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EXAMINING THE IMPACT OF EMERGING TECHNOLOGIES ON BANKING AND FINANCE

Rachel Ogidan

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1.0 INTRODUCTION

Technology is in many forms like magic; it is disruptive and fast. Alarmingly, technology is in principle, faster and a myriad of facts support this assertion. Moore's law, which highlights that computers double their capabilities every 12-18 months, is one of the supporting facts.[1] The annual data on global internet penetration, which currently stands at 63 per cent, is another irrefutable fact.[2]

Technological changes are happening rapidly. In some areas, the advances are small incremental improvements while in others; they are breakthroughs that completely revolutionise industries. Consequently, companies and sector drivers are compelled to find ways to adopt the latest technologies as they deploy products and services, whilst trying to deliver benefits customers expect. Tragically, despite these modifications, few businesses and even sectors have been outpaced by the advancement of technology, which is best likened to a speeding bullet. This has resulted in bold assertions such as that made by Stewart Brand- *once a new technology rolls over you if you are not part of the steamroller, you are part of the road.*[3]

* LLB (UNILAG), BL (KANO). Reachable on: rachelogidan@gmail.com

[1] K. Greene "A New and Improved Moore's Law" available at https://www.technologyreview.com/2011/09/12/191382/a-new-and-improved-moores-law/#:~:text=Power%20hungry%3A%20The%20first%20general%20purpose%20computer%2C%20ENIAC,computer%20processing%20power%20doubles%20about%20every%2018%20months (accessed 16 January 2023).

[2] Statista Research Department "Worldwide Digital Population" available at https://www.statista.com/statistics/617136/digital-population-worldwide/ (accessed 16 January 2023).

[3] L. Schultz "Are you Part of the Steam Roller or Are you Part of the Road?" available at https://www.linkedin.com/pulse/you-part-steam-roller-road-leland-schultz/ (accessed 29 January 2023).

The banking sector is not left out of this frenzy and has experienced significant transformation flowing from technological innovations. These innovations have resulted in digitisation such as Unstructured Supplementary Service Data (USSD), internet banking, digital banking, e-payments, open banking and self-inquiry facilities, inter alia. Hence, traditional banking processes have become safer and faster variables, which have become crucial factors for many organisations. This is reiterated by the World Retail Banking Report, which highlights that 75 percent of customers are attracted to cost-effective and seamless services.[4]

Likewise, there is the emergence of a new wave of disrupting technologies that continue to impact traditional banking systems such as lending, risk management, investment, and payment options across financial institutions. These advancements and other improvements in technology have led to the birth and christening of Financial Technology (FinTech), a term used to describe the application of digital technology to financial services.[5]

Despite the numerous advantages of technology in the current banking system, key stakeholders treat it with cautious disdain. This concern is founded on an array of factors, such as automation of the process thus resulting in loss of jobs, cyber-attacks, regulatory hurdles and most importantly scepticism associated with the ever-increasing number of fintech companies. The author is not oblivious to the concerns that a booming fintech sector could revolutionise the financial industry, and in turn, replace the role of traditional

[4] S. Kiely "World Retail Banking Report 2022: Incumbent banks must embrace data-centric capabilities to drive personalized customer experiences" available at https://www.ccrmagazine.com/world-retail-banking-report-2022-incumbent-banks-must-embrace-data-centric-capabilities-to-drive-personalized-customer-experiences/#:~:text=Retail%20banks%20are%20currently%20lagging%20in%20their%20ability,seamless%20services%2C%20significantly%20raising%20their%20digital%20banking%20expectations. (accessed 15 January 2023).

[5] World Bank Group "Fintech and the Future of Finance" available at https://www.worldbank.org/en/publication/fintech-and-the-future-of-finance (accessed January 15, 2023).

banks but opines that such concerns are unfounded and are deeply rooted in a myopic understanding of the similar yet distinct features.

In highlighting these distinctions, this paper interrogates the relationship between technology and banking, further, it briefly examines the role of technology in traditional banking. Next, it examines the impact of disruptive technology on banking and traditional money. It does this by exploring the historical evolution of banking and critically analysing fintech companies, with a special focus on their mode of operations. It further proceeds to analyse critically how regulations and regulatory authorities deal with changes in this critical sector.

Additionally, it argues that innovation will alter and expand the current definition of money to incorporate digital currencies and other forms of emerging technologies. This paper answers in the negative the question of whether technology eliminates banking. It avers that technology cannot eliminate traditional banking but merely modify its methods whilst creating neo-banks.

Conclusively, it restates the potential of digital disruption in the banking sector but contends that there is indeed a disruption not of the industry but of facts.

2.0 THE FUTURE OF BANKING: AN ANALYSIS OF THE IMPACT OF TECHNOLOGY ON BANKING

'Creative destruction,' an all-encompassing term coined by Joseph Schumpeter best describes the relationship between industries and technological advancement. It refers to how these advancements improve the lives of many while bearing with them the puissant potential to destroy others. Countless sectors and industries have been affected by this phenomenon. A noteworthy example is automobile technology, which has revolutionised the transportation industry and resulted in the massive loss of jobs for manual transportation workers. The media is another classical example of an industry that has fallen under the axe of innovative technology; with the spread of online media and news outlets, there is visible less dependence on traditional prints.

Conversely, many argue that these disruptive technologies, although destroying industries, result in the birthing of new and more effective ones[6]. In applying the same illustration, the automobile industry and online media have provided more jobs than their introduction displaced. While there are merits to both sides of the debate, it is crucial to restate that technology may at best reform how banking is conducted and the elimination as speculated remains impractical. Therefore, any assertion to the contrary is an indication of a restrictive understanding of what banking truly is, and a limitation to conventional banking from which there have been centuries of evolution.

An in-depth examination of the current impact of technology on financial services broadly and on banking specifically is an important prelude to any coherent analysis of the future of banking. This is crucial in providing the essential context for understanding the potential future of banking. This exposition shall limit the term "bank" to investment and retail banks such as commercial and microfinance banks, and by extension, banking shall refer to the operations of such banks to the exclusion of others such as apex banks around the globe.

Banking has evolved from the seed lending operations in ancient Mesopotamia,[7] millennia ago to include services like savings accounts, the use of automated teller machines (ATM), mobile payments technologies, smart contracts, neo-bank start-ups as well as digital and mobile banking services amongst others. In spite of these laudable innovations, banking and financial services have been conservative and slow in adopting new technologies in comparison to other sectors[8].

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[6] J. Manyika "Technology, jobs and the future of work", available at https://www.mckinsey.com/featured-insights/employment-and-growth/technology-jobs-and-the-future-of-work (accessed 11 September 2023)

[7] Worldbank.org.ro "The History of Banks," available at https://www.worldbank.org.ro/about-banks-history (accessed 15 January 2023).

[8] E. Lui, "Stay Competitive in the Digital Age: The Future of Banks", available at https://www.imf.org/-/media/Files/Publications/WP/2021/English/wpiea2021046-print-pdf.ashx (accessed 11 September 2023)

Nonetheless, the desire to remain relevant and competitive has incentivised the inclusion of technology by way of digital banking, artificial intelligence, blockchain, peer-to-peer (P2P) payments and open banking. These are the future of traditional banking. Fintech companies including neo-banks are also frequently described as the future of banking[9] and will be elaborately examined in the next segment of this paper.

Artificial Intelligence (AI) has been effectively adopted in many industries to mitigate risks, improve productivity, and drive innovations.[10] It is estimated that the Artificial Intelligence market would grow by up to 54 percent annually and is elegantly described as one of the next great technological shifts.[11]

The banking sector is not immune to this innovative whirlwind. Hence, an increase in the affordability and reliability of AI has resulted in a concurrent increase in its use by banks and other financial service companies. Retail banks are now able to leverage this technology to automate and streamline their lending processes and provide greater transparency for customers.

A common use is the adoption of conversational AI-Chatbot-based services, credit scoring algorithms, and machine learning for risk management. As aforementioned, the automation of the process which otherwise requires significant human input, has superficial adverse impacts on employment statistics nationally and globally, a problem which is solved by the creation of more jobs by technology. Alluding to this, the Judge Business School, University of Cambridge in its detailed global report estimates that AI will replace nine

[9] E. Feyen, H. Natarajan, M. Saal, " Fintech and the Future of Finance: Market and Policy Implications", available at https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099450005162250110/p17300600228b70070914b0b5edf26e2f9f (accessed 11 September, 2023)

[10] T. Davenport, R. Kalakota, "The potential for artificial intelligence in healthcare" (2019) 6-2 *Future Healthcare Journal,* 94-98

[11] Statista "Forecast Growth of the Artificial Intelligence (AI) Software Market Worldwide from 2019-25" available at https://www.statista.com/statistics/607960/worldwide-artificial-intelligence-market-growth/ (accessed 29 January 2023).

percent of jobs in financial institutions by 2030, while simultaneously predicting an expansion of the workforce of fintech companies by AI by up to 19 percent.[12]

The implementation of Artificial Intelligence is further necessitated by the expansion and popularity of fintech companies, who have technology imprinted in their DNA. Consequentially, it is now considered grossly inadequate to compete solely on delivering conventional banking metrics such as attractive credit rates and easily accessible credit facilities. At the minimum, these metrics must be delivered with some element of technological innovation to be considered distinctive. Consequently, AI is primarily reshaping banking by delivering conventional services in a manner that is competitive. Ergo, banks are seen adopting forecasting tools in providing credit facilities. Noteworthy is the case of the Royal Bank of Canada which introduced spending forecasting tools and a novel forecasting tool for car dealers which uses customer data to predict demand for vehicle purchases and adapts the required information in providing innovative credit facilities.[13] In addition, AI is being deployed for simpler tasks such as customer identification to more regulatory complex subjects like anti-money laundering. There are innumerable benefits arising from the current use of AI in the banking industry which cannot be explored in depth in this exposition and the pace of its applications is exponentially accelerating with a prediction of up to 64 percent increase by 2030; concomitant with this growth are valid concerns of regulatory complexities.[14] Nonetheless, it is indeed a pillar upon which the future of banking rests.

The future of banking is not hinged on conflict with innovation but on a symbiotic relationship. Peer-to-peer payment is a clear

[12] L. Ryll *et al* "Transforming Paradigms: A Global AI in Financial Services Survey" (University of Cambridge/ World Economic Forum, 2020) available at https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2020-ccaf-ai-in-financial-services-survey.pdf (accessed 16 January 2023).

[13] Penny Crossman "5 Ways the World Economic Forum says AI is Changing Banking" available at https://www.americanbanker.com/list/5-ways-the-world-economic-forum-says-ai-is-changing-banking accessed 16 January 2023).

[14] *Supra* note 8.

illustration of the foregoing. For up to a decade, independent fintech platforms such as PayPal and Venmo have been at the fore of this conversation, enabling customers to send money directly without the requirement of a bank account from the receiving party. Innovations like this have fuelled incessant and numerous debates about the elimination of banking by secondary financial institutions in recent years. Increasing data on global internet penetration[15] also supports such assumptions as more consumers embrace mobile banking. However, such enthusiastic consumers are left with diverse platforms providing distinct solutions to various problems. Ideally, consumers expect retail banks, which serve as their primary financial institution, to provide an integrated solution tied to a conventional bank account. In theory, these independent platforms have filled a lacuna by allowing users to send money through a linked account or card. Nonetheless, it is slightly different in practice and there is the eventual utilisation of conventional bank accounts, albeit minimally.

The inevitable limitations of such independent platforms are highlighted in the eventual requirement of bank accounts for a coalescent solution. In this sense, they strive to become banks and banks in turn strive to attain their current flexibility. This quandary is resolved by the adaptation of P2P payments in mobile banking, thus enabling customers to rely on one unified platform to address conventional needs in traditional and evolving manners.

In practice, this would allow Mrs. Ayo Nnachi, the holder of a Guarantee Trust Bank (GTB) savings account, to send cash to Mr. Musa Chidera without requiring his account details. Mr Musa may then elect to transfer the said sum to his conventional bank account, or alternatively leave it on his P2P account.

This raises critical legal questions as to data privacy, regulatory requirements for authentications and more importantly, safety. The ease of practically circumventing these is evident by the large numbers of active users of independent platforms, with PayPal generating up to $25.3 billion in revenue from approximately 426

[15] *Supra* note 3.

million users for the year 2021.[16] P2P payments provide speed, convenience, and flexibility, and it is necessary that banks in retaining their commercial significance attempt to keep abreast of technological advancement while embracing their strength which currently lies in old dysfunctionality.

In the race for creating an integrated solution, retail banking is by miles closer to the finish line than secondary financial institutions such as PayPal and must run as the swift and innovative athlete to ensure sustenance. Failing this, they risk losing the ever-broadening segment of the digital community to secondary institutions that offer pragmatic solutions to improve customer experience.

The relationship between technology and banking is epitomised by doing conventional processes unconventionally. Digital banking is indeed the unconventional approach to banking upon which many innovations stand, including open banking and other emerging technologies. Broadly, digital technology is the umbrella that encompasses online and mobile banking. Its relevance is hinged on speed, convenience, and ease. Interestingly, the constantly evolving nature of technology has rendered these, inadequate and obsolete, and this has paved the way for open banking as the future of banking.

Otherwise known as "open bank data," is the interconnectedness of data and accounts across multiple financial institutions. It deploys the use of Application Programming Interface (API) to share data with third-party applications.

It also escalates the ease, speed, and convenience of digital banking by enabling consumers to experience interconnectivity and integrated banking which is increasingly relevant with the spread of digitisation and globalisation. The evolution of Automated Teller Machines (ATMs) restates the importance of interconnectivity and how it is in fact inevitable for sustenance. Almost six decades ago when the first ATM was rolled out in Barclays Bank, North

[16] D. Curry "PayPal Revenue and Usage Statistics (2023)" available at https://www.businessofapps.com/data/paypal-statistics/ (accessed 17 January 2023).

London,[17] the use of the machines was limited to customers of the bank. Therefore, non-customers of the bank had no access to what was considered a ground-breaking innovation. Decades later, interconnectivity was introduced to ATMs, allowing consumers to use ATMs of other banks.[18] Now, consumers can use their cards across the globe with little or no limitations.

With the evolution of technology and its intersection with banking, interconnectivity is not limited to ATMs and transcends all spheres of digital banking. This is the fulcrum of open banking– flexibility, control, and convenience. In the year 2020, the number of open banking users in the United Kingdom doubled within 10 months[19] and further accelerated within 2020-2022, with up to 10-11 percent of digitally enabled consumers consenting to open banking.[20]

This system allows consumers to access and control all existing accounts from various third-party service financial institutions, including other retail banks and predominantly, fintech companies. In practical terms, customers using open banking are allowed to manage multiple financial products and accounts in a centralised location.

Open banking has the potential to alter the current financial landscape but as with all disruptive products, there also exists the potential for irreversible damage. Its operation revolves around the consensual release of data such as spending transactions which may then be deployed in various ways to improve the banking experience, including financial inclusion, improved financial management, lower transaction costs amongst others[21]. It is an offspring of the existing

[17] K. Wack, Alan Kline "The evolution of the ATM" available at https://www.americanbanker.com/slideshow/the-evolution-of-the-atm (accessed 22 January 2023).
[18] *ibid.*
[19] OpenBankProject "Open Banking in 2022- Milestones and Use Cases" available at https://www.openbankproject.com/open-banking-2022-milestones-use-cases/ (accessed 22 January 2023).
[20] *ibid.*
[21] L. Brodsky, L. Oakes,(Mckinsey & Company), "Data Sharing and Open Banking", September 5, 2017, available at https://www.mckinsey.com/industries/financial-services/our-insights/data-sharing-and-open-banking#/ (accessed 13 September, 2023)

competition between fintech companies and traditional banks aimed at improving the quality of financial services.

The technicality associated with its application is beyond the scope of this exposition, but there are legal concerns indivisible from its use. Therefore, associated with the numerous benefits of integrated data, are grave and perilous issues including increased cybersecurity exposure as well as data privacy and protection violations. It is important that regulators are in tandem with innovation in addressing such concerns. In response to this, the Central Bank of Nigeria (CBN), in 2021, issued the CBN Regulatory Framework for Open Banking in Nigeria.[22]

The use and futuristic impact of technology elaborately examined above are features intrinsic to fintech companies whose DNA are imprinted with technology. They are nonetheless significant alterations for conventional retail banks who are forced to implement them to ensure sustenance.

Nevertheless, there remains an evident transition from conventional banking to a combination of digital banking and more recently, digital-only banks. This has resulted in a drop in revenue for commercial banks across various economies. A recent report by PricewaterhouseCoopers (PWC) showed a persistent decrease in the revenue of retail banks in the United Kingdom, with up to -1.3 percent Compound Annual Growth Rate (CAGR).[23] This crisis is not limited to one jurisdiction and transcends social and economic strata. A similar concern was raised by the Central Bank of Nigeria through its Deputy-Governor, Financial System Stability Directorate, Mrs

[22] CENTRAL BANK OF NIGERIA, *Issuance of Regulatory Framework for Open Banking in Nigeria*, available at https://www.cbn.gov.ng/Out/2021/PSMD/Circular%20on%20the%20Regulatory%20Framework%20on%20Open%20Banking%20in%20Nigeria.pdf (accessed 22 February 2023).

[23] J. Lyons et al "Digitising to Diversify: How digital platforms can fuel bank's top line growth" available at https://www.pwc.co.uk/industries/banking-capital-markets/digitising-to-diversify-digital-platforms-fuel-banks-top-line-growth.html (accessed 16 January 2023).

Aisha N. Ahmad who alarmingly noted the fear of Fintech outcompeting traditional banks with associated profitability risk[24].

The future of banking is indeed not a conflict with innovation but a symbiotic relationship, as the focus of any business is not the protection of the status quo but sustainability and efficiency. Consequently, a tremendous likelihood exists that the implementation of the aforementioned and other emerging technologies would result in a modification of human interplay with banking, an alteration of the definition of money as is now known, and a paradigm shift from paper to digital currencies. These, although disruptive, would guarantee the sustenance and efficiency of traditional banks, which will in turn translate to revenue increase and profitability.

3.0 FINTECHS: THE EMERGENCE OF MODERN BANKS

The disruptive nature of technology and digital companies is a recurring headline across many renowned publications; academic and otherwise. This is supported by the ever-increasing number of start-ups globally, which currently stands at up to 1.35 million,[25] a number on a steady increase annually.

A large percentage of these organisations are financial technology companies which indeed suggests that retail banks are under gross threat of extinction[26]. However, the less publicised and glamorous data is that many of these organisations do not survive their formative years. [27] Surviving digital technology companies whose operations are underscored by financial inclusion, nonetheless, have

[24] Economic Confidential, "Fintechs may Crash Commercial Banks", November 2, 2022, available at https://economicconfidential.com/2022/11/fintechs-crash-banks/ (accessed 11 September, 2023)

[25] Startup Genome "The Global Startup Ecosystem Report" available at https://startupgenome.com/report/gser2022 (accessed 16 January 2023).

[26] Global Fintech Report, 2019, " Crossing the Lines: How Fintech is Propelling FS and TMT Firms out of their Lanes" , available online at https://www.pwc.com/gx/en/industries/financial-services/assets/pwc-global-fintech-report-2019.pdf (accessed 11 September, 2019)

[27] J. Howarth "What percentage of Startups Fail? 80+ Statistics", 2023, available at https://explodingtopics.com/blog/startup-failure-stats (accessed 23 January 2023).

significant short and long-term potential to revolutionise the financial services industry.

It is trite that fintech companies are shaping financial services and leaving retail banks to play catch up. Their services are targeted primarily at consumer banking and payments as well as providing solutions to problems which retail banks are unable to address for a variety of reasons including limited technology implementation and regulatory restrictions. Additionally, financial exclusion abetted by illiteracy and poor infrastructure has contributed to its proliferation in developing societies. For more developed countries, the difficulties associated with the creation and maintenance of accounts with commercial banks, obtaining credit facilities, and proving identities have made fintech companies desired unicorns. In 2018, up to one percent of all accounts in the United Kingdom were held with a digital or neo bank. [28] This meagre percentage escalated tremendously to 27 percent in 2022.[29] This increase, among other factors, has earned such banks the nickname "challenger banks". In lauding this achievement, it is important to acknowledge the role played by the Covid-19 pandemic and reduced dependence on physical branches of traditional banks. This has tragically resulted in the closure of up to 3000 branches and an accompanying reduction of up to 20 percent of users of such banks.[30] Data as the above support speculations that traditional banks may indeed be eliminated by technology, such speculations are a unilateral examination of growth by digital banks.

Interestingly, retail banks still hold a lion's share or chunk of the global market. It may be argued that this would reduce over time but

[28] M, Willems "The unstoppable rise of the challenger bank: Canary Wharf's retail giants have reasons to be worried" available at https://www.cityam.com/the-unstoppable-rise-of-the-challenger-bank-canary-wharfs-retail-giants-have-reasons-to-be-worried/ (accessed 23 January 2023).

[29] Woodseer "UK Challenger Banks and their Effect on the Big Four" available at https://www.woodseerglobal.com/blog/uk-challenger-banks-and-their-effect-on-the-big-four (accessed 23 January 2023).

[30] K. Moskvitch "Legacy Banks are Fighting Back against the Monzo Insurrection" available at https://www.wired.co.uk/article/fintech-startups-taking-on-legacy-banks (accessed 23 January 2023).

this is largely speculative and anecdotally, as various principles suggest otherwise.

Financial services such as banks are unique and as such are hinged on fundamental trust and goodwill for operations. Stringent laws, experience, and effective regulators to name a few have contributed to the trust held by existing banks. When combined with the willingness to invest in emerging technologies, reduced cost pressures, experience and contemporary strategy, retail banks are still recognised by many as primary financial institutions with the "challenger banks" settling for the role of supporting institutions for low risks and minimal value transactions. It is unlikely that this changes in the coming years.

Nevertheless, the proliferation of financial technology has resulted in stifling competition, with fintech companies striving to attain the trust held by retail banks and retail banks striving to attain the flexibility of such organisations. In response to this, a growing trend by retail banks is the formation of partnerships with these new companies or the formation of pseudo partnerships which allows the appropriation of their technology. Wema Bank Nigeria is a perfect illustration of both instances; its fully digital banking platform– Alat and its partnership with leading fintech company, PiggyVest highlights partnership as the most practical approach.

Notwithstanding the approach adopted, the continued operation of banks and modern financial companies is heavily dependent on the laws in place to accommodate innovation whilst preserving key economic and social factors. Hence, debates which fail to consider the importance of laws and regulatory institutions in encouraging innovation and preserving existing structures are prejudiced and fragmental.

3.1 The Role of Regulations and Regulatory Institutions

There has been a long academic debate about the nature of corporate law under which banking is a subset; whether it is a

branch of public or private law[31]. Scholars who argue that corporate law is a branch of public law rightly rest their arguments on what is termed externality. Economists describe this term as a cost or benefit of an economic activity experienced by an unrelated third party.[32] Banking and other corporate transactions have possible cost or benefit implications on unrelated persons, sectors, and national and global economies; in drastic cases resulting in recessions. The Great Recession of 2008,[33] a global financial crisis birthed by poor corporate governance and unchecked lending practices by banking institutions support such arguments. Conversely, scholars who aver that corporate law is a branch of private law rest their arguments on the nature of relationships between parties, often regulated by contracts or memorandums of association. There are merits to both sides of the debate, hence, corporate law is rightly considered a cross-border field. Consequently, there are stringent laws regulating otherwise private transactions.

The necessity of such distinction and overlapping relations is an attempt to justify the roles of regulations and regulatory authorities in the financial sector which encompasses banks and fintech companies.

Fintech companies, like the biblical Joseph, are cloaked in a colourful robe of flexibility marked by less stringent regulations, however, attached to the supposed flexibility is a pit of reduced "ethos and governance." This is convenient but dangerous in light of the principle of externality aforementioned.

It is trite, in theory, and practice that financial institutions, particularly banks, are unique in comparison to non-financial

[31] H. Hansmann, R.Kraakman, "The End of History for Corporate Law", Discussion Paper No. 280 3/2000, available at http://www.law.harvard.edu/programs/olin_center/papers/pdf/280.pdf (accessed 13 September,2023)

[32] CFI Team "Externality" available at https://corporatefinanceinstitute.com/resources/economics/externality/ (accessed 21 January 2023).

[33] Bank of England "The Financial Crisis- 10 Years On: What happened, and what has been done since?", available at https://express.adobe.com/page/DAlRb7HdWiHqA/ (accessed 21 January 2023).

institutions. An examination of the aftermath of the global crisis of 2008-2009, which over a decade after is still the subject of a plethora of academic research, reiterates this. What originated as mere unethical lending practices soon devolved into the crash of the stock market, which translated to the failure of major businesses around the globe and by extension, increased unemployment rates, which in turn birthed reduced purchasing powers, crippling investment, and death to international trade.[34]

Interestingly, fintech companies are not immune to such bad practices and have equal and even exaggerated potential to engage in practices resulting in adverse externalities. There are inexhaustible lists of Silicon Valley failures, which have been devastating to innocent customers and unrelated third parties. Theranos and its fictitious blood testing technology and the collapse of cryptocurrency exchange– FTX[35] are some, to name a few. While these were not neo-banks or fintech companies with functions similar to retail or legacy banks, they bore r similarities in mode of operations and by extension, risks.

Therefore, it is in essence impractical and jeopardising for institutions to enjoy the perks of conventional banks, including revenue without the accompanying targeted regulations. The reduced ethos and governance requirements which have created problematic lacunae are a curate's egg, good in parts, as the reduced regulation is indeed the basis upon which their flexibility thrives.

Laws are indeed not figurative but are by nature, corrective and preventive, and have successfully avoided a repeat of a global crisis. In addition to the above, laws and various regulations have helped to establish trust in a long-recognised system which is especially important in light of the complexity and unique nature of bank structures, activities, and business. The requirement of fundamental

[34] CFI Team "2008-2009 Global Financial Crises" available at https://corporatefinanceinstitute.com/resources/economics/2008-2009-global-financial-crisis/ (accessed 21 January 2023).

[35] Natalie Sherman, Joe Tidy "Crypto giant FTX collapses into bankruptcy" available at https://www.bbc.co.uk/news/business-63601213 (accessed 22 January 2023).

trust is not one that is exclusive to banks but extends to all financial institutions.

Tragically, the trust held by retail banks is such that it is monopolised, and neo-banks and other technological financial institutions have been unable to attain such trust which is key. This is premised on a myriad of reasons, primarily, flexibility, which for such institutions is a double-edged sword, thus, standing as one of their biggest strengths whilst allowing them to bend rules in their operations. Such flexibility is not available to legacy banks, as the laws have evolved quickly to address all such lacunas whilst providing stringent penalties for default.

Interestingly, arbitrary regulation is not the solution and regulators must attempt to catch up with the fast pace of technology in issuing laws and policies that are effective but do not stifle innovations.

While this is underway, retail banks must embrace the strengths and weaknesses in their curate's egg cloaked as targeted regulation. Existing regulations have been at the core of ensuring the sustenance of individual banks, preservation of economies, the standard of living, and provision of fundamental trust. It is anticipated that the importance of trust is likely to drop with the influx of the youthful population who prioritise flexibility over trust. Nonetheless, trust remains indispensable as its absence leaves such financial institutions vulnerable to fraud, which has the potential of the domino's effects of the global recession described above.[36]

It is important that regulations are in place which strengthen the relationships between banks and fintech companies by acknowledging the strengths and limitations of each subset independently and collectively. Such regulations must be unified in application, allowing innovations while protecting core competencies required by financial service institutions. Such laws must be preventive but not prohibitive, thus limiting investments. The Central Bank of Nigeria's

[36] J. Rottenburger, L. Kaufmann "Startups are More Vulnerable to Fraud. Here's Why", (2018) *Harvard Business Review*, available at https://hbr.org/2018/10/startups-are-more-vulnerable-to-fraud-heres-why (accessed 22 January 2023).

prohibition on cryptocurrency transactions is an example of prohibitive regulation. While the apex bank subsequently attempted to justify its circular,[37] any justification ought to have preceded or accompanied the ban, hence, it can be rightly described as arbitrary. It is crucial that laws are in place to avoid negative externalities and such laws need not be arbitrary or high handed.

Furthermore, regulations may be used to incentivise growth and investments. Various jurisdictions have adopted incentives to drive growth broadly, and in many instances, specifically in key industries. This comes in form of tax reliefs, holidays and funding, inter alia to encourage investment; it is important that legal obligations are accompanied by incentives to promote investment and growth of the financial sector encompassing traditional banks and digital companies. Regulations should provide incentives that allow retail banks to invest and explore critical emerging technologies, while concurrently enabling digital companies to attain the fundamental trust required to create an equilibrium.

Another essential way forward is the amendment of relevant laws to enable private companies to offer their securities to the public and simplify the heinous process of listing on the capital market. Many digital financial institutions are private companies and as such experience difficulties and restrictions including equity financing[38]. These limitations can be addressed with ease by innovative laws. The spirit of the law behind such restrictions is inextricably linked to the debates on the cross-border nature of corporate law, and by extension, laws and regulations for financial institutions. And while it is on merit designed to prevent negative externalities, the laws must evolve to accommodate innovation whilst protecting economies, lest we fall into the positivist trap of hinging the existence of a legal

[37] CENTRAL BANK OF NIGERIA "Response to Regulatory Directive on Cryptocurrencies" available at https://www.cbn.gov.ng/Out/2021/CCD/CBN%20Press%20Release%20Crypto%2007022021.pdf (accessed 22 January 2023).

[38] A. Doust, Forbes, "Growing Start-ups: M&A, Go Public or Stay Private available at https://www.forbes.com/sites/forbestechcouncil/2021/04/16/growing-startups-ma-go-public-or-stay-private/ (accessed 13 September, 2023)

system on the presence of written laws and not the practicality or the extent to which the laws satisfy the tenets of justice.

An effective approach would be the implementation of principles of the utilitarian school of thought which canvasses that laws ought to be shaped to provide the best outcome and offer the most socially useful purpose possible. They opine that laws must increase happiness, justice or wealth while alternatively decreasing unhappiness, injustice and poverty.[39]

In applying the following principles, the laws must catch up to the fast pace of technological advancements but not by way of arbitrary guidelines. It is important that lawmakers and regulators are proactive in issuing and implementing laws and circulars to enable growth.

4.0 CONCLUSION

'Acclimatise or be replaced' is a rechristening of nature's longest law on survival only for the fittest. Technology has significantly altered many sectors but an elimination remains impractical. Digital healthcare has revolutionised healthcare but cannot eliminate the need for doctors. This however must not be erroneously interpreted as a justification to rigidly refute innovation.

The future of banking is hinged on the need to embrace emerging technology and prioritise the need of customers, in developing key strategies. Unlike the transport and media sector discussed earlier, the future of money and financial services will not metamorphose drastically like those sectors, however, the change would not result in an eradication but would rebirth systems that ensure ease, convenience, and speed. Like any two-edged sword, these improvements would bear with them bigger challenges to which regulators must be well prepared to tackle. Cyber risks and financial crimes will mushroom and create legal and reputation risks for organisations. Current preventive methods and laws have proven

[39] University of Lincoln "What is the Philosophy of Law?" available at https://online.lincoln.ac.uk/what-is-the-philosophy-of-law/#:~:text=Utilitarianism%20is%20a%20philosophy%20that,unhappiness%2C%20poverty%2C%20or%20injustice. (accessed 22 January 2023).

grossly inadequate to detect fraud and eliminate other financial risks and would become even less adequate with the rising numbers of digital services[40].

A plethora of data has been cited in this exposition, highlighting technological disruption over the decades. These numbers are rightly sourced but technological disruption over the past decade is widely exaggerated. An assessment of Fortune 500 [41] and Global 500 indicates more stability than is frequently suggested in colourful and flagrant publications. These annual compilations rank the top 500 companies in the United States of America and the top 500 companies globally respectively based on revenue.

A common theme is that minute change has indeed occurred over the past two decades and an even more minute proportion of firms on either of the lists were established in the last two decades.[42] From the Fortune 500, only seventeen companies were established within the past twenty-five years, accounting for a meagre 3.4 percent.[43] More alarmingly, only 35 of the companies on these lists from over two decades ago have gone bankrupt.[44] These lists are objectively reliable sources that cut across various sectors and unanimously point to disruption, not of industries but of facts. The facts do not argue against the disruption associated with technological advances but rightly indicate that it has been excessively overstated.

In practice, many organisations have embraced innovative ways, including technology, to stay afloat and thrive. These established

[40] Norton Rose Fullbright, "Cybersecurity- not just and IT issue but a regulatory one too", available at https://www.nortonrosefulbright.com/en/knowledge/publications/54263658/cybersecurity---not-just-an-it-issue-but-a-regulatory-one-too (accessed 13 September, 2023)

[41] Fortune "Global 500" available at https://fortune.com/ranking/global500/ (accessed 23 January 2023).

[42] J. Birkinshaw, "How Incumbents Survive and Thrive", (2022) *Harvard Business Review*, available at https://hbr.org/2022/01/how-incumbents-survive-and-thrive (accessed 23 January 2023).

[43] *ibid.*

[44] *ibid.*

organisations are operating successfully today and have not had their sectors hijacked by technology-driven companies.

These numbers are bearers of hope for traditional banks that sustainability is not unattainable. It is not to be misconstrued as a justification to oppose innovation but adopt strategies to face the disrupter. Traditional banks must adopt bold and offensive strategies when confronted with disruptive forces by fintech companies. The first step is to objectively interrogate the gaps in the value of services rendered and address such gaps where practical. In the alternative, the retail banks may elect to embrace their strengths and weaknesses in creating strategies which do not involve an overhaul of existing systems but capitalisation on such systems.

Broadly and comically, banking encapsulates retail and digital banks, so it is contradictory to suggest the latter eradicates the former. Despite their distinct features, digital banks are offspring of traditional banks and the matrimony of their functions as described above is more conceivable than an elimination of traditional banking methods.

Banks are dying, not at the hand of innovation but of bad corporate governance practices as well as arbitrary and inept laws. Hence, regulatory institutions must embrace their roles in ensuring the sustenance of banking systems, as well as creating an innovative and conducive environment.