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THE IMPACT OF TECHNOLOGICAL CHANGE (DIGITAL CURRENCY) ON TRADITIONAL BANKING

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Abstract

The banking industry is a vibrant one, which provide a lot of resources to both public, and the private entities. The existence of the banking industry primarily facilitate the movement of fund from companies, and individuals who patronize the activities of banking. In the aim of meeting this primary requirement, the banking institution make money from the charges levied on client who demand their services. Notwithstanding the importance of the banking activities, the change in technology has brought a lot of competition to the industry. The challenges faced by the industry has resulted in many banking institutions folding up, as a result of non-compliance to rules set by regulators. For this reason the research investigate into the causes of the inability to meet the require regulation laid down by the regulators. The study indicates that the banking industry is often slow in the adaptation of new process due to the peculiar culture of the institution. However, the inability to quickly adopt to changes in the fast pace of changing technology is impacting negatively on the operations of the traditional banking industry. The study identify some of the current changes such as cryptocurrency, and mobile money, and the impact this has on the banking industry. The study recommends the need for the banking industry to quickly adopt to the current changes so as to be competitive in the industry.

Keywords: Cryptocurrency, Digital currency. Mobile money, Bitcoin, Ethereum, Ripple, Bitcoin Cash, EOS, and Litecoin

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Introduction

The year 2007 to 2008 presented the greatest financial crisis in history, which resulted in many banks in the banking industry declaring bankruptcy due to the fact their inability to

mobilize cash to execute their daily operations. Notable among these banks are Merrill Lynch, AIG, Freddie Mac, Fannie Mae, HBOS, Royal Bank of Scotland, Bradford & Bingley, Fortis, Hypo and Alliance & Leicester (The Guardian, 2008). In USA the bailout of these banks by the Treasury Department was by investing about $200 billion in hundreds of banks through its Capital Purchase Program in an effort to prop up capital and support new lending (CNN, 2009). Among many of the lessons learnt from this financial disturbance is the ability to instill in the bank confidence, as the loss of confidence spread like wildfire during the credit crunch and threatened to take down the entire global financial system. The lessons were the importance of timely recognition of losses after the crisis, rigorous stress testing and the need for carefully judged strengthening of bank balance sheets, while maintaining a flow of credit to the real economy. Also the credit crunch resulted in the tightening of the regulation of the banking sector across the world which resulted in the increase of regulation burden on traditional bank, thereby shadow the growth of banks 55%, but also explains the growth of Fintect by 35% (Buchak et al., 2017)..

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Financial Technology (Fintech) a small sector in comparison to the size of financially intermediated assets and capital markets is on the increase, and has the ability to threaten the stability of the banking sector. The influence of fintech is beginning to be felt in the banking sector and capital markets, has a welfare-enhancing disruptive capability (Vives, 2017).

The research uses secondary material to analyses the problem. The desk search is basically on the previous publication on and the current situation of the performance of the banking sector. Analyzing the data requires a chronological assessment of the information gathered. Though secondary research analysis provide various advantages such as time savings, readily available of large data, and data collected are reliable due to the fact that professional on

the said field had already done the work, and so can be trusted, the limitation cannot be ignored. Some of the disadvantages are in appropriate of the data, wrong format, or lack of sufficient information (Oxbridge Essay, n/d)

Literature Review

The History of the Banking Industry

There are several reasons why people bank, however, the need to bank is the inability to secure the money, and assets one when acquired. Another feasibly reason for banking in addition to safe keeping of money is the likely interest one may gain (Wang, 2010). The Banking sector has played significant role in the human settings, if not several centuries, many decades, in fostering trust and confident in the economic system of countries that they tend to serve, as the banking system ensure constant availability of cash, and motivate clients to save by providing interest on the amount of money loan to the bank in the form of savings.

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The need for banking started as far back as 2000 BCE. Banking, which was derived from an Italian word Banco, started in the Babylonians and Egyptian period during 2000 – 1700 BCE., when habitant of this period kept their valuables in the temple, because the temple were considered as a divine place and taboo to steal from the temple (Beattie, 2018). Due to such perception, inhabitants who lived during this period were encourage to safe keep their valuables in the temple. However, the administrators of Rome took over the responsibility of keeping valuables in the temple, as the practice profited money lenders, of which the temple priest found such practices as unholy (Beattie, 2018, & Tieo, n/d). The traditional banking which started in 1700 BC has improved in many fronts in order to meet the demand of the consumers or the clients, however, the existence of traditional banking is challenged at many front. Schubent (2017),indicated that the four topmost challenges of bankers, and financial institution faces are:

1. The ability for the banks to make enough money to provide enough returns on investment, or the returns on equity that the shareholders requires.
2. The demand of customers' expectations such as technology put pressure on the banks
3. The financial technology FinTech creates a big challenge for the traditional banks, because the traditional banks do not adjust quickly to the changes, as many operates within cultures that restrict immediate adjustment.
4. The increase raise in the level of regulatory requirement, which makes the banks to spend large part of their discretionary budget on being compliant

Moored (2018), suggested that the biggest challenge facing traditional banking is how the banks may stay engage with the customers. However, practitioners believes capital or liquidity is the biggest challenge, because of the amplified regulation that the 2008 financial crush brought with. The varied views remain a good question to be answered. Nevertheless, KPMG (n/d) indicated that mandate are now important to the banking industry than relentless attention to connecting with customers as a means of building new revenues streams. One of such regulation is the Base capital adequacy. Kara (2015), suggested that the adoption of Basel principles by the majority of countries around the globe is an important, indicating that survey done by the Bank for International Settlements (BIS) in 2015 shows that all 27 Basel Committee on Banking Supervision (BCBS) member countries had implemented enhanced risk-based capital regulations by the end of 2013, whiles a survey by the Financial Stability Institute (FSI) indicated that 95 out of 117 non-Basel Committee member authorities that were monitored have adopted or were in the process of adopting by mid- 2015.

According to Cline (2016), higher bank capital requirements reduce the probability of banking crises, this interests suggest that Basel principles have become a model for capital

regulation by national banking systems in both developed and developing countries (Kara, 2016). Furthermore, the theory points out that the experience of a recent financial crisis is a driving force for more stringent capital regulations. Such regulation has sent shock to the spine of the banking industry in Ghana is the increase bank reserves or capital requirement (Capital requirement is the minimum amount of capital a bank or other financial institution has to hold as required by its financial regulator) by central bank from GH¢ 120 million to GH¢400 million ($26,000,000 to $88,888,888) by December 2018 (Akrong, 2017). The new requirement in the industry has led to the central bank advising the local banks to merge with other banks to remain in operations, or to end operation if requirement are not met by the end of 2018. The various requirements for the banking institution makes the banking system very costly to run, and unattractive compared to more flexible alternatives of the digital currency.

The Impact Financial Technology (Fintech) on the Banking Industry

Financial Technologies acronym FinTech may be define as technologies used and applied in the financial services sector, and the financial institutions on the back end of their businesses. The FinTech industry uses technology to improve activities in finance. The use of smartphones for mobile banking, investing services and cryptocurrency are examples of technologies aiming to make financial services more accessible to the general public. Mar (2017), stated that Accenture recently released report indicated that investment in fintech around the world has increased dramatically from $930 million in 2008 to more than $12 billion by early 2015. And this is likely continue to increase, as FinTech touches not just the financial services sector, but every business the financial services industry deals with. FinTech startups are small and agile, able to disrupt the operations of traditional financial institutions and innovate quickly creating an

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advantage for the user. Not requiring big investors make FinTech a fast growing technology all over the world.

Mobile payments, and money transfer services has revolutionize the way small businesses start up, accept payments, and go global, and they are making it easier than ever to start and run a business. Peer-to-peer (P2P) lending platforms provided by fintech provides credits without bank intermediation where individuals and companies invest in small business. P2P lending is growing fast in the United States, UK, Germany, France, Finland, and China (Vives, 2017). In a more advance FinTech on a more secure but low cost transaction platform is the cryptocurrencies, which is based on the concept of blockchian (IMF, 2018). The Traditional payment systems may also be disrupted by digital currencies such as Bitcoin, which consists of a public digital database that allows transactions between peer-to peer without any intermediary to verify the transaction, with a large number of computers authenticating each transaction sequentially. Blockchain technology is potentially disruptive because of the ability of the technology to opens the gate to many potential cost-saving innovations, permits currency without the backing of government or an intermediation function of the bank, which have specialized in ensuring security among parties in transaction. The activities indicates that fintech put enormous pressure on the banking sector, which requires the traditional banking sector to react immediately.

Mobile Money

The digital era has really change the face of banking industry, making the customer absolutely important player in the market. The financial sector over the past years has witnessed a tremendous change due to competition as a result of the emergence of mobile devices for carrying out or transacting financial transactions (Masamila et al, 2010). The bottom line is that

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the banks must provide customers with want the customer want, and not what the banks want. The increase in different mode of saving money in addition to the traditional banking such as mobile money, and digital currencies has given the customer absolute control, and providing varied options for the customer to saving their money. Mobile money transfer which started as money transfer within countries borders has now gone international providing similar banking services at a lower cost, under cutting the activities of money transfer institutions such as Money Gram, and Western Union, whose services heavily depends on the traditional banking. The banking industry has suffered a lot of setback in the introduction of mobile money transfer as most of the customers of the banking industry especially countries in Africa patronize the mobile money due to the flexibility, and convenience the mobile money comes with. The activities of the mobile money has impacted negatively on the amount of money saved in the bank, and rather increase the amount of money saved on individual wallet of the mobile money (Mpiani, 2016). The drift to mobile money is purely due to low cost of transaction, and convenience the mobile money provide which the customers cherish so much of which the banks do not. The increase drift of customers to other currency saving processes beg the question; will the bank survive by putting premium importance on the regulations?

Cryptocurrency:

Digital currency is a payment method which exists only in electronic form and is not tangible. Digital currency can be transferred between entities or users with the help of technology like computers, smartphones and the internet (Techopedia, n/d). The introduction of digital currency, cryptocurrency such as Bitcoin, Ethereum, Ripple, Bitcoin Cash, EOS, and Litecoin just to mention a few has further worsen the situation of the banking industry. The technology behind cryptocurrency assets including blockchain is an exciting advancement that

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could help revolutionize fields beyond finance that provides a new, low-cost payment methods to those who lack bank accounts and in the process empower millions in low-income countries (Lagarde 2018). Interestingly, cryptocurrencies have already made their way into trading within apps. The possible benefits have even led some central banks to consider the idea of issuing central bank digital currencies (IMF, 2018). This show the competitive edge of cryptocurrency on the traditional banking. According to the Chief of International Monetary Fund (IMF), Christine Lagarde cryptocurrencies need an international regulation, and supervision, which requires the close attention of the central banks (Alkhalisi, 2018; Lagarde, 2018; & Zhao, 2018). The digital currency is well popular all over the world especially in Asia (Tarud, 2017).

Cryptocurrency is also becoming an emergent currency in African with its popularity gradually growing in Ghana. The central bank of Ghana also share similar sentiments of IMF, and has called for immediate regulation of cryptocurrency, which requires an act of parliament to regularize the activities in Ghana. The indication is that though the central bank has not yet regularized the activities of cryptocurrency, the activities is well accepted by the growing popularity among the public (Zurek, 2018). As cryptocurrency creates its own market, the traditional market where the traditional banking systems fill threatened as the traditional banks are removed as intermediary of these market (IMF, 2018). Mourdoukoutas (2017), suggested that Bitcoin is under attack by the big traditional banks and government as they see Bitcoin as threat to their operation, as the Bitcoin, has the potential to become a new currency, free of the control of big governments and big banks. Blockchain, cryptocurrency technology is potentially disruptive since it opens the gate to many potential cost-saving innovations, which also permits a currency without the backing of government or a trusted go-between, an intermediation function at which banks have specialized (Vives, 2018).

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Cryptocurrency and the Traditional Banking:

As technology impact significantly on industries, with introduction of technological innovations such as mobile money and bitcoin there is the need for banks and financial institution to take critical evaluation of their operation to remain competitive. Digital currencies are decentralized, whereas most traditional currencies are controlled by a centralized government, therefore able to be regulated by a third party. Digital currencies are created and transacted in open source environments, where they are controlled by code and rely on peer-to-peer networks, thus no single entity can affect the currency (Tarud, 2017). This makes the trading in this currency beyond the boundaries of government, and the central banks.

The worldwide acceptance of digital currency outside any frame work of regulation from both government and central banks threatens activities, and existence of the traditional bank. The French banking giant, BNP Paribas released a report where they discussed the technology behind cryptocurrency and how it could lead to making the traditional banks redundant (Tarud, 2017). A report issued by UK Bank indicated the flexibility and low cost operation of Bitcoin, indicating that users of Bitcoin can handle many of their daily payments needs without the need for interaction with banks, and avoiding the need to incur bank fees. In the same way, value stored in PayPal accounts moves outside of the bank's payment systems, depriving banks of valuable payments revenue. The indication is that the traditional banking industry will not be in the position to raise enough cash from their operation to meet their shareholders' requirement, there by pushing downward the share value of these banks. As the traditional banking systems have high transactional cost, the digital currency tend to be very fast with very low transactional cost, making digital currencies more attractive. Providing services of low transactional cost, quick,

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efficient, providing more digital banking options is what the traditional banking systems need to focus, and improve so as to match up with cryptocurrency.

The Research Question

The research Question is "How significant is the impact of Financial Technology on the traditional banking". The question look into the operations of the banking industry and analyzed the impact of this sector vis-a-vi the fast growing of financial technology in the industry. As fintech and the Traditional banking operates in different financial platform, and serve similar purposes there is the need to investigate of the impact of fintech on traditional banking system so as to design the solution.

Research theory and methodology

Theories represent tentative solutions to problem, generalization about a phenomenon, an explanation of how or why something occurs. A theory may be said to be a generalization about a phenomenon that explains how or why the phenomenon occurs. (Frey, Botan, Friedman, & Kreps, 1991). The research is based on historical research theory directed towards the description of phenomenon that occurred in the past. The main task of historical research theory is to gather all available information and sources as to a particular topic, and subsequently to classify, arrange, clarify, evaluate, elaborate and publish them by means of scientific methods (Špiláčková, 2012),. Upon studying literature about recording findings and thoughts, each investigator creates their own individual system of documenting as best suited to their needs (Hroch et al., 1985).

The study attempt to analyze the impact of financial technology on the banking sector by using secondary data. Secondary research involves re-analyzing, interpreting, or reviewing past data, where as in contrast to primary research, secondary research is easier and inexpensive,

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particularly because the researcher is less involved with the actual process of collecting the data. Though the two most common types of secondary research data are quantitative, and qualitative, this research is fundamentally base on qualitative data sets (Oxbridge Essays. n/d). The research employ case study analytic procedure, which detailing the description of the case, set within its context, which uses collective case study with secondary data as the data collection (Mensah, 2016).

Data Analysis

Digitization is changing many industries across the world and altering the way individuals and companies operate, and banking is no different (BBA, 2015). Though Banks see digital currency as too risky, the moves to curb the activities, and popularity of cryptocurrency has not achieve much success (Lam, 2017). The central banks around the world are increasingly recognizing the potential upsides and downsides of digital currencies. Though cryptocurrencies have seen "extreme volatility", the activities continue to remains less clear if cryptocurrencies pose a threat to financial stability, with the increase in volume of cryptocurrencies could matter to monetary policy at some point (IMF, 2018). Nevertheless, in the future when the acceptance of digital currency becomes more acceptable worldwide the threat to traditional bank industry would be very immanent. There is the need for an immediate, and different approach of how the traditional banks see the digital currency. The first step to achieve success in the fight against the threat of the operations of the digital currencies is the acceptance of the digital currency, and to regularize their activities by establishing regulations for these digital currencies. As indicated by IMF, there is the need for the traditional banking system to consider introducing digital currencies so as this form of currency has come to stay.

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According to IMF (2018), regulation may begin by focusing on policies that ensure financial integrity and protect consumers in the crypto world just as it is done in the traditional financial sector. The regulation implementation can be achieve and be effective, with the efforts close international cooperation, since crypto-assets know no borders, the framework to regulate them must be global to effectively tackle the issue. The approach provide a better solution than to fight the spread of digital currency.

Further, IMF indicated that Distributed ledger technology (DLT) may be used to speed up information-sharing between market participants and regulators. The banking system must adopt technology that enables instant global transactions to create registries of standard, verified, customer information along with digital signatures. Governments may reduce the cost of the traditional banking, and help free up resources for priority needs and reduce tax evasion, including evasion related to cross-border transactions. There is also the need for the traditional banking sector to adopt a biometrics, artificial intelligence, and cryptography to enhance digital security, and identify suspicious transactions in close to real time. Having this in place would give law enforcement the ability to quickly detect illegal transactions, and stop it in time, in order to help remove the "pollution" from the crypto-assets ecosystem (IMF, 2018).

A study conducted by Bank of Ghana (2017), suggested that improvement in the mobile money sub sector leads to development of the payment ecosystem, deepening of financial inclusion, and promotion of cash-lite economy. Therefore the study advice Bank of Ghana to continue to deepen the payment system by leveraging on the widespread usage of mobile phones as alternative channels for access to finance to help support improvement in the monetary policy transmission mechanism. So for the traditional banking to survivor in the soon coming future,

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require absolute collaboration between the traditional banking industry, and the digital currency operators.

Conclusion

The banking sector plays a very important role within the financial sector by providing much secured platform for transaction that assures players in the financial sector. The industry also provides employments to numerous people whose service provided to the banks are rewarded in a form of salary. So any effort to sustain the activities of the industry is very important as they provide a strong base to the economy of the world. In as much the banks need to be protected by government in order to provide the services the sector does, there is the need for the banking institution to be innovative, and quickly adopt to changes in the fintech in order to remain competitive.

Reference

Akrong, E. Y., (2017). *Q&A relating to BoG proposed new minimum capital for banks in Ghana.* Retrieved from https://www.myjoyonline.com/business/2017/September-11th/q.php

Bank of Ghana, (2017). *Impact of mobile money on the payment system in Ghana*: an econometric analysis. https://www.bog.gov.gh/privatecontent/Public_Notices/Impact%20of%20Mobile%20Money%20on%20the%20Payment%20Systems%20in%20Ghana.pdf

BBA, (2015). *Digital disruption: UK banking report*. Retrieved from https://www.bba.org.uk/publication/bba-reports/digital-disruption-uk-banking-report-2/

Beattie, A., (2018). *The evolution of banking*. Retrieved from https://www.investopedia.com/articles/07/banking.asp

Buchak, G., Matvos, G., Piskorski, T., and Seru, A. (2017). *Fintech, Regulatory Arbitrage and*

https://piie.com/system/files/documents/wp16-6.pdf

CNN, (2009). *Bailed out banks*. Retrieved from http://money.cnn.com/news/specials/storysupplement/bankbailout/

Frey, L. R., Botan, C. H., Friedman, P. G., and Kreps, G. L., (1991*). Investigating communication: an introduction to research methods.* Retrieved from https://books.google.com.gh/books?id=IRAxk7sn258C&pg=PA103&lpg=PA103&dq=Frey,+Botan,+Friedman,+%26+Kreps,+1991&source=bl&ots=vhI38Y2dB8&sig=S5jte8YbQKep_

Gazi Ishak Kara, G. K., (2016*). Bank capital regulations around the world: what explains the differences?* Retrieved from https://www.federalreserve.gov/econresdata/feds/2016/files/2016057pap.pdf

Lagarde, C. (2018). *Addressing the dark side of the crypto world.* Retrieved from https://blogs.imf.org/2018/03/13/addressing-the-dark-side-of-the-crypto-world/

Lam, E. (2017). *What the world's central banks are saying about bitcoin*. Retrieved from https://www.bloomberg.com/news/articles/2017-12-15/what-the-world-s-central-banks-are-saying-about-cryptocurrencies

Mar, B., (2017). *The complete beginner's guide to fintech in 2017.* Retrieved from https://www.forbes.com/sites/bernardmarr/2017/02/10/a-complete-beginners-guide-to-fintech-in-2017/#1141b1543340

Masamila, B., Mtenzi, F., Said, J. and Tinabo, R. (2010). A secured mobile payment model for developing markets. *Communications in Computer and Information Science, 87*(2), 175-182

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level of corporate organization. *International Journal of Innovative Research and Advanced Studies, 3.* 10

Mourdoukoutas, P., (2017). *Why big banks attacked bitcoin*. Retrieved from https://www.forbes.com/sites/panosmourdoukoutas/2017/09/14/why-big-banks-attacked-bitcoin/#1c322a826c53

Oxbridge Essay, (n/d). *How to do your dissertation secondary research in 4 steps.* Retrieved from https://www.oxbridgeessays.com/blog/dissertation-ultimate-guide/how-to-dissertation-secondary-research-4-steps/

Špiláčková , M. (2012). *Historical research in social work – Theory and practice.* Retrieved from http://periodika.osu.cz/eris/dok/2012-02/04_historical_research_in_social_work.pdf

Tarud, J. (2017). *Is traditional banking under threat from cryptocurrency?* Retrieved from https://www.koombea.com/blog/cryptocurrency/

Techopedia, (n/d). *Digital currency.* Retrieved from https://www.techopedia.com/definition/6702/digital-currency

The Guardian, (2008). *Three weeks that changed the world*. Retrieved from https://www.theguardian.com/business/2008/dec/28/markets-credit-crunch-banking-2008*the Rise of Shadow Banks.* Retrieved from http://www.nber.org/papers/w23288

Zhao, W. (2018). *IMF Chief Lagarde: Global Cryptocurrency Regulation Is 'Inevitable'.* Retrieved from https://www.coindesk.com/imf-chief-lagarde-global-cryptocurrency-regulation-is-inevitable/graphic.com.gh/business/business-news/bitcoin-is-illegal-bank-of-ghana.html

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