FINANCIAL TECHNOLOGY DEVELOPMENT AND GLOBAL FINANCIAL MARKETS

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Abstract

The global financial markets encounter numerous challenges, such as liquidity issues, unsustainable loan practices, a lack of transparency in transactions, tax evasion, and the looming threat of collapse due to interconnectedness and instability in emerging economies. The integration of financial technology (Fintech) has now become indispensable in enhancing the efficiency of these markets, expanding their reach, and facilitating their digital transformation. This research explored the impact of Fintech on the global financial markets. Using a survey-based approach, self-structured questionnaires were distributed to senior managers in the financial services sector through the Google+ platform. The study validated only 356 out of the total 366 retrieved questionnaires. The reliability of the questionnaire was assessed using Cronbach's alpha, yielding coefficients ranging from 0.928 to 0.80. Both descriptive and inferential statistics were employed for analysis. The findings indicated a significant positive effect of financial technology on the global financial markets. The study demonstrates the importance for financial service industry management to strategically deploy financial technology for enhanced market operations.

Keywords: *Emergence of Fintech, Financial technology, Global financial markets, Mobile devices, Internet of Things, Role of regulations.*

JEL Classification Codes: G15, L86

INTRODUCTION

The global financial markets are burdened with unethical practices and inconsequentially weak corporate governance practices, particularly among the developing economies of the world (Almulla & Abdullah, 2021; Barbu, Dorian, Florea, Mihai & Barbu, 2021). Lavrinenko, Edmunds, Svethana, Alina and Krzysztof. (2023) opined that the global financial markets are, in most cases, dominated by the superpowers, who control the flow of market forces and the dynamics of portfolio diversification and asset-efficient pricing. In developing economies, the market is characterized by a lack of transparency, insider trading activities, and high information asymmetries, creating highly imperfect market hypotheses (Van & Quang, 2021; Al-Kandari, Al-Roumi & Al-Roomy, 2020). The global financial markets are the result of high information technology and digital transformation that detect the flow of financial liquidity. The role of

information technology in powering the global financial markets as the world and corporate transactions strive on the wheel of information technology, especially in the financial industry (Akintoye et al., 2019; Odunayo, Akintoye, Aguguom, Sanyaolu, Omobowale & Osunusi, 2023)

The Basel Committee's suggestions on capital adequacy criteria are another prominent issue in the evolving microeconomics and regulation of global finance. This is a tough subject that will need careful consideration. Several difficulties must be addressed. First, the heavy reliance on rating agencies in determining capital requirements raises a number of concerns, most notably about significant business and geographic areas that are not currently covered by ratings, but more fundamentally about the reliability of ratings and implied responsibilities for them. Second, despite deviation from a uniform 8% requirement, parts of arbitrariness persist, such as the rigorous tiring of a bank or company below the sovereign of its domicile (Abbas & Rozina, 2021; Baker, Thair, Kaddumi & Riham, 2023; Akintoye, Adegbie & Adeniyi, 2020). Vineet, Sajid, Raj & Anjali. (2023) opined that the new regulations are likely to boost the cost of capital in many emerging-market nations, and the advantages of this result in terms of decreased financial system risk must be balanced against the potential costs of slower economic growth. Finance is becoming more globalized as the free flow of capital benefits activities and enterprises all over the world.

The main problem of the global financial markets was their limitations on portfolio capital outflows, which provided a visible barrier to the viability of financial integration. An in-depth examination of the global financial markets's experience would reveal that developing economies are, at best, the exception that proves the norm. Nigeria and some of the African countries' removal of quantitative limitations in less than six months, as well as the more recent phasedown to a mild tax, have prevented the long-term damage that may have happened (Abu-Afifa, Abdallah, Malik & Alsufy, 2022, Asongu & Ozegbe, 2020). The concern of many stakeholders in the developing economies is the lack of adequate infrastructure to drive financial technology due to inherent complexities and consistent adjustment processes within the financial system since it has become the trajectory wheel that drives the global financial markets, where the developing economies also play significant roles like their counterparts in the developed economies with highly sophisticated and high-technology facilities. These obstacles have left financial institutions in developing economies vulnerable to market risks and highly non-performing loans as the level of transparency and honest dealings is embedded with unethical practices and information asymmetric challenges (Dubey & Sharma, 2022; Kulu, Opoku, Gbolongo & Kodwo, 2022).

However, financial technology transactions have deepened banking penetration and corporate banking investments as banking transactions now rely on the application and implementation of information technology (Song & Appiah-Otoo., 2022). Nemoto, Storey and Huang (2019) posited that there is a close connection between financial technology and the global financial markets, as market participants greatly depend on the significance of financial technology in broadening investors' participation all over the world despite their locations. Evidently, studies have documented the relevance and importance of financial technology in banking activities. Ratna, Ulric, Amina, Purva, Sumiko, Majid and Kim (2020) stated that financial technology acts as a catalyst for the effective function of macroeconomic indexes, as the advent of financial technology brought new upsurges in the global financial markets as the introduction has become crucial

properties in financial growth, terming the vulnerability of the financial institution in constant check and ensuring prudency in the market.

Naeem and Ozuem (2021) contended that financial technology has always been seen as a subset of financial services and, by extension, information technology. However, financial technology has evolved into a new paradigm of digital transformation owing to the speed of business transactions requiring similar speed financial payments, where new technologies and innovations in the global market are driven by information technology (financial technology) (Ding, Gu & Peng., 2022; Abbas & Rozina, 2021). The availability of financial technology components like digital money, mobile payments, e-wallets, point-of-

sale devices, crowd funding facilities, online transfers, and e-insurance platforms are some of the significant properties of financial technology in the new era of new technological innovations. Over the decade, financial technology and digitalization of the global financial markets have received substantial attention in the areas of financial payments, banking services and money transfers, management, corporate businesses, insurance, and communications (Jihen, 2023; Grbic, 2020).

Almulla and Abdullah (2021) noted that, in whatever form, financial technology plays a major role in contributing to the global financial markets. Without the financial technology of existing banking services, corporate business transactions cannot strive as loudly as corporate business and communication have witnessed over the years. Consistent with the instance, Hoque (2023) argued that financial technology (firms called fintech) plays significant roles in driving the global financial markets and communication industries with great innovations and in enabling diversifications in financial service delivery. In the same way, Ming-Pey (2022) submitted that financial technology also provides solutions for insurance distribution, and sustainable financing through crowd-funding and mobile money transactions (Lu, 2022; Vineet, Sajid, Raj & Anjali, 2023).

While it seems vast studies of financial technology exist, the nexus between financial technology and the global financial markets is considerably scanty on the global scene but evidently lacking in the Nigerian domain and beyond, researching empirical attempts to address the problem of the global financial markets. This current study provides a novelty to the literature, considering financial technology and the global financial markets, in an effort to bridge the gap in the literature. In addressing the problem of the global financial markets in this respect, this study examined the effect of financial technology on the global financial markets. The study, therefore, put forward the following research objective, research question, and hypothesis:

2.0 Review of Literature and Theoretical Framework

Emergence and Financial Technology (Financial Technology Development): Fintech innovation has a long history dating back to the 1860s. It is simpler to comprehend where these fascinating and disruptive technologies are headed if you understand the origins and history of fintech. In the 1860s, Giovanni Caselli invented the pan-telegraph, which is generally regarded as the beginning of the history of financial innovation.

From 1865 to 1966**:** This is a period of financial globalization, as all started with technologies like the telegraph, trains, and steamships, which allowed for the first instantaneous transfer of financial information across borders. Major events on this timeline include the first transatlantic cable (1866) and Fedwire in the United States (1918), the first electronic fund transfer system that relied on now-outdated technologies such as the telegraph and Morse code. To reduce the burden of carrying cash, credit cards were developed in the 1950s. Diner's Club was the first to provide one in 1950, and American Express followed with its own credit card in 1958.

From 1967 until 2008, traditional financial institutions led the move from analog to digital. The first pocket calculator and the first ATM installed by Barclays Bank in 1967 marked the beginning of the present era of fintech. In the early 1970s, there were advancements such as the world's first digitized stock exchange, which marked the beginning of how financial markets function today (Barbu, Dorian, Florea, Mihai & Barbu, 2021). SWIFT (Society for Worldwide Interbank Financial Telecommunications) was established in 1973 and is still the first and most commonly used communication system between

financial institutions, enabling huge amounts of cross-border payments. The introduction of bank mainframe computers in the 1980s introduced the world to Internet banking.

2008–2014: The Global Financial Crisis, which swiftly became a global economic disaster, became more widely recognized, and the general public grew suspicious of the previous financial system. This, along with the fact that many financial specialists were out of work, resulted in a paradigm shift and paved the way for a new industry Fintech 3.0. This global financial crisis era was characterized by the emergence of new players, particularly fintech businesses, alongside incumbents (such as banks). Smartphones are also the primary means by which people access the Internet and use different financial services. Google Wallet debuted in 2011, and Apple Pay debuted in 2014 (Jihen, 2023).

2014–2017: This is the globalization period, with new technology and financial innovations flooding the markets on a daily basis. Ming-Pey (2022) stated that Fintech 3.5 implies a departure from the Western-dominated financial system and takes into account the worldwide expansion of digital banking as a result of improvements in fintech technology. It focuses on consumer behavior and internet access in underdeveloped nations. For example, economies like China and India that never had the opportunity to build Western-style physical banking infrastructure were more receptive to new alternatives.

2018-Date: This is the era of descriptive technologies and full digitalization of systems. Neobanks are the game changers in this space, challenging traditional banks' price and complexity while winning consumers' confidence with simpler, digital-only experiences and low-to-no costs. Machine learning, for its part, is changing the way individuals engage with banks and insurance businesses, allowing them to receive personalized offers and support. N26, for example, revamped its premium account in 2019 to cater to its customers' special demands and likes, such as discounts at coworking spaces and online travel booking sites (Lu, 2022; Hoque, 2023).

Global financial markets. The landscape of contemporary business sectors is undergoing a profound transformation due to the digital revolution. Established market frameworks are crumbling, sector demarcations are shifting, and fresh contenders are entering the fray. Virtual markets are on the rise, accompanied by innovative business tactics, revenue channels, and cost models. Consequently, the once-defined boundaries between sectors are slowly dissolving, giving rise to new cross-sector competitive dynamics. This poses challenges for macroeconomic analysis, as noted by Grbic (2020).

Money Technology: Money as we know it is approaching the end of its useful life. People are ready to announce new technology's demise and reject it as inescapable. Every technology is ultimately surpassed by a more advanced, superior one. Now it's happening with money, which is an outmoded technology in which we print pictures on bits of paper and assign them a value because the government says so. However, the currency has traditionally had an expiration date owing to changes in diplomatic agreements or technical advancements. We've progressed from seashells to cowries, gold coins to coins, and paper to digital (Dubey & Sharma, 2022; Naeem & Ozuem, 2021). The move to a cashless world is well underway, but is there more to this shift? Money has the ability to both construct and demolish civilizations. Whether they acknowledge it or not, it is definitely crucial in everyone's life nowadays. The introduction of money might be viewed as the final stage in getting the world to where it is currently. The power of finance can be found everywhere, from the technologies we use to the battles we fight. Blockchain technology and the ubiquitous use of smartphones have paved the way (Varma, Shivinder, Kiran, Simon & Ramona, 2022). This is an extreme plan that many people would oppose. As humanity prepares for the digital economy, the values of Bitcoin, Ethereum, and other cryptocurrencies have surged

in recent years, and large organizations are now investing in cryptocurrencies to prepare for the future. The door to this technology has already been opened (Song & Appiah-Otoo, 2022; Nemoto, Storey & Huang, 2019).

Market Quality: Market quality is defined as a market's capacity to satisfy its twin liquidity and price discovery aims (Vineet, Sajid, Raj & Anjali, 2023). Markets with lower transaction costs are often seen as having higher quality, as are markets with higher pricing. While market quality is still a passionately argued and frequently discussed issue, obtaining a consensus definition among market players is challenging. It may be defined broadly as something that provides a fair bargain to end consumers. Market quality in developed markets' equities has come under increasing scrutiny in recent years.

Market Efficiency: Market efficiency is concerned with the degree to which market prices reflect all accessible, appropriate, and relevant information needed from the market. According to Zu, Gu, Li and Bonsu (2019), in a typical market, it is believed that a market is efficient when there is sufficient and efficient information in relation to the prices. In such a situation, there would be no undervaluation or overvaluation of the available securities when all the participants had the same level of information that is available in the market. A financial market is considered an efficient market if it contains certain characteristics of being perfect, costless, complete, and allowing instant transmission of information (Srinivasan & Rajarajeswari, 2021). In global financial markets, the market could be seen to be efficient when the assets being traded and their prices are

fully reflecting all the available information to the market participants. However, it is not easy to make money by trading assets in an efficient market since it is the information asymmetry and hidden knowledge of the market that make the market profitable.

Digital Currency and Liquidity: One of the most crucial aspects of any investment is the option to purchase or sell the asset as and when the investor desires. The liquidity of the asset will primarily influence whether or not a wise investor will take a stake in the investment, and this applies to Bitcoin and other cryptocurrencies (Ratna, Ulric, Amina, Purva, Surva, Sumiko, Majid & Kim, 2020). In cryptocurrency, liquidity refers to how easily a digital currency or token may be changed to another digital asset or cash without affecting the price, and vice versa. Because liquidity is a measure of an assets outside demand and supply, a deep market with plenty of liquidity indicates a healthy market. Furthermore, the more liquidity a crypto-currency or digital asset has, the better.

Financial Technology: Financial technology (fintech) is the new technology that is concerned with improving and automating the speed of delivery and use of financial services (Talom & Tengeh, 2020). Companies now use financial technology to assist business operations and provide better customer service in managing corporate financial operations, processes, and product delivery, thereby redefining quality customer service. It is made of specialized software and algorithms that are explored on computers and other smartphones. The word "financial technology" is a combination of finance and technology, meaning, in other words, finance working with technology. The global financial markets become dynamic and universal with the help of information technology. People of diverse backgrounds will interact with each other under the same umbrella of information and technology, impacting the efficient working of the global financial markets. Yang, Li, Ma and Chen (2018) reported that financial technology is closely related to the global financial markets.

Mobile Device: A mobile device is another form of financial technology working towards the same purpose. Yunxin (2021) opined that mobile devices, otherwise referred to as handheld computers, are a form of computer that is small in nature and operates in the hand. A mobile device ordinarily has a flat

LCD or OLED screen, a touchscreen interface, and digital or physical buttons. The mobile devices are connected to the Internet and linked to any available WiFi, Bluetooth, cellular networks, or near-field communications, integrated with cameras, and have the ability to pass and receive voice and video telephone calls. Importantly, financial technology functionalities are carried out using mobile devices in making fund transfers, mobile payments, and receiving or making online payments (Algaeed, 2021). Ahmed and Wamugo (2018) noted that mobile devices had a significant effect on the effectiveness of the effectiveness of financial markets in enhancing business fund transfers.

The Internet **of Things**: The Internet of Things as one of the new innovations has been considered by studies from different perspectives. Agbloyor, Abor, Adjasi and Yawson (2013) defined the Internet of Things as the use of intelligently connected devices and systems to leverage data gathered by embedded sensors and actuators in machines and other physical objects. It is expected

that the Internet of Things will spread over the coming years and unleash new dimensions of services that will improve the quality of life of financial reporting and the productivity of financial services users, unlocking great opportunities. Meanwhile, Asongu, Agyemang-Mintah and Nting (2021) defined the Internet of Things as an advanced automation and analytics system that exploits networking, sensing, big data, and artificial intelligence technology to deliver complete systems for a product or service. A very useful tool in information technology and financial technology, some of the important features of the Internet of Things (IoT) include intelligence, connectivity, sensors, active engagements, and small device use in the mobilization of financial transactions in the financial markets (Al-Kandari, Al-Roumi & Al-Roomy, 2020).

Role of Regulation: In Nigeria, there is no one piece of legislation that governs fintech. However, there are a number of current rules and laws that relate to the fintech industry. Abbas and Rozina (2021) posited that the primary authority is in charge of ensuring Nigeria's financial stability and integrity. To that end, it publishes recommendations and rules for financial service oversight. These rules aim to provide an efficient financial system for transaction settlement as well as growth from a global perspective in developed and emerging economies.

2.2 Theoretical Review

The theoretical underpinning this study was considered from three theories of information technology theory, grounded theory and diffusion innovation theory based on the believed relevance of these theories to the study**.**

Information Technology Theory: The information technology theory suggested that the goals of information technology were to digitalize financial services (Alfaro et al., 2004). Ali et al. (2019) posited that information technology provides the non-technical, commercial sides of information technology and the technical, computer-focused parts at the same time. Alfaro et al. (2004) noted that information technology is significant in all spheres as businesses and non-business transactions rely on financial information for decision-making. Developers may also be entrusted with developing interactive company websites and mobile apps. The shift towards agile or continuous development paradigms necessitates developers being more active in information technology operations, such as application deployment and monitoring (Ajah, Akintoye, Aguguom & Ajibade, 2024). Information technology in business is ultimately intended to assist businesses in being more efficient and productive. It serves a variety of functions, including but not limited to time = money when it comes to assisting organizations in becoming more productive, improving corporate performance, data security and troubleshooting, saving the company money, improving customer satisfaction, communication, and experience, and

communication system simplification, as well as improving management decision-making (Onay & Ozsoz, 2013).

Grounded Theory: Grounded theory is a systematic approach that has been widely used in qualitative social science research. The process entails the development of hypotheses and theories through data collection and analysis (Saba, Kouser & Chaudhry, 2019). Inductive reasoning is used to develop grounded theory. The technique differs from the usual hypothetic-deductive

paradigm employed in scientific inquiry. A grounded theory research project is likely to begin with a question, or maybe merely the collection of qualitative data. Researchers become aware of ideas or concepts when they evaluate the data obtained. These concepts and ideas are said to "emerge" from the data. Samad (2015) opined that grounded theory is a research approach that is used to think about and conceptualize data. It is utilized in research on a wide range of demographics, including remarriage after divorce (Saba, Kouser and Chaudhry, 2019) and professional socialization. Two sociologists, Barney Glaser and Anselm Strauss, invented grounded theory methodologies. Yang, Cheng and Luo (2009) noted that Glaser and Strauss devised the constant comparative approach, which eventually became known as the grounded theory method, while working together on research on dying hospital patients. They provided a summary of their findings in the book Awareness of Dying, which was released in 1965.

Diffusion of Innovation Theory: Diffusion Innovative Theory was proposed by Evertt Rogers in 1965 (Simpson, 2002). The diffusion innovative theory is concerned with the explanation of why and what constitutes and instigates new ideas and technology spreading. According to the theory, which was popularized by Everett Rogers in his famous book “Diffusion of Innovation, published in 1962, Saker et al. (2015) reported that Rogers, in his proposition, posited that diffusion is the procedure through which new innovations are communicated to others over time among stakeholders and participants in a social community or social system. Yang (2018) posited that the diffusion innovative theory at the time was concerned with five factors that influenced and enabled new ideas and innovation to be spread; these included the innovation itself, adopters, effective communication terminals, time, and a strong social system. According to ThankGod, Alhassan and James (2019), innovation must be widely adopted to allow self-sustainability, and from the adoption perspective, new ideas must be adopted and fully communicated to stakeholders who need them and are capable of putting the new ideas to effective use. Nemoto, Storey and Huang. (2019) commented that diffusion innovative theory is synonymous with financial technology in propelling the efficiency of global financial markets. The diffusion innovative theory reflects how new technology and new ideas, as well as new innovations, spread in all respects of human endeavors, society, cultures, and introductions to a widespread audience.

2.3 Empirical Review

Lavrinenko, Edmunds, Svethana, Alina and Krzysztof (2023) studied the effect of financial technology (Fintech) on the global financial markets among European countries. The study employed sourced data using the Financial Development Index (FDI) in selected countries within the European Union where financial technology is practiced. From a regression analysis perspective, the study employed frequency analysis and correlation analysis approaches. The result of the analysis revealed a positive linear association between the explanatory variables of financial technology and the global financial technology index. In addition, the study showed that the global financial technology market index had a significant effect on financial institutions’ access index. In addition, Ding et al. (2022) studied the effect of the emergence of financial technology on business innovations. The study employed documented data in relation to financial technology using a city-level fintech index that comprises 331 cities and is based on

data from Ant Finance Service Group. The regression analysis carried out revealed that companies implementing fewer financial resources display a disproportionally greater degree of innovation in cities with more developed financial technology services. In addition, the study found that financial technology development encourages company lending and supports research and development investment because Internet credit increases bank loan competition. More so, the study added that the implications and consequences of financial technology development on the actual economy are essentially high.

Van and Quang (2021) studied internal corporate governance and financial technology and their effect on stock market price risk in Vietnam. The purpose of this study is to look into the role of internal corporate governance and external audits in averting future stock market crashes. Using data from the Hanoi and Ho Chi Minh City stock exchanges in Vietnam from 2010 to 2019, we discovered that internal corporate governance is highly associated with future stock price collapse risk. We discover that strong boards are positively related to the danger of a future stock price drop. However, there is a negative association between audit committee effectiveness and crash risk. These findings suggest that proper internal company governance can reduce the danger of a stock price drop. Furthermore, this study shows that external audit quality improves the audit committee's efficacy in avoiding crash risk.

Yunxin (2021) studied financial technology from an international capital flow perspective and its effect on the Chinese financial markets. The study employed secondary data, using time series data sourced from the Chinese database for the study. The regression analysis using pooled panel data revealed that financial technology exerted a significant effect on the financial markets in China for the period considered. Similarly, Abbas and Rozina (2021) examined the effect of financial technology on global financial markets from a banking sector perspective. The study used an expo facto research design, using secondary data sourced from the selected banks listed and operating in Saudi Arabia. Descriptive statistics and multiple regression analysis were carried out for the study, and the results of the analysis showed that financial technology had a positive and significant effect on the global financial markets among the banks selected and tested in Saudi Arabia.

Almulla and Abdullah (2021) studied the impact of financial technology on the global financial markets, considering the banking system. The banks selected for the study formed the source of the data used for the study. The financial performances of the banks for the period used were extracted from the banks's annual financial statements. The results demonstrated that financial technology has a positive and significant effect on the financial performance of banks and, by extension, the global financial markets as represented in the study. Ansari et al. (2020) studied the influence of financial technology and other descriptive technologies on the performance of global financial markets from the perspective of developing economies. The study employed an *expo facto* research design, using secondary data sourced from the companies selected for the study. The study employed random-effect generalized least squares regression analysis, and the results of the analysis demonstrated that financial technology significantly affected the financial markets of the financial institutions investigated in the study.

Al-Kandari et al. (2020) considered the effects of financial technology and the global financial markets. The study aimed to consider the implications of the dynamics of stock market development on the economic growth of Kuwait's economy. The study employed secondary data

collected from the Kuwaiti database, and the pooled regression analysis using ordinary least squares revealed that financial technology had a great impact on Kuwaiti stock market practices. In addition, the study showed that Kuwait's stock market performance impacted the economic growth of the country. Similarly, Ali et al. (2019) studied the effect of financial technology on the performance of Islamic banking and the financial

industry in Brunei Darussalam and Malaysian capital markets. The study explored an expo facto research approach, using secondary data sourced from Brunei Darussalam and Malaysia, respectively. The regression was estimated using the data from the countries' financial performance of the selected Islamic banks, revealing that financial technology greatly impacted Islamic banking performance. Whereas Mohammad et al. (2019) investigated the implications and effects of financial technology on financial market development as it affects competitiveness and market development. Secondary data was employed for the period covered in the study. Financial data for the period were obtained from the annual financial reports of the selected financial institutions. The result of the analysis demonstrated that financial technology had a significant effect on the development of the development of financial markets.

3.0 Methodology

Design: The study proposes a field survey research design, using primary data from structured questionnaires. The study proposes to consider the selected financial service industry in Nigeria, the developed and other emerging economies perspective, as the target sector. Self-structured would be administered through online platforms (for example, survey money, Google Forms, and face-to-face administration).

Population and Sample Size: Senior managers and above from financial service companies formed the population of 3,250 respondents from all parts of Nigeria and other countries via an online platform, having experience and knowledge of financial technology and access to the Internet among the strata and spectrum of service companies with a clear understanding of the financial technology (Fintech) application. A total of 356 questionnaires were validated for the study from a total of 366 questionnaires retrieved from the respondents.

Sample Size Technique: The study employed Yaro Yamane to estimate and determine the appropriate sample size for the study.
Using Yaro Yamane formula:
$N=N/1+n(\varrho)^2$
Where
N = sample size
N = Population
ϱ = Level of significance
n = 3,250/1+3,250(0.05)2
= 3,250/1+8.125
= 356

Reliability of the Instrument: The instrument's pre-test reliability and validity were carried out using Cronbach's alpha, which were considered appropriate tests. For the descriptive statistics, the study employed Hausman, Heteroskedasticity, and Normality tests. Acceptance or rejection of the specified model or hypotheses was based on a 5% significance level. The results of the re-test confirmed the validity and reliability of the instrument used.

Model Specification

$Y_i = \alpha_0 + \beta_i + \mu_i$ …… (1)

Functional Relationship

GFMKT = *f*(EMFT, MBDV, IoT, DIGTR, RORE ……..……..(2)

Model

$GFMKT_i = \alpha_0 + \beta_1 EMFT_i + \beta_2 MBDV_i + \beta_3 IoT_i + \beta_4 RORE_i + \mu_i$ ---------- (3)

Where

GEMFT = Global financial markets, EMFT = Emergence of Fintech, MBDV = Mobile devices, RORE = Role of regulations, and IoT = Internet of Things, i=cross-sectional, β = Coefficients of the model, μ = Error terms.

Reliability and Validity Tests

The study presents the reliability and validity tests in Table 1:

Table 1: Reliability and Validity of Instruments

Variables	**Number of Items**	**Results: Cronbach Alpha**
Money Technology	5	0.798
Market Quality	5	0.812
Market Efficiency	5	0.911
Digital Currency Technology and Liquidity	5	0.923
The Emergency of Fintech	5	0.895
Mobile Devices	5	0.928
Internet of Things	5	0.824
Role of Regulations	5	0.851

Source: Output Result (2024)

The result from the reliability test result in Table 1 showed that Cronbach Alpha coefficients take values between the range of the least and the highest of 0.798 and 0.928. Furthermore, the result revealed that the Cronbach Alpha coefficients had the highest with 0.928 for mobile devices and the least for money technology with a coefficient of 0.798. Specifically, the coefficients of the Cronbach Alpha were 0.798, 0.812, 0.911, 0.923, 0.895, 0.928, 0.824, and 0.851, representing the constructs of money technology, market quality, market efficiency, digital currency technology and liquidity, the emergency of fintech, mobile devices, the internet of things, and the role of regulations, respectively. Consequent to this, the results of the scale that was developed for the study were seen to be reliable and suitably good to produce consistent results.

A priori expectations

The study expects that Financial Technology Development and its surrogates of Fundamental Qualitative (i) Emergence of Fintech (ii) Mobile Devices, (iii) Internet of Things, (iv) Digitalization of Transactions, and (v) Role of Regulations have a significant effect on global financial markets. Hence, $\beta 1\text{-}\beta 5 < 0$.

Demographic

Table 1: Demographic Characteristics

Table 1

Work Experience

Work Experience	Frequency	Per cent
< 2 years	0	0.0
2 – 5 years	30	8.4
6 – 9 years	102	28.7
Above 10 years	224	62.9
Total	**356**	**100.0**

Education

	Frequency	Per cent
Diploma/ND/NCE	25	7.0
HND/BSc	65	18.3
M.Sc./M.Phil.	106	29.8
PhD	8	2.2
Others	152	42.7
Total	**356**	**100.0**

Professional Qualifications	Frequency	Per cent
ACA/ACCA/FCCA/ACMA/FCMA/ANAN	215	60.4
Others	141	39.6
Total	**356**	**100.0**

Source: *Field survey, 2024*

Where: ND = National diploma, NCE = National certificate of education, HND = Higher national diploma, PhD = Doctor of Philosophy, M.Phil. = Master of philosophy, ACA/FCA = Associate/Fellow of Institute of Chartered Accountants of Nigeria and others in different countries who are holders of ACCA=Association of Chattered Certified Accountants, ACMA/FCMA = Associate and Fellow of

Associate of Certified Management Accountants, ANAN = Association of National Accounts of Nigeria.

In Table 2, the study presented the demographics of the respondents. The estimates showed that the majority of the respondents were between the ages of 10 and above with 224 (62.9%), while the least was between the ages of 2-5 (8.4%). The education qualification, respondents that did not specify their qualification has 152 (42.7%, while MSC/Mphil had 106 (29.8%). But the least were respondents with PhD 8 (2.2%). From the professional perspective, respondents with ACA/ACCA/FCCA/ACMA/FCMA/ANAN were greater in number showing 215 in number representing 60.4% while the rest were 141 (39.6%).

4.0 Data Analysis, Results and Discussions

Descriptive Statistics

Briefly, participants' responses to the effect of Financial Technology Development on global financial markets questions are represented herein.

Table 2: Global Financial markets

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Total	% of Total Agree	Mean (Std.)	Rank
Money technology is closely related to the global financial markets	1 [0.3]	25 [7.0]	44 [12.4]	80 [22.5]	206 [57.3]	356 [100]	286 [80.34]	4.31 (0.96)	3
Market quality has improved through the deployment of financial technologies	0 [0.0]	8 [2.2]	36 [10.1]	93 [26.1]	219 [61.5]	356 [100]	312 [87.64]	4.47 (0.77)	1
Fintech enhances market efficiency within the global market	0 [0.0]	23 [6.5]	45 [12.6]	93 [26.1]	195 [54.8]	356 [100]	288 [80.90]	4.29 (0.92)	4
Access to digital currency technologies has deepened global financial markets effectiveness	0 [0.0]	6 [1.7]	71 [19.9]	77 [21.6]	202 [56.7]	356 [100]	279 [78.37]	4.33 (0.85)	2
The use of digital currencies has improved liquidity in easing growth in the global financial markets	2 [0.6]	18 [5.1]	69 [19.4]	62 [17.4]	205 [57.6]	356 [100]	267 [75.00]	4.26 (0.98)	5

Source: *Field survey, 2024*

In Table 2, the result shows that the majority of the participants are in support of the statement, "Market quality has improved through the deployment of financial technologies" is in support of {Average Score = 4.47; SD = 0.77} with 87.64% percentage of total Agree; closed to this is the statement that says "Access to digital currency technologies has deepened global financial markets effectiveness{Average Score = 4.33; SD = 0.85} with 78.37% percentage of total Agree and the standard deviations showing responses that vary slightly. The percentage of total Agree of "Money technology is closely related to the global financial markets" {Average Score = 4.31; SD = 0.96} and "Fintech enhances market efficiency within the global market" {Average Score = 4.29; SD = 0.92} statements are 80.34% and 80.90% respectively. The least supported statement appears to be "The use of digital currencies has improved liquidity in easing growth in the global financial markets" {Average Score = 4.26; SD = 0.98} with the percentage of total Agree equals 75.00%.

Table 3: Emergence of Fintech

	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**	**Total**	**% of the Total Agree**	**Mean (Std.)**	**Rank**
The emergency of fintech has improved the global financial markets	0 [0.0]	6 [1.7]	16 [4.5]	169 [47.5]	165 [46.5]	356 [100]	334 [93.82]	4.38 (0.65)	5
The availability of mobile devices has affected global financial markets	3 [0.8]	21 [5.9]	8 [2.2]	62 [17.4]	262 [73.6]	356 [100]	324 [91.01]	4.57 (0.86)	2
The Internet of Things has broadened the effectiveness of the global financial markets	4 [1.1]	21 [5.9]	16 [4.5]	40 [11.2]	275 [77.2]	356 [100]	315 [88.48]	4.58 (0.91)	1

Digitalization of transactions has influenced the global financial markets	1 [0.3]	27 [7.6]	25 [7.0]	37 [10.4]	266 [74.7]	356 [100]	303 [85.11]	4.52 (0.94)	3
The role of regulations has an effect the on global financial markets	3 [0.8]	31 [8.7]	16 [4.5]	71 [19.9]	235 [66.0]	356 [100]	306 [85.96]	4.42 (0.98)	4

Source: *Field survey, 2024*

In above Table 3, "The emergency of fintech has improved the global financial markets" appears to be the least supported statement by the participants, {Average Score = 4.38; SD = 0.65} with 93.82% percentage of total Agree. Close to this in responses is the statement that says "The role of regulations has an effect the on global financial markets" {Average Score = 4.42; SD = 0.98} with 85.96% percentage of total Agree. The most supported statement is observed to be "The Internet of Things has broadened the effectiveness of the global financial markets" {Average Score = 4.58; SD = 0.91} with 88.48% of the percentage of total Agree. The other statement "The availability of mobile devices has affected global financial markets" {Average Score = 4.57; SD = 0.86} and "Digitalization of transactions has influenced the global financial markets" {Average Score = 4.52; SD = 0.94} have their percentages of total agree equal 91.01% and 85.11% respectively.

In Table 4, Model Summary and ANOVA are presented; the predictors are the emergence of Fintech (EMFT), mobile devices (MBDV) and Internet of Things (IoT) and the dependent variable considered is Global Financial markets (GFMKT).

Table 4: Model Summary and ANOVA

Model Summary			
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
0.269	0.072	0.064	0.37848

ANOVA					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Regression	3.921	3	1.307	9.123	0.000
Residual	50.422	352	0.143		
Total	54.342	355			

Source: *Author's Computation, 2024; underlying data from Field Survey.* ***Note:*** *Predictors are (Constant), EMFT = Emergence of Fintech, MBDV = Mobile devices, RORE = Role of regulations, and IoT = Internet of Things. The dependent variable is GFMKT = Global financial markets.*

In above Table 4, the F-statistics value is 9.123; Sig. = 0.000. These imply that the joint effect of Financial Technology Development proxies {Emergence of Fintech EMFT, Mobile devices MBDV, Role of regulations (RORE), and Internet of Things (IOT) significantly explains variations in the Global financial markets GFMKT. The adjusted $R^{-square}$ 0.064, which means that 6.0 is the percentage of the variation in the Global financial markets GFMKT mutually explain by the Financial Technology Development s proxies {Emergence of Fintech EMFT, Mobile devices MBDV and Internet of Things IOT}.

Table 5: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.134**	0.283		11.057	0.000		
EMFT	0.121**	0.033	0.195	3.644	0.000	0.919	1.088
MBDV	0.089**	0.040	0.115	2.218	0.027	0.981	1.019
RORE	-0.080	0.052	-0.081	-1.533	0.126	0.907	1.102
IoT	0.079	0.053	0.080	1.488	0.138	0.907	1.102

Source: *Author's Computation, 2024; underlying data from Field Survey.* ***Note:*** *Predictors are (Constant), EMFT = Emergence of Fintech, MBDV = Mobile devices, RORE = Role of regulations, and IoT = Internet of Things. The dependent variable is GFMKT = Global financial markets.* ***Note: ** represents a 5% significance level.***

Interpretation

The summary of the estimated regression model that investigates the effect of Financial Technology Development s on the Global financial markets is presented below in an empirical form.

$$GFMKT_i = \alpha + \beta_1 EMFT_i + \beta_2 MBDV_i + \beta_3 RORE_i + \varepsilon_i \beta_4 IOT_i + \varepsilon_i GFMKT_i$$
$$= 3.134 + 0.121 EMFT_i + 0.089 MBDV_i - 0.080 REi + 0.079 IoT_i +$$

Based on the model results in Table 5 ($GFMKT_i$ = 3.134 + 0.121$EMFT_i$ + 0.089$MBDV_i$ - 0.080$RORE_i$ + 0.079IoT_i), the result from the study showed that each of the coefficients of emergence of financial technology, mobile devices, and the Internet of Things were positively signed and in tandem with the study expectations (β_1 = 0.121; β_2 = 0.089; β_3 = -0.80 + β_4 = 0.079)

> 0. This inferred that a unit change in the emergence of financial technology, mobile devices, and the Internet of Things will bring about an increase of 0.121, 0.089, and 0.079, respectively, in global financial markets in the global market space.

Also in Table 5, the coefficients of the estimated regression model used to investigate the relationship between Financial Technology Development TADTINV and Global Financial Markets GFMKT reported show that the unstandardized coefficient of the emergence of Fintech EMFT is positive and statistically significant at the 0.01 level of significance {β_1 =0.121; P-value = 0.000}, which implies that the emergence of Fintech EMFT has a great influence on Global Financial Markets GFMKT. Thus, every percentage increase in the emergence of Fintech EMFT leads to a 0.121 percent increase in Global Financial Markets GFMKT. Also, the unstandardized coefficient of mobile device MBDV is positive and statistically significant at the 0.05 level of significance {β_2 = 0.089; P-value = 0.027}, which depicts that mobile device MBDV greatly influences the global financial markets GFMKT. In other words, it means that for every unit increase in mobile devices (MBDV), there is always about a 0.089 unit increase in the global financial markets (GFMKT).

Also, the unstandardized coefficient of the role of regulations RORE is negative and statistically insignificant at the 0.05 level of significance {β_3= -0.080; p-value = 0.126}, which depicts that the role of regulations RORE negatively influences the global financial markets GFMKT. In other words, it means that for every percentage increase in the role of regulation RORE, there is always about a 0.080 percent decrease in the global financial markets GFMKT. Lastly, the unstandardized coefficient of the Internet of Things IOT is also positive but statistically insignificant at the chosen levels of significance {β_4= 0.079; p-value = 0.138}, which connotes that the impact of the Internet of Things IOT on the global financial markets GFMKT is not significant. Judging from the estimated regression coefficients, the effect of the emerging fintech EMFT on the global financial markets (GFMKT) is more significant than the other explanatory variables.

Collinearity Statistics and Variance Inflation Factor (VIF)

Also in Table 5, the Collinearity Statistics columns indicate no harmful effect of multicollinearity in the estimated model, given the VIF values that are less than 3 {VIF < 3} with their corresponding tolerance values (i.e., VIF reciprocals) above 0.10. Based on the estimated value and at a level of significance of 0.05, ***the F-statistic*** is 9.123, while the *P-value of the F-statistic is* 0.000, which is less than 0.05. Therefore, the study rejected the null hypothesis and accepted the alternative, which means that financial technology development had a statistically significant positive effect on the global financial markets.

Discussions: The results of the descriptive statistics showed that the analysis showed a majority of the respondents agreed that "the emergency of fintech has improved the global financial markets" appears to be the least supported statement by the participants". In addition, the regression analysis revealed that the emergency of financial technology and mobile devices exhibited positive significance, but the role of regulation exerted negative and insignificant effects, while the Internet of Things showed insignificant

effects. However, the joint statistics using the entire explanatory variables revealed a significant positive effect. The result of the study was found to be consistent with the results obtained in some prior studies by Lavrinenko et al. (2013), Ding et al. (2022), Van and Quang (2021), Yunxin (2021), Abbas and Rozina (2021), Almulla and Abdullah (2021), Ansari et al. (2020), Al-Kandari et al. (2020), and Mohammad et al. (2019).

Conclusion, Recommendations, and Suggestions for Further Studies

The emergency of financial technology had brought huge and dramatic changes in the speed and accuracy of financial services, especially in the financial and communication industries. The landscape of the global financial markets has evolved from liquidity and risk management to effective dissemination of financial information and accurate and efficient banking services globally. Studies have shown that financial technology has the capacity to smooth the curves of market complexities and multidimensional issues facing financial institutions. Consequently, this study examined the effect of financial technology on the global financial markets. The results of the descriptive statistics and the regression analysis showed some level of similarity. The result conclusively showed that financial technology had a positive and significant effect on the global financial markets. Consequent to the findings, the study recommended that the management of financial institutions should consider financial technology very imperative in mobilizing and transforming financial services from Nigeria and from the global space, who have knowledge of financial technology applications. The study provides novelty research, demonstrating the deepening significance of fintech in resolving the challenges of global financial market leverage from the respondents' perceptions from a global point of view and the findings from the regression results.

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