

An Appraisal of Fintech-Induced Competition in Nigerian Banking Industry

Benjamin Alao

LIGS UNIVERSITY 810 Richards Street, Suite 836 Honolulu HI 96813 USA

Date of Submission: 05-11-2020

Date of Acceptance: 20-11-2020

ABSTRACT: Financial technology (Fintech) companies have introduced significant disruptions into the Nigerian financial market thereby changing the competitive landscape tremendously. The general perception that competition has erupted between banks and Fintech entities seems validated by the amount of technology-driven changes taking place among Nigerian banks in response to Fintech revolution in recent years.

This article poses to identify the factors responsible for the perceived heightened competition between the two groups of industry players. Furthermore, using both quantitative and qualitative research methods, the paper attempted to identify the factors taking the lead in driving competition between the duo and concluded by recommending that industry players develop the capacity to reinforce these important factors in fostering symbiotic collaboration between banks and Fintech companies for an enhanced competitive advantage and more viable banking industry for the future financial services market.

Keywords: Fintech, Financial technology, Financial services disruption, Fintech evolution, Fintech competition, Nigerian banking industry, Nigerian financial services, Fintech disruption.

I. INTRODUCTION

The landscape of financial services industry globally has witnessed unprecedented transformation as a result of emergence of financial technology (aka. Fintech) companies that have penetrated the financial market with lots of innovative business models and nascent products and services. Reports have shown that global Fintech investment has been receiving exponential growth over the years, with the figure according to Consultancy.eu standing at US\$111.8 billion in 2018. A global impact of Fintech on financial institutions is the ability to enforce a general revolution in the financial industry with the adoption of smart technologies and innovations, resulting in the reawakening of banks and other

financial institutions for digital strategic realignment to maintain their competitive edge in the industry.

By extension, Nigeria's Fintech investment has been on the increase over the years. According to a McKinsey report, Fintech investment in Nigeria has been on the surge by 197% in the past three years (Kola-Oyeneyin et al., 2020). There are no doubts that Fintech is receiving significant attention from the financial market, stimulating an amount of competition between the incumbents and the entrants. This is more so as the industry continued to receive substantial foreign direct investment (FDI) through Fintech, and the heightened possibility surrounding the emergence of 'big Fintech' companies including some of the telcos believed to be more capable of competing with the banks in terms of capital and data assets.

The purpose of this paper is to examine the factors that are responsible for disruption in the financial services industry and competition between the banks and Fintech entities. By using both qualitative and quantitative research approach, secondary data from existing related works and primary data from an online survey were analysed to create a conceptual framework for establishing theories and appraise actual perceptions of practitioners in the subject matter.

The literature review and analysis are contained in Section II while the survey, its analysis and discussion of findings are presented in Section IV. The methodology applied in this paper is explained in Section III while the conclusion is presented in Section V.

The paper concluded with a highlight of factors identified as drivers of financial services disruption and influencers of Bank-Fintech competition. Banks were advised to pay attention to these factors by scaling up their digital business strategies to adequately provide for them and meet the dynamic expectations of their customers in the technology-driven financial industry and the emerging digital economy in Nigeria.

II. LITERATURE REVIEW

2.1 The Fintech Evolution

Financial technology (FinTech) is the term used to describe entities in the business of disrupting the financial services industry with the use of technology and innovations to create new models and financial products/services. Fintech describes the intersection between finance and technology (Koffi, 2016; Ojo & Nwaokike, 2018), and in enhancing and disrupting the financial services they combine innovative business models

and technology (Ernst & Young, 2019). Fintech startups use technology to change how consumers store, save, borrow, invest, transfer, pay and secure money as they conduct and deliver functions of financial services providers differently (Ojo & Nwaokike, 2018).

Adoption of Fintech is expanding globally. According to Ernst & Young (2019), 25 percent of small and medium enterprises (SMEs) have adopted Fintech globally citing a range of functionality, high availability and top-range features as the top priority for Fintech adoption.

Total investment activity (VC, PE and M&A) in fintech 2013–2018



Figure 1: Global Fintech investment (2013 - 2018)

Source: consultancy.eu

According to Jun and Yeo (2016), Fintech’s growth has hit threefold over 5 years based on a 2014 report of Accenture, while Romanova (2016) reported that global investment on Fintech reached US\$6.8 billion in 2014 and was booming at 25% rate year-on-year. Figure 1 shows that the total global Fintech investment grew from US\$18.9 billion in 2013 to US\$111.8 billion in 2018 according to Consultancy.eu. These were corroborated by the picture of Fintech investment in Africa, which according to Ojo and Nwaokike (2018) has experienced significant growth from \$198 million in 2014 to about \$800 million in

2016. Particularly in Nigeria, Fintech investment, majority of which came from overseas has exceeded US\$200 million over the last two years (Ojo & Nwaokike, 2018), and this figure has grown by 197 percent in the past three years (Kola-Oyenehin et al., 2020).

Fintech companies are thriving globally owing to certain competitive advantages they enjoy. They can impact on virtually all services traditionally offered by financial institutions and deliver improved and new products at more attractive costs coupled with convenience to consumers while leveraging on digital technology

advancements under a limited regulatory burden (Navaretti et al., 2018). Because of these elements of competitive advantage being enjoyed by Fintech companies and the amount of their impact on banking and other financial services providers, it is generally argued that Fintech is building potential competition with the traditional financial institutions (Navaretti et al., 2018; PWC, 2017; Romanova & Kudinska, 2016; Wonglimpiyarat, 2017). Small banks would be most hit by the Fintech impact as they might not be able to cope with the digital innovation to achieve the required intensity and scale as could be found in large and urban banks, which are more capable to absorb and digest the digital innovations to pave the way for a new model capable of offering many financial services, including Fintech (Navaretti et al., 2018). Therefore, it is essential to examine the factors that could stimulate competition between the banks and Fintech in Nigerian financial industry.

2.2 Agents of Fintech-induced Disruptions in the Banking industry

Due to its social and economic attachments, and its susceptibility to constant innovative changes, the banking sector has always been at the forefront of disruption from history. Ranging from regulatory to technology changes, banks have witnessed a series of disruptions over the last decades (Wonglimpiyarat, 2017). However, in this paper attention will be placed more on technology-related disruptions as relevant to the banking industry.

The Fintech companies are demonstrating better capacities in certain financial services thereby disrupting the status quo, causing the financial institutions to respond accordingly. What determines a disruption is understood to be characterized by the ability of a smaller business to successfully challenge bigger and established incumbent businesses with its fewer resources (Ojo & Nwaokike, 2018). According to these authors, when the incumbents focus on satisfying the requirements of their most profitable and demanding customers exceedingly and left some segments of the market underserved, thereby the entrants find the opportunity to penetrate and serve these segments satisfactorily to the extent that the mainstream consumers begin to patronize the services of the entrants – a disruption has taken place. In line with that viewpoint, disruptive technology is defined as “a technology which displaces an established technology and shakes up the industry or a ground-breaking product that creates an entirely new industry.” (Ojo & Nwaokike, 2018). Fintech companies are deploying

disruptive technologies to revolutionize the banking industry by creating new models, financial products and services to disrupt the market and leverage on the digital inclusion.

Fintech companies are nimble and agile, hence able to respond to customer requests and provide support to them much faster than the traditional banks. Fintech’s agility is a disruptive factor to the traditional banking as many customers prefer to have fast, on-demand feedback to their requests and complaints (Kola-Oyeneyin et al., 2020; Navaretti et al., 2018). Leveraging agility, Fintechs can spur competition in financial markets and provide more efficiently the services that traditional financial institutions are not able to provide or providing poorly (Navaretti et al., 2018).

Moreover, Fintech companies can deliver financial services more efficiently and at lower costs, too (Kola-Oyeneyin et al., 2020; Navaretti et al., 2018; Ojo & Nwaokike, 2018; Romanova & Kudinska, 2016). Through technology commoditization and portability, Fintechs can gain wider scale and achieve fees augmentation to boost income. The low transaction charges offered by Fintechs has constituted a disruptive factor in the banking industry. Technologies deployed around a high level of standardization and data-driven financial products/services development have enabled Fintechs to lower costs and grow their potential target market (Romanova & Kudinska, 2016).

Fintechs are shaking the market with the ability to offer financial services with more convenience than what is available with the traditional banks. Reports have shown that convenience has topped the list of customer preferences in the market (Ernst & Young, 2019; Kola-Oyeneyin et al., 2020; Navaretti et al., 2018; Romanova & Kudinska, 2016). Access and convenience have been adjudged a strong factor by which Fintechs are disrupting the financial market with 57% of respondents, in a survey conducted recently, citing these as the reason for using Fintech (Kola-Oyeneyin et al., 2020). Fintechs have taken technology to the front-end of banking thereby offering products/services, marketing and promotional campaigns as well as customer support to the homes of consumers via internet and mobile banking.

Fintech’s ability to serve the underbanked is another important disruptive factor. The cashless policy and the financial inclusion initiatives of the Central Bank of Nigeria (CBN) would not have recorded appreciable success without the adoption of Fintech within the various segments of the market. People in rural areas are still largely hit by

financial exclusion while about 60 million Nigerians have no bank accounts (Kola-Oyeneyin et al., 2020). As observed by Koffi (2016), Fintechs are creating new infrastructure to pave way for greater financial inclusion of several millions of people that want banking but not necessarily the banks. Through disruptive technologies like mobile money and the Unstructured Supplementary Service Data (USSD), financial services consumers could enjoy basic banking via their mobile phones (Ojo & Nwaokike, 2018).

The Fintech sector has enjoyed unprecedented growth since its emergence in the Nigerian financial industry. Its rapid growth is another source of disruption causing the incumbents to consider a review of their strategies for proper alignment with the market trends (Kola-Oyeneyin et al., 2020). Moreover, an increasing number of people are having stronger preferences for Fintech products and services due to reasons around convenience, more attractive rates, accessibility, better online experience, better quality and more innovative products (Ojo & Nwaokike, 2018; Romanova & Kudinska, 2016). According to Ernst & Young (2019), "68% of consumers are willing to consider a financial services product offered by a non-financial services company." A situation whereby bank customers are shifting to Fintech entities for services originally provided by the traditional banks is a disruption that cannot be ignored either by the bank operators or the regulators.

2.3 Factors influencing Bank-Fintech Competition

The question of whether or not competition exists between banks and Fintech entities in Nigeria is debatable. However, the existence of factors that could stimulate competition among players in the financial industry is not deniable. Nevertheless, a market laden with competitions is beneficial to the entire system for the development and efficient co-existence of all parties involved (Jun & Yeo, 2016). The competition will enhance efficiency and open doors for new entrants and sensitize resilience in the incumbents (Navaretti et al., 2018). Rather than view the disruptive technologies and the nimble Fintechs as a threat, banks would need to respond positively as it all would lead to a better customer experience and consequently, an entire better banking sector (Kolesova & Girzheva, 2018). The Fintech revolution coupled with the COVID-19 responses has helped Nigerian banks to re-strategize to retain their competitive edge (Kola-Oyeneyin et al., 2020).

2.3.1 The Competition and Competitive Areas

History has shown that banks have always been in competition between themselves over technology innovations (Harris & Wonglimpiyarat, 2019). As observed by Romanova (2016), the fact that Fintechs have expanded their services to 'interfere' in the areas originally covered by traditional banks is a good rationale for competition. Through enhanced efficiency, Fintech has come to change the financial services landscape but not without casting doubts in the existing business models, services and operating rules (Zveryakov et al., 2019). According to Ernst & Young (2019), Fintech entities have succeeded in disrupting the financial services by using technologies to offer enhanced capabilities, convenience and lower rates thereby changing the customers' expectations and in the process, mounting pressures on the incumbents to develop and offer the same experience to remain competitive and retain market share.

One clear competitive area lies in the sharing of customer data with Fintechs. The enormous volume of data required by the Fintech entities are in the custody of the banks while Fintechs and the non-bank entrants would only need to seek for and devise a means of accessing these data via technologies like the application programming interface (API). This has been a major reason for collaborations between banks and Fintech entities in the industry. For the same reason, it has been advocated that appropriate legislation be enacted to support Fintech and protect the incumbents in the relationship. Fintech is considered an example of a front-end entrant that requires to leverage the infrastructure of an end-to-end incumbent. Unless supported by the regulator (e.g. CBN), the incumbent would naturally deny the entrant the use of its infrastructure - hence, the competition (Jun & Yeo, 2016; Nienaber, 2016). However, the symbiotic relationship between banks and Fintech operators is more grounded on the fact that they recognize each other's competitive advantages, and according to PWC (2017), "Fintech startups don't just need capital, they need customers. At the same time, incumbents need new approaches to drive change and deliver innovation."

2.3.2 The Drivers of Competition among Banks and Fintech

It is reasonable to assume the existence of competition between traditional banks and Fintech entities in Nigeria primarily because players from

both sectors are accessing the same market. However, this assumption remains arguable from an assessment of those factors that could act as drivers to spur competition among the two groups of players in the financial market.

In addition to all the disruptive factors discussed in the previous section, certain factors are driving competition in the financial services ecosystem as a result of Fintech penetration. Navaretti et al. (2018) argued that Fintechs have enhanced competition in the financial market by providing services that were originally known with financial institutions, including new ones more efficiently and in the process broaden the pool of consumers for those services.

A fundamental driver of the competition resides in the uninhibited advancement in technology and ubiquity of modern devices and the expansion of social media usage among the populace. According to the data available on Internetworldstats.com, the number of Nigerians on the Internet has grown from 200,000 in 2000 to 126 million with over 27 million Nigerians on Facebook as of 31 December 2019. According to the statistics on the website of Nigeria Communications Commission (cnn.gov.ng), the number of internet users has grown to 152 million, with a total number of GSM subscribers given as 205 million as of September 2020. These developments have prepared a good ground for Fintech to thrive in the increasingly digitalized economy. Fintechs have developed into more agile entities by deploying combinations of the smart technologies – internet, mobile, cloud computing, social media, internet-of-things (IoT), artificial intelligence (AI), robotics, analytics, and big data to create new business models, products and services with enhanced convenience, customer experience and attractive rates/fees. Traditional banks would need to compete with Fintechs on technology deployments and digital transformation into more agile and customer-centric firms to remain competitive in the new landscape (Kola-Oyeneyin et al., 2020).

Also, it has been argued that Fintechs have broadened the scope of financial services to include new products and services to create diversification (Navaretti et al., 2018; Romanova & Kudinska, 2016). Banks would need to speed up their digital transformation programmes to enable them to play competitively in the expanded financial market.

In support of the growth of the internet and technology usage is the demographic changes in Nigeria's population. According to Ojo and Nwaokike (2018), digital natives are coming of age to form a group of teeming millennials that would

influence the future investment space. These are groups of people with a high preference for state-of-the-art technologies, customer experience, speed and convenience to further promote adoption of Fintech. According to the data presented on the Worldometer's website, Nigeria with a population of over 206 million has a mean age of 18.1 years as of November 2020. This implies that there are more youths than old people in the country's population. Banks would need to design products and services as obtainable with Fintechs to remain competitive in the market dominated by these technology-savvy people.

Regulation is another driver with a likelihood to promote competition in the industry. The financial institutions have been exposed to a series of regulatory policies from the regulators like the Central Bank of Nigeria (CBN), and Nigeria Deposit Insurance Corporation (NDIC). For instance, as part of the Payment System Vision 2020, the CBN launched the Cashless Policy in 2012. Also, the regulatory body introduced the Bank Verification Number (BVN) to promote the practice of the know-your-customer (KYC) policy. These initiatives have enabled effective assessment of creditworthiness, which many Fintech applications use today (Anichebe, 2019; Kola-Oyeneyin et al., 2020; Ojo & Nwaokike, 2018).

For the banks, strict regulatory hurdles must be crossed to enter the market and operate with very close compliance monitoring whereas, Fintech companies enjoy less regulated entry and operating environment. This regulatory dichotomy has been identified as being favourable to Fintech entities and aiding their rapid growth (Ojo & Nwaokike, 2018; Romanova & Kudinska, 2016). As argued by Navaretti et al. (2018), regulatory dichotomy where Fintechs enjoy regulatory arbitrage mounts competitive pressures on traditional banks such that if exploited could increase the riskiness of banking activities. Yet regulatory arbitrage is required to spur development and competition in the market.

Against this backdrop PWC (2017) mentioned the emergence of the term RegTech (Regulatory Technology) to describe innovation and emerging technology "focused on solving complex regulatory challenges, enabling smarter regulation and reducing complexity in existing regulation and compliance." Moreover, the emergence of Blockchain technology is looking promising in the design of self-regulatory systems within the Fintech ecosystem. Harris and Wonglimpiyarat (2019) argued that cases of Blockchain banking are emerging forming a factor of competition between banks and financial

institutions. However, the future of Blockchain banking is in attaining interoperability across chains to support a large spectrum of payments and value exchanges on the IoT. In other words, the current standalone case of Blockchain banking would migrate to the collaborative approach to attain a high systemic characteristic, just like the case of Card innovations (Harris & Wonglimpiyarat, 2019). However, Zveryakov et al. (2019) argued that the competition between banks and Fintech companies is shifting to cooperation in the FinTech/RegTech ecosystem.

III. METHODOLOGY

The approach adopted in this paper included both qualitative and quantitative analyses of secondary and primary data. By conducting an extensive literature review of others' works related to this subject matter, a theoretical framework was developed to guide the conceptual method of addressing the purpose outline for the paper. The theoretical framework enabled the author to develop certain themes built into the conceptual construct, which guided on the discussion of the various topics in the paper (see Table 1).

Table 1: Distribution of Data Segments from sources across the themes

SOURCE	THEME					Totals
	Bank & Banking	Competition & Competitive areas	Competitive factors	Disruption & Disruptive factors	Fintech	
Romanova (2016)	3	1	5	5	4	18
Nienaber (2016)	1	2	0	0	0	3
Harris and Wonglimpiyarat (2019)	1	3	0	0	5	9
Ojo and Nwaokike (2018)	0	0	6	8	6	20
Jun and Yeo (2016)	0	3	0	0	1	4
Ernst & Young (2019)	0	1	3	4	5	13
Navaretti et al. (2018)	1	2	3	2	5	13
Wonglimpiyarat (2017)	1	0	0	0	1	2
Zveryakov et al. (2019)	1	2	0	0	1	4
Vezzoso (2018)	0	0	0	0	1	1
Kolesova and Girzheva (2018)	0	2	0	0	1	3
PWC (2017)	0	1	1	0	2	4
Koffi (2016)	0	0	1	1	1	3
Kola-Oyeneyin et al. (2020)	0	4	3	0	4	11
Totals:	8	21	22	20	37	108

Source: Author's design

A total of 108 data segments (or 'quotations') were selected in a combination of fourteen sources across a group of five themes in the literature review. These data segments aided

discussions throughout the paper as shown in the various citations and listed references.

The quantitative analysis was based on primary data collected through an online survey designed around the subject matter.

Q2 Your Profession or Industry

Answered: 188 Skipped: 0

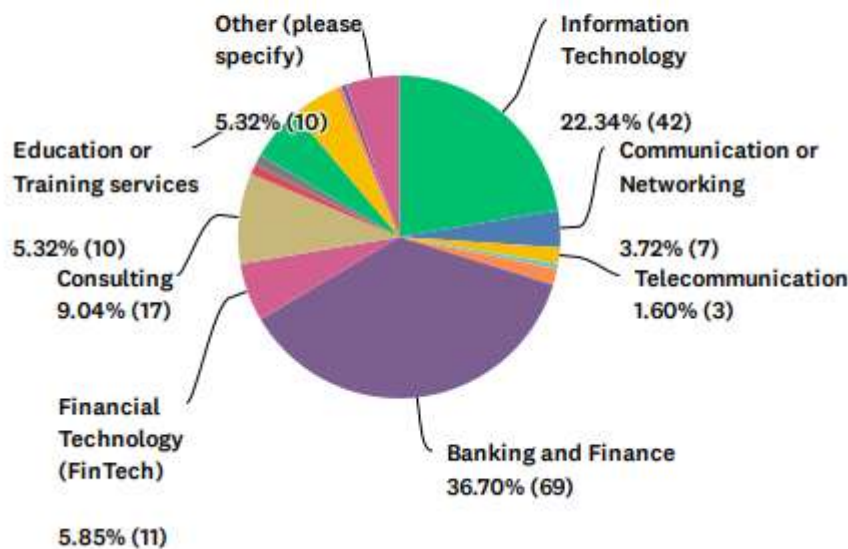


Figure 2: Profession or industry distribution of respondents

Source: Author's design

The survey was administered to a population size of about 300 of which 188 valid responses were collected after 2 weeks of its launch. Findings from the analysis conducted on the collected data are discussed in the next section.

IV. DISCUSSION OF FINDINGS

In an attempt to ensure that reasonable amount of data was collected from the right audience, deliberate efforts were made to reach many people in the banking and finance, information technology, Fintech, and consulting professions or industries, which were considered to be of key relevance to the subject matter. As shown in Figure 2, these key industries represented 73.93% of the total responses collected – a position

considered good enough to influence the outcome of the survey correctly.

4.1 The most Disruptive Factor of Fintech Evolution in Banking Industry

Having established the fact that Fintech adoption has disrupted the financial services industry in general, and banking in particular (Section 2.2) the survey was designed to enable participants rate a few of these factors to identify the leading disruptive factors. The respondents were asked the question: 'Which of the following factors do you consider as the most disruptive of the Fintech evolution to the Nigerian banks?'. The outcome of the poll is shown in Figure 3 and Table 2.

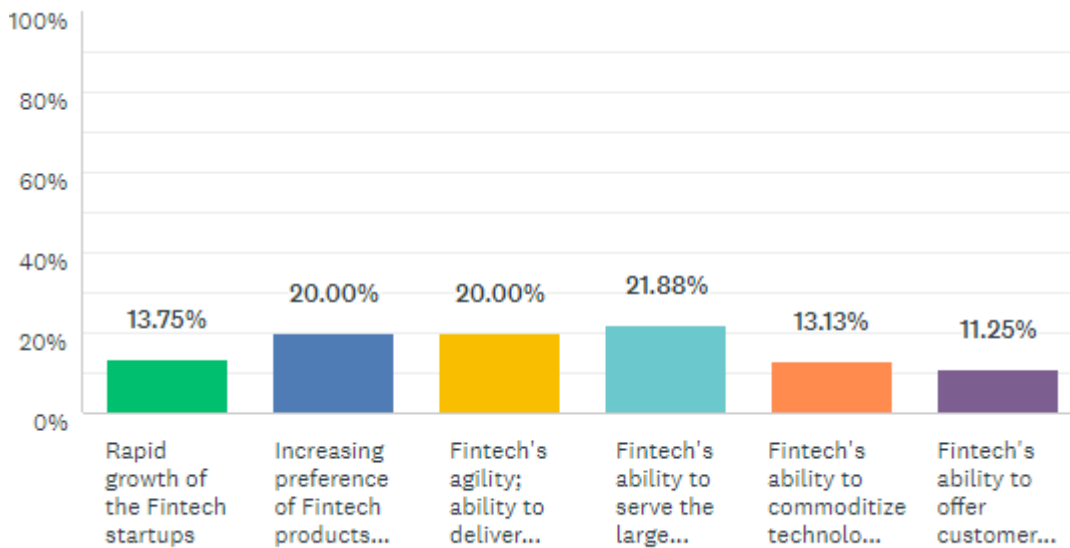


Figure 3: Disruptive factors of Fintech evolution in Nigerian banks

Source: Author's design.

Table 2: Summary of responses - Disruptive factors

Source: Author's design

ANSWER CHOICES	RESPONSES	
Rapid growth of the Fintech startups	13.75%	22
Increasing preference of Fintech products among bank customers	20.00%	32
Fintech's agility; ability to deliver services to customers faster	20.00%	32
Fintech's ability to serve the large unbanked population	21.88%	35
Fintech's ability to commoditize technology and innovation	13.13%	21
Fintech's ability to offer customers lower transaction charges	11.25%	18
TOTAL		160

This outcome revealed that the most disruptive factor of the Fintech evolution in the Nigerian banking industry is the ability of Fintech to serve the large population of the unbanked Nigerians, polling 21%. According to a report, this category accounted for 60 million of the total population of Nigerians (Kola-Oyeneyin et al., 2020). It can also be deduced that this is the highest expectation of the respondents when it comes to how the Fintech should impact the Nigerian financial industry.

Based on the findings, raking next closest to the most disruptive factor are Fintech's agility and increasing customers' preference for Fintech

products, with 20% score each. Based on the discussion in Section 2.2, these factors are a reality that Nigerian banks have to contend with strategically to retain their competitive edge.

4.2 Factors influencing Competition between Banks and Fintech

In line with the discussion in Section 2.3 certain factors are playing a significant role in the perceived competition between Nigerian banks and Fintech entities. These factors were rated in the survey with the aid of identifying the gravity of their influence.

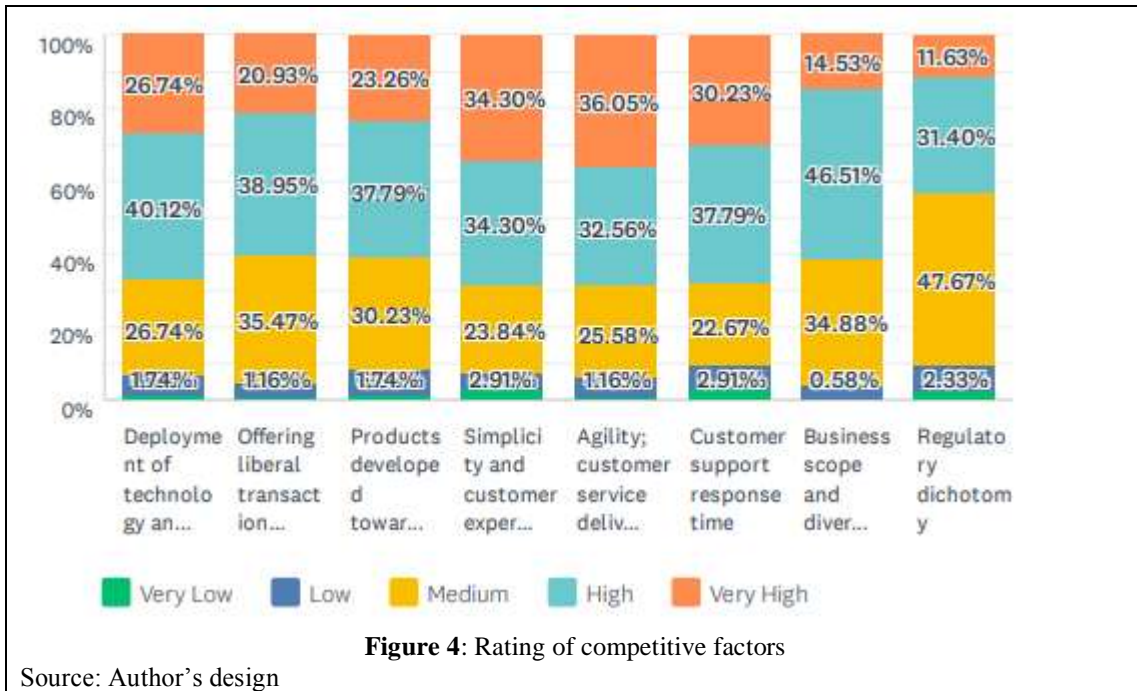


Figure 4 gives the results from the survey when the participants were asked to rate the factors based on the likelihood of each causing

competition between banks and Fintech entities. Table 3 gives a summary of the statistics derived from the ratings.

Table 3: Statistics of competitive factors' rating

Source: Author's design

	MINIMUM	MAXIMUM	MEDIAN	MEAN	STANDARD DEVIATION
Deployment of technology and innovation	1.00	5.00	4.00	3.85	0.93
Offering liberal transaction rates	1.00	5.00	4.00	3.75	0.86
Products developed towards achieving financial inclusion	1.00	5.00	4.00	3.74	0.95
Simplicity and customer experience; friendliness and ease of use	1.00	5.00	4.00	3.92	1.01
Agility; customer service delivery speed	1.00	5.00	4.00	3.98	0.95
Customer support response time	1.00	5.00	4.00	3.86	1.01
Business scope and diversification	1.00	5.00	4.00	3.71	0.78
Regulatory dichotomy	1.00	5.00	3.00	3.43	0.87

A median value of 4 polled by seven out of eight factors rated is an indication of high agreement among the respondents that these factors influence competition. However, Fintech's agility featured as the factor with the highest competitive influence with a mean of 3.98 and standard

deviation (SD) of 0.95. An SD of less than 1 is an indication of commonality in agreement on a response among the respondents.

V. CONCLUSION

Financial technology (Fintech) has impacted the Nigerian banking industry significantly by using technology to innovatively redefine how customers transact banking business. Fintech companies have used their nimbleness and agility to transform the banking services, create new models and nascent products leading to new expectations from the bank customers. This development is stimulating competition between traditional banks and Fintech entities as banks now need to readjust their digital strategies to match up with the Fintech to remain competitive in the digitalized market.

This article has examined some factors responsible for the disruption of the financial services, and the factors influencing competition between these two players in the banking industry. Using both quantitative and qualitative research methods it has been established that Fintech's agility and ability to serve a large number of unbanked/underbanked Nigerians are factors to be watched closely. Also, the increasing preference of Fintech's products by bank customers has a high rating of disruption of the banking industry. Banks would need to do the needful to prevent a situation of losing their customers to the non-bank financial providers. A common way of achieving this is for banks to rather than engage in unhealthy competition, consider forming strategic alliances with Fintech entities for them to be able to deliver on their customers' digital expectations to remain competitive in the digitalized market and economy.

Finally, the regulators need to address the issue of regulatory dichotomy by fashioning out an appropriate regulatory framework for the Fintech industry without hindering their development but ensuring a levelled ground and conducive environment for both players to thrive. Doing this would also heighten the level of trust for Fintechs and the financial institutions, and strengthen the entire financial services industry.

BIBLIOGRAPHY

- [1]. Ernst & Young. (2019). Global FinTech Adoption Index 2019.
- [2]. Harris, W. L., & Wonglimpiyarat, J. (2019). Blockchain platform and future bank competition. *Foresight*, 21(6), 625–639. <https://doi.org/10.1108/FS-12-2018-0113>
- [3]. Jun, J., & Yeo, E. (2016). Entry of FinTech Firms and Competition in the Retail Payments Market. *Asia-Pacific Journal of Financial Studies*, 45(2), 159–184. <https://doi.org/10.1111/ajfs.12126>
- [4]. Koffi, H. W. S. (2016). The Fintech Revolution: An Opportunity for the West African Financial Sector. *Open Journal of Applied Sciences*, 06(11), 771–782. <https://doi.org/10.4236/ojapps.2016.611068>
- [5]. Kola-Oyeneyin, E., Kuyoro, M., & Olanrewaju, T. (2020). Harnessing Nigeria's fintech potential. McKinsey & Company, September.
- [6]. Kolesova, I. V., & Girzheva, Y. S. (2018). Impact of Financial Technologies on the Banking Sector. *KnE Social Sciences*, 3(2), 215. <https://doi.org/10.18502/kss.v3i2.1545>
- [7]. Navaretti, G. B. mname, Calzolari, G. mname, Mansilla-Fernandez, J. M. mname, & Pozzolo, A. F. mname. (2018). Fintech and Banking. Friends or Foes? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3099337>
- [8]. Nienaber, R. (2016). Banks Need to Think Collaboration Rather Than Competition. *The FinTech Book*, 20–21. <https://doi.org/10.1002/9781119218906.ch4>
- [9]. Ojo, O. V., & Nwaokike, U. (2018). Disruptive Technology and The Fintech Industry In Nigeria: Imperatives for Legal and Policy Responses. 9(3).
- [10]. PWC. (2017). Redrawing the lines: FinTech's growing influence on Financial Services. In PWC Global FinTech Report.
- [11]. Romanova, I., & Kudinska, M. (2016). Banking and fintech: A challenge or opportunity? *Contemporary Studies in Economic and Financial Analysis*, 98, 21–35. <https://doi.org/10.1108/S1569-375920160000098002>
- [12]. Wonglimpiyarat, J. (2017). FinTech banking industry: a systemic approach. *Foresight*, 19(6), 590–603. <https://doi.org/10.1108/FS-07-2017-0026>
- [13]. Zveryakov, M., Kovalenko, V., Sheludko, S., & Sharah, E. (2019). FinTech sector and banking business: Competition or symbiosis? *Economic Annals-XXI*, 175(1–2), 53–57. <https://doi.org/10.21003/ea.V175-09>