ and $\eta \hat{}_{I,\, t}$ are measured with the help of the following regression:

$$\hat{\ell}_{i,t} = \hat{\gamma}_i \hat{\ell}_{i,t-1} + \eta_{i,t}, \ell^{\wedge *}_{i,t} \hat{\gamma}_i \ell_{i,t-1} + \sum_{k=1}^{ki} \hat{\gamma} \Delta \ell_{i,t-k} + \hat{\eta}^{\wedge *}_{i,t}, \gamma_{i,t} = \sum_{M-1}^{N} \hat{b} \square \chi_{mi,t} + \hat{\eta}_{i,t}$$

The null hypothesis indicating no co-integration is accepted when the residuals are non-stationary. Conversely, if the errors are stationary, co-integration is deemed to exist. To analyze the Autoregressive Distributed Lag (ARDL) regression for the panel dataset, the study employs the Pooled Mean Group (PMG) method. The Panel Error Correction Model (ECM) procedure is applied to examine the short-term relationship of variables across different panels. It serves as a baseline for all selected samples."

Results and Discussion

Table 1 presents the descriptive statistics for the variables used in analyzing the relationship between financial liberalization and financial market performance, in the context of testing the convergence hypothesis. The key variable of interest, financial market performance, is measured through the annual growth rate of the average stock market index. It has a mean value of 26.32085 and an exceptionally wide standard deviation of 202.4084, which reflects substantial variation in stock market returns across countries or time periods. The data also show extreme skewness (15.37725) and kurtosis (260.3586), indicating the presence of significant outliers and a highly non-normal distribution, likely driven by a few instances of very high market returns or collapses. Monetary freedom, which reflects the stability of price levels and the absence of price controls, has a mean of 77.17211 and a relatively moderate standard deviation of 12.38364. The variable is negatively skewed (–3.487888) and highly leptokurtic, with a kurtosis of 20.47207, suggesting that in most observations, monetary conditions are relatively free and stable, but some countries experience severe monetary distortions. Fiscal freedom, representing the efficiency and burden of taxation, shows a mean of 65.24662 with a standard deviation of 15.20096. The distribution is slightly negatively skewed (–0.322880) and nearly mesokurtic (kurtosis of 2.322175),

indicating that the spread of fiscal policy performance is moderate and relatively normally distributed compared to other variables in the dataset. Financial liberalization, measured by the financial governance index, has a mean value of 71.59084, with a high standard deviation of 54.34751. The skewness is strongly positive (3.091218), and the kurtosis is also high at 15.29040, indicating significant rightward skew and the existence of extreme values where some countries have exceptionally high levels of financial openness compared to the rest. Economic growth, measured by the annual GDP growth rate, has a mean of 2.906254 and a standard deviation of 3.760566. Although the average is positive, the minimum value is –14.14 and the maximum is 24.37, showing a wide range of growth experiences, from deep recessions to rapid expansions. The distribution is modestly left-skewed (–0.658981) with a kurtosis of 6.370131, reflecting the presence of occasional periods of economic shocks or booms. Political stability, measured on a percentile rank from 0 to 100, has a relatively high mean of 79.10082 and a standard deviation of 18.37098. The data are negatively skewed (–1.295505), implying that most countries in the sample score relatively high in political stability, with a few exceptions pulling the lower tail. The kurtosis of 3.919634 suggests a distribution with heavier tails than the normal, indicating some variability in exposure to political risk. The descriptive statistics indicate a high level of dispersion in financial market performance and financial liberalization, while variables like monetary freedom, fiscal freedom, and political stability show more consistent distributions. These differences underline the importance of controlling for institutional, macroeconomic, and governance factors when analyzing the impact of financial liberalization on market performance. The extreme values and non-normality in some variables also suggest the need for robust estimation techniques in the empirical analysis.

Table 1: Descriptive Statistics

	FMP	MP	FP	FL	ECO	POL
Mean	26.32085	77.17211	65.24662	71.59084	2.906254	79.10082
Median	8.415000	79.90000	68.00000	60.03000	3.070000	86.71000
Maximum	4012.570	95.40000	94.00000	415.7500	24.37000	98.59000
Minimum	-86.74000	0.000000	30.00000	7.740000	-14.14000	18.04000
Std. Dev.	202.4084	12.38364	15.20096	54.34751	3.760566	18.37098
Skewness	15.37725	-3.487888	-0.322880	3.091218	-0.658981	-1.295505
Kurtosis	260.3586	20.47207	2.322175	15.29040	6.370131	3.919634

Table 2 displays the correlation matrix for the key variables in the study investigating the relationship between financial liberalization and financial market performance. The matrix reveals both the strength and direction of the linear associations among selected variables. Financial market performance is

negatively and significantly correlated with monetary freedom (–0.4307), significant at the 1% level. This suggests that countries with higher price stability and fewer price controls may paradoxically experience lower stock market returns, possibly due to reduced speculative volatility or more mature financial systems. The relationship between financial market performance and fiscal freedom is positive but weak (0.0532) and only significant at the 10% level, indicating that better fiscal conditions may have a limited and marginally positive effect on market returns. Financial liberalization shows a very weak and statistically insignificant correlation (–0.0488) with financial market performance, suggesting that increased financial openness, at least in isolation, does not show a linear impact on market outcomes. Economic growth has a weak and statistically insignificant correlation with financial market performance (0.0364), implying that fluctuations in GDP growth may not directly translate into stock market performance in the short term. This highlights the often observed disconnect between real economic indicators and financial markets. Political stability is also weakly and negatively correlated with financial market performance (–0.0335), though the correlation is not statistically significant. This may suggest that financial markets can perform well even in politically less stable environments, possibly due to short-term investment opportunities or market speculation in such contexts. Examining the relationships among the independent variables, monetary freedom is positively correlated with financial liberalization (0.2652) and political stability (0.1007), both significant at the 1% level, implying that countries with stable pricing environments also tend to have more open financial sectors and greater political stability. Fiscal freedom is positively related to financial liberalization (0.1944) and economic growth (0.1444), but negatively associated with political stability (–0.4035), suggesting that efficient fiscal policies may coincide with greater liberalization but not necessarily with stronger governance. Financial liberalization is negatively associated with economic growth (–0.1518) and political stability (–0.2208), both significant at the 1% level. This could imply that rapid financial liberalization, if not well-regulated, may be associated with instability or structural adjustments that temporarily hinder growth and political steadiness. The correlation matrix explains that while financial liberalization interacts significantly with other institutional and macroeconomic factors, its direct link to financial market performance is weak and statistically insignificant. This underscores the importance of considering potential indirect effects and using more advanced econometric techniques to explore the dynamic interactions in the system.

Table 2: Correlation Matrix

Variables	FMP	MP	FP	FL	ECO	POL
FMP	1.000000					
MP	-0.4307***	1.000000				
FP	0.053184*	-0.18706***	1.000000			
FL	-0.048772	0.265191***	0.194358***	1.000000		
ECO	0.036445	-0.003518	0.144352***	-0.15179***	1.000000	
POL	-0.033534	0.100675***	-0.40352***	-0.22076***	-0.13428***	1.000000
Note: ***, **, *, 1%, 5%, 10% level of significance.						

The results presented in Table 3 through the panel least squares estimation reveal a statistically significant and economically interpretable nexus between financial liberalization and financial market performance, providing empirical support for the convergence hypothesis. The coefficient for financial liberalization, measured using the financial governance index derived from the KOF globalization index, is positive and statistically significant at the 1% level ($\beta = 0.3738$; $p = 0.0020$). This suggests that improvements in financial liberalization, reflected by better financial integration and governance, have a substantial and favorable effect on financial market performance. This finding aligns with previous literature that emphasizes the importance of open and liberalized financial systems in enhancing capital market efficiency and attracting investments (Bekaert, Harvey, & Lundblad, 2005; Ahmed & Rura, 2024). Conversely, monetary freedom demonstrates a strong negative and statistically significant relationship with financial market performance ($\beta = -7.6707$; $p < 0.0001$). This result suggests that less monetary control or higher inflation volatility may undermine market performance. When monetary instability prevails, it may increase uncertainty for investors, leading to diminished confidence and lower stock returns. This is consistent with empirical findings that link macroeconomic volatility with diminished investor sentiment and market inefficiencies (Mishkin, 2007; Khan, 2022). Fiscal freedom also has a negative coefficient ($\beta = -0.7184$; $p = 0.0124$), indicating that higher fiscal freedom—often tied to lower taxes and fewer government interventions—may paradoxically be associated with weaker financial market performance. A potential interpretation is that excessive tax reductions without adequate regulatory frameworks or institutional oversight might reduce government revenues necessary to stabilize markets, especially in developing economies (Romer & Romer, 2010; Omri, 2022). Economic growth, measured by the annual growth rate of GDP, is positively associated with financial market performance ($\beta = 3.2718$; $p = 0.0444$), affirming the fundamental macroeconomic theory that robust economic expansion fuels capital market development. This relationship supports the premise that economic prosperity enhances corporate earnings, investor confidence, and capital inflow, thereby boosting stock

market returns (Levine & Zervos, 1998; Audi & Yu, 2024). Interestingly, political instability exhibits a negative and statistically significant coefficient (β = -0.2456; p = 0.0029), implying that increased political risk significantly undermines financial market performance. This result is coherent with theoretical arguments that political uncertainty deters investment and distorts resource allocation (Campos & Nugent, 2002; Idris, 2023). The overall model is statistically significant (F-statistic = 46.51, p < 0.000), although the explanatory power is relatively modest (R^2 = 0.196). This indicates that while the selected variables significantly contribute to explaining financial market performance, other unobserved factors may also be influential. The model provides evidence that financial liberalization and economic growth positively contribute to financial market performance, whereas monetary and fiscal instability, as well as political risks, pose significant challenges. These findings emphasize the need for balanced policy interventions aimed at fostering liberalization while ensuring macroeconomic and political stability to support long-term financial development.

Table 3: Panel Least Square

Dependent Variable: FMP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MP	-7.670745	0.512590	-14.96467	0.0000
FP	-0.718364	0.439394	-1.634898	0.0124
FL	0.373800	0.120910	3.091562	0.0020
ECO	3.271788	1.625329	2.013001	0.0444
POL	-0.245600	0.135803	-1.767304	0.0029
C	609.4639	62.26784	9.787780	0.0000
R-squared	0.195972	Mean dependent var		26.32085
Adjusted R-squared	0.191758	S.D. dependent var		202.4084
S.E. of regression	181.9697	Akaike info criterion		13.25179
Sum squared resid	31589778	Schwarz criterion		13.28221
Log likelihood	-6354.858	Hannan-Quinn criter.		13.26337
F-statistic	46.50522	Durbin-Watson stat		0.928956
Prob(F-statistic)	0.000000			

The long-run results of the autoregressive distributed lag model in Table 4 provide deeper insight into the dynamic relationship between financial liberalization and financial market performance, emphasizing both direct and indirect macroeconomic influences over time. The coefficient for financial liberalization remains positive and statistically significant at the 5% level (β = 0.1009, p = 0.0292), reaffirming the

result found in the panel least squares model. This consistent positive impact supports the notion that sustained efforts to liberalize and integrate financial systems contribute significantly to enhancing financial market performance. It underscores how well-regulated openness, in terms of cross-border financial transactions and governance reforms, promotes investor confidence and long-term market efficiency, consistent with the findings of Bekaert, Harvey, and Lundblad (2005) and supported by more recent evidence from Audi et al. (2025), who highlighted the stabilizing role of openness during market shocks. The impact of fiscal freedom is again negative and statistically significant ($\beta = -0.2324$, $p = 0.0089$), suggesting that in the long run, excessive fiscal laxity—reflected through low tax rates or reduced government revenues—may hinder the development of robust financial markets. A plausible interpretation is that low fiscal revenue can constrain public investment in financial infrastructure and regulatory enforcement, which are essential for market development in emerging economies (Romer & Romer, 2010; Wali, 2018). Economic growth exhibits a strong and highly significant positive effect ($\beta = 1.4323$, $p = 0.0001$), demonstrating that sustained increases in gross domestic product substantially improve financial market performance. This relationship confirms theoretical expectations and empirical evidence that economic expansion strengthens corporate profitability and capital accumulation, encouraging more investor participation and broader financial deepening (Levine & Zervos, 1998; Ali & Mohsin, 2023). Conversely, political instability continues to have a negative and highly significant long-run impact ($\beta = -0.9529$, $p < 0.0001$). This indicates that persistent uncertainty regarding governance, institutional trust, and political violence deteriorates investor sentiment and diminishes the willingness of both domestic and foreign investors to engage in financial markets. The result aligns with Campos and Nugent's (2002) argument that political instability disrupts economic processes and impedes capital market growth. This conclusion also finds support in the study by Dahmani and Makram (2024), who emphasize the critical importance of political stability for financial system resilience, particularly in developing regions. Interestingly, monetary freedom is statistically insignificant in the long run ($\beta = -0.0464$, $p = 0.7409$), contrasting its strong short-term influence in the panel least squares model. This suggests that while inflation control and price stability may affect investor perceptions in the short run, their effect on financial market outcomes dissipates over time when other institutional and structural factors—such as liberalization, growth, and political conditions—take precedence (Mishkin, 2007; Fatima & Zaman, 2020). Overall, the ARDL results reinforce the convergence hypothesis by highlighting the pivotal role of financial liberalization and economic expansion in promoting financial market performance over the long term. The detrimental effects of political instability and fiscal inefficiency serve as cautionary indicators, suggesting that liberalization policies must be complemented with strong institutions and prudent fiscal management to ensure sustainable financial development.

Table 4: ARDL Long Run Outcomes

Dependent Variable: FMP				
Variables	Coefficient	Std. Error	t-Statistic	Prob.*
MP	-0.046406	0.140292	-0.330784	0.7409
FP	-0.232353	0.088541	-2.624244	0.0089
FL	0.100869	0.022493	4.484446	0.0292
ECO	1.432312	0.366498	3.908103	0.0001
POL	-0.952883	0.155767	-6.117373	0.0000

The short-run dynamics of the autoregressive distributed lag model, presented in Table 5, provide valuable insights into how financial market performance responds to changes in key macroeconomic and institutional variables over time, prior to reaching long-run equilibrium. Among the short-run predictors, economic growth is statistically significant (coefficient = 0.9644, p = 0.0258), confirming that increases in gross domestic product lead to immediate positive changes in financial market performance. This finding underscores the short-term responsiveness of market participants to improved macroeconomic conditions, consistent with the theoretical framework of endogenous growth models where economic expansion stimulates investment activity (Levine, 2005; Roy & Madheswaran, 2020). Political instability is also significant in the short run (coefficient = 3.4056, p = 0.0271), and unlike in the long run where its effect was negative, the short-run coefficient is positive. This counterintuitive outcome may be attributed to speculative market behavior or fiscal stimulus introduced during politically volatile periods, which can temporarily boost investor sentiment or government expenditure. However, such effects are generally unsustainable, consistent with its long-run adverse influence observed earlier (Alesina et al., 1996; Dahmani & Makram, 2024). In contrast, financial liberalization, fiscal freedom, and monetary freedom are not statistically significant in the short run ($p > 0.05$), suggesting that policy changes related to liberalization, fiscal structure, or monetary conditions do not produce immediate effects on financial market performance. This lagged response may result from institutional rigidities or the gradual diffusion of policy reforms into market expectations. These variables appear to influence market behavior more prominently in the long run, as evidenced in previous estimations (Bekaert & Harvey, 2000; Audi & Yu, 2024). The error correction term is negative and highly significant (coefficient = –0.8014, p = 0.0000), confirming the presence of a stable long-run relationship among the variables. The magnitude of this coefficient indicates that approximately 80.1% of short-run deviations from long-run equilibrium are corrected within a single period. This relatively fast rate of adjustment reflects a robust mean-reverting process, suggesting that financial markets in the sampled countries are responsive and relatively efficient

in correcting disequilibria caused by temporary shocks (Engle & Granger, 1987). These findings further validate the convergence hypothesis in explaining financial market performance across countries.

Table 5: Short Run Outcomes

Dependent Variable: FMP

MP	-0.750208	0.847115	-0.885603	0.3762
FP	0.299015	0.417238	0.716652	0.4739
FL	-0.095688	0.426593	-0.224308	0.8226
ECO	0.964353	0.431477	2.235003	0.0258
POL	3.405632	1.536362	2.216686	0.0271
C	78.34536	8.965915	8.738133	0.0000
ECT	-0.801366	0.065742	-12.18962	0.0000

Conclusions

Based on the estimated results and discussion, several main conclusions can be drawn from this study. First, the findings indicate that monetary freedom has a negative and statistically insignificant effect on financial market performance. The absence of statistical significance suggests that variations in monetary flexibility within the observed range do not substantially affect financial market outcomes. Second, there is a negative and statistically significant relationship between fiscal freedom and financial market performance. This implies that a decline in fiscal freedom corresponds with a reduction in financial market performance. Greater fiscal freedom typically reflects reduced governmental constraints on economic activity, particularly in the financial sector. Consequently, limited government involvement and regulation may be linked to enhanced market efficiency and improved financial performance. Conversely, reduced fiscal freedom may result in greater state intervention in financial markets, potentially introducing inefficiencies, diminishing investor confidence, and weakening overall market outcomes. Third, financial liberalization is found to have a positive and statistically significant effect on financial market performance. This suggests that increased openness and fewer restrictions in the financial sector can enhance market efficiency and overall performance. Financial liberalization often leads to better price discovery, increased transparency, and higher market liquidity. Additionally, it can attract international investment and capital inflows, further supporting financial market advancement. Fourth, economic growth is shown to have a positive and statistically significant impact on financial market performance. Economic expansion can elevate investor confidence, broaden investment opportunities, and improve returns, thereby strengthening financial market outcomes. Lastly, political instability has a negative and statistically significant effect on financial market performance. Political

unrest may generate uncertainty, disrupt economic policy, and deter foreign investment, all of which can undermine financial market stability and performance. These results support the validity of the convergence hypothesis.

Policy Implications

Based on the conclusions drawn from the estimated results, several policy suggestions are offered for developing countries to enhance financial market performance. Given the negative and statistically insignificant impact of monetary freedom on financial market performance, policymakers should strive to maintain a balance between regulatory intervention and market autonomy. Ensuring the stability and efficiency of financial markets must remain a central objective. This balance should be tailored to the specific economic context and time period, as the significance of this relationship may vary. In light of the negative and statistically significant relationship between fiscal freedom and financial market performance, governments should pursue policies that encourage greater fiscal freedom. This involves reducing unnecessary restrictions on economic activities, particularly within the financial sector. Limiting excessive government intervention can improve market efficiency and bolster investor confidence. Considering the positive and statistically significant effect of financial liberalization on financial market performance, countries should implement policies that promote openness and minimize constraints within the financial sector. Such measures can improve market efficiency, transparency, and liquidity. Furthermore, liberalization can attract international investment and capital inflows, enhancing financial market development. To leverage the positive and statistically significant relationship between economic growth and financial market performance, governments should prioritize policies that stimulate economic growth. These include initiatives to support investment, innovation, and productivity. Removing barriers to entrepreneurship and investing in infrastructure can significantly contribute to sustained economic growth, thereby strengthening financial markets. In response to the negative and statistically significant impact of political instability on financial market performance, policymakers must focus on fostering political stability. Reducing political unrest and uncertainty through effective governance and consistent economic policy is essential. Such efforts can help establish a stable environment conducive to financial market growth. Given the findings that financial liberalization and economic growth positively influence financial market performance and support the convergence hypothesis, countries should pursue integrated policies aligned with these factors. Creating an attractive investment environment through liberalization, sustained growth, and political stability can significantly enhance the appeal of financial markets to foreign investors.

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