The Impact of Technological Change (Digital Currency) on Traditional Banking

JOSEPH L. A. MENSAH

ABSTRACT

The banking industry is vibrant and provides many resources to both public and private entities. Its existence primarily facilitates the movement of funds from companies and individuals who patronise its activities. With the aim of meeting this primary requirement, the banking institution makes money from the charges levied on clients who demand its services. Notwithstanding the importance of banking activities, the change in technology has brought more competition to the industry. The challenges faced by the industry have resulted in many banking institutions folding up as a result of non-compliance with rules set up by regulators. For this reason, the research investigates the causes of the inability of banks to meet the requirements laid down by regulators. The study indicates that the banking industry is often slow in the adaptation of new processes due to its peculiar culture. However, the inability to quickly adapt to changes in the fast-paced world of changing technology is impacting negatively on the operations of the traditional banking industry. The study identifies some of the current changes such as cryptocurrency, mobile money and the impact they have had on the banking industry. The study recommends the need for the banking industry to quickly adapt to the current changes so as to be competitive in the industry.

Keywords: *Cryptocurrency, Digital currenc, Mobile money, Bitcoin, Ethereum, Ripple, Bitcoin Cash, EOS and Litecoin*

Introduction

The period 2007 to 2009 presented the greatest financial crisis in modern history. It resulted in many financial institutions especially banks declaring bankruptcy due to their inability to mobilise cash to execute their daily operations. Notable among these financial institutes were Merrill Lynch, AIG, Freddie Mac, Fannie Mae and HBOS. The rest were the Royal Bank of Scotland, Bradford & Bingley, Fortis, Hypo and Alliance & Leicester (The Guardian, 2008). In the USA, the bailout of these institutions 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 (Cable News Network, 2009). Among many of the lessons learnt from this financial disturbance is the ability to instill confidence in the banking sector as the loss of confidence spread like wildfire during the credit crunch and threatened to take down the entire global financial system. The lessons also involved the importance of timely recognition of losses after the crisis, rigorous stress testing and the need for carefully strengthening of banks' balance sheets while maintaining a flow of credit to the real economy.

Also, the credit crunch resulted in the tightening of the regulations of the banking sector across the world. This resulted in the increase of regulation burden on traditional banks, thereby shadowing 55% growth of banks. It also explains the growth of Financial Technology (Fintect) by 35% (Buchak et al., 2017). Fintech, a small sector in comparison to the size of financially intermediated assets and capital markets is on the increase. It has the ability to threaten the stability of the banking sector. The influence of FinTech, which 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 analyse the research problem. Desk search is basically on the previous publication and on the current situation of the performance of the banking sector. Analysing the data requires a chronological assessment of the information gathered. The secondary research analysis provides various advantages such as time saving, readily available large data and reliable data collected. Despite the fact that professionals on the said field have already done the work so can be trusted, the limitation cannot be ignored. Some of the disadvantages are: inappropriate data, wrong format and 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 of a person to secure on his/her own money and assets acquired. Another 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 roles in human settings for several centuries or many decades in fostering trust and confidence in the economic system of countries that they serve. The sector ensures constant availability of cash, by motivating clients to save as it provides interest on the amount of money loaned to the bank in the form of savings.

The need for banking started as far back as 2000 BC. Banking, which was derived from the Italian word Banco, started in the Babylonian and Egyptian period during 2000 – 1700 BC., when people kept their

valuables in the temples because it was considered as a divine place and a taboo to steal from it (Beattie, 2018). Due to such perception, inhabitants who lived during this period were encouraged to safe-keep their valuables in the temple. However, the practice profited money lenders which the temple priests found to be unholy thus the administrators of Rome took over the responsibility of keeping valuables in the temple (Beattie, 2018, &Tieo, n/d). Traditional banking which started in 1700 BC has improved in many fronts in order to meet the demands of clients. The existence of traditional banking is challenged at many fronts. Schubent (2017) indicated that the four topmost challenges that bankers and financial institutions face 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 require.
2. The demands of customers' expectations such as technology, put pressure on the banks
3. FinTech creates a big challenge for the traditional banks, because they do not adjust quickly to the changes, as many operate within cultures that restrict immediate adjustment.
4. Increase 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 engaged with their customers. However, practitioners believe that capital or liquidity is the biggest challenge, because of the amplified regulation that the 2008 global financial crunch has brought with it. The varied views remain a good question to be answered. Nevertheless, Klynveld Peat Marwick Goerdeler (KPMG) (2013), indicated that mandate is now important to the banking industry than relentless attention to connecting with customers as a means of building new revenue streams. One of such regulation is the Basel capital adequacy requirement. Kara (2015) suggested that the adoption of Basel principles by the majority of countries around the globe was important. It indicates that the survey done by the Bank for International Settlements (BIS) in 2015, showed that all 27 member countries of the Basel Committee on Banking Supervision (BCBS) had implemented enhanced risk-based capital regulations by the end of 2013. On the other hand, a survey by the Financial Stability Institute (FSI) indicates that 95 out of 117 non-Basel Committee member authorities that were monitored had 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 suggests 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 the recent financial crisis is a strong driving force for more stringent capital regulations. Such regulations have sent shock to the banking industry in Ghana in the form of increased bank reserves or capital requirement. Capital requirement is the minimum amount of capital a bank or any other financial institution has to hold as required by its financial regulator, the central bank, from GH¢ 120 million to GH¢400 million 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 in order 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 make the banking system very costly to run and unattractive compared to the lower initial cost alternatives of the digital currency.

The Impact of Financial Technology (FinTech) on the Banking Industry

Financial Technologies (FinTech) may be defined as technologies used and applied in the financial services sector and the financial institutions at the back end of their businesses, or technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services (Financial Stability Board, 2019). The FinTech industry uses

technology to improve activities in finance. The use of smartphones for mobile banking, investment 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. This is likely to 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. They are able to disrupt the operations of traditional financial institutions and innovate quickly, thereby creating an advantage for the user. Not requiring big investors makes FinTech a fast growing technology all over the world.

Mobile payments and money transfer services have revolutionised the way small businesses start up, accept payments and go global. They are making it easier than ever to start and run a business. Peer-to-peer (P2P) lending platforms provided by FinTech provide credits without bank intermediation where individuals and companies invest in small businesses. P2P lending is growing fast in the United States, UK, Germany, France, Finland and China (Vives, 2017). A more advanced fintech with 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 open the gate to many potential cost-saving innovations, permit currency without the backing of government or an intermediation function of the bank which have specialised in ensuring security among parties in transaction. The activities indicate that FinTech puts enormous pressure on the banking sector, which requires the latter to react immediately.

Mobile Money

The digital era has really changed the face of the banking industry making the customer an absolutely important player on the market. The financial sector has witnessed a tremendous change due to competition as a result of the emergence of mobile devices for carrying out financial transactions (Masamila et al, 2010). The bottom line is that the banks must provide customers with what the customers want but not what the banks wants. The increase in different modes of saving money in addition to the traditional banking, such as mobile money and digital currencies have given customers absolute control and provided varied options for customers to save their money. Mobile money transfer which started as money transfer within countries borders has now gone international. It provides similar banking services at a lower cost, under-cutting the activities of money transfer institutions such as Money Gram and Western Union, which services heavily depend on the traditional banking. The banking industry has suffered many setbacks by the introduction of mobile money transfers as most of the customers of the banking industry, especially countries in Africa, patronise them due to the flexibility and convenience they come with. The activities of mobile money have impacted negatively on the amount of money saved in the banks. It rather increases the amount of money saved on individual wallet of the mobile money (Mpiani, 2016).

The drift to mobile money is purely due to the low cost of transaction and the convenience that it provides, which the customers cherish so much but which the banks do not provide. The increase in drift of customers to other currency saving processes begs the question of whether the bank can 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, 2018). The introduction of digital currency and cryptocurrency such as Bitcoin, Ethereum, Ripple, Bitcoin Cash, EOS and Litecoin just to mention a few, has further worsened the situation of the banking industry. The technology behind cryptocurrency assets including blockchain is an exciting advancement that can help to revolutionise fields beyond finance that provide 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 applications (apps). The possible benefits have even led some central banks to consider the idea of issuing central bank digital currencies (IMF, 2018). This shows 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 require the close attention of the central banks (Alkhalisi, 2018; Lagarde, 2018; & Zhao, 2018). The digital currency is very 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 shares similar sentiments of IMF, and has called for immediate regulation of cryptocurrency, which requires an act of Parliament to regularise the activities in Ghana. The indication is that though the central bank has not yet regularised the activities of cryptocurrency, the activities are 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 act as intermediaries feel threatened as they (the traditional banks) are removed as intermediaries of the market (IMF, 2018). Mourdoukoutas (2017) suggested that Bitcoin is under attack by the big traditional banks and government. They see it as a threat to their operations, since it 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 permit a currency without the backing of government or a trusted go-between- an intermediary function in which banks have specialised (Vives, 2018).

Cryptocurrency and Traditional Banking

As technology impacts significantly on industries with the introduction of technological innovations such as mobile money and bitcoin, there is the need for banks and financial institutions to make critical evaluation of their operations to remain competitive. Digital currencies are decentralised, whereas most traditional currencies are controlled by a centralised government. It is 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 puts the trading in this currency beyond the boundaries of governments and the central banks. The worldwide acceptance of digital currency outside any framework 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 European Central Bank (2015), indicated the flexibility and low cost operation of Bitcoin, showing that users of Bitcoin can handle many of their daily payment needs without the need for interaction with banks and avoid the need to incur bank fees. In the same way, value stored in PayPal accounts moves outside of the bank's payment systems. This deprives banks of valuable payments

revenue (Spaven, 2015). The indication is that the traditional banking industry will not be in the position to raise enough cash from their operations to meet their shareholders' requirement, thereby pushing downward the share value of these banks. As the traditional banking systems have high transactional cost, the digital currency tends to be very fast with very low transactional cost. This makes digital currencies more attractive. These currencies provide services at low transactional cost which are quick and efficient. Providing more digital banking options is what the traditional banking systems need to focus on and improve so as to match up with cryptocurrency.

The Research Question

The research Question for this study is: "How significant is the impact of financial technology on the traditional banking". The question looks into the operations of the banking industry and analyses the impact of this sector vis-a-vis the fast growing financial technology in the industry. Since FinTech and Traditional banking operate in different financial platforms but serve similar purposes, there is the need to investigate the impact of FinTech on traditional banking system in order to arrive at a solution.

According to Das (2017), Disruptive Innovation theory is the process by which technology enables entrants to launch less expensive and more accessible products and services that may gradually replace those of well-established competitors. The result of Disruptive Innovations is that products that initially perform poorly with respect to existing options positioned toward unserved or less attractive segments of the market and ignored by other businesses, may provide solutions that will gradually replace those of well-established competitors. Similarly, FinTech products seem to perform poorly compared with the traditional financial institutions. It (FinTech) is however doing very well in existing informal segment of the financial market, which has been ignored by the traditional bank and may likely overtake the traditional institution. The situation gives cause for concern to investigate the impact on digital currency on traditional banking.

Research theory and methodology

Theories represent tentative solutions to problems, generalisation about a phenomenon and explanation of how or why something occurs (Frey, Botan, Friedman, & Kreps, 1991). The study is descriptive 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 recordings, findings and thoughts, each investigator creates his or her own individual system of documenting as best suits need (Hroch et al., 1985).

The study attempts to analyse the impact of financial technology on the banking sector by using secondary data. Secondary research involves re-analysing, interpreting or reviewing past data. In contrast to primary research, secondary research is easier and inexpensive, 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 based on qualitative data sets (Oxbridge Essays. 2018).The research employs case study analytic procedure which details the description of the case set within its context and uses collective case study with secondary data as the data collection (Mensah, 2016).

Data Analysis

Digitisation is changing many industries across the world and altering the way individuals and companies operate (BBA, 2015). Though banks see digital currency as too risky, the moves to curb the activities and popularity of cryptocurrency have not achieved much success (Lam, 2017). The

central banks around the world are increasingly recognising 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 their volume, it 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 will be very immanent and real. There is the need for an immediate and different approach to how the traditional banks see the digital currency.

The first step to achieve success in the fight against the threat of the operations of digital currencies is to accept them and regularise their activities by establishing regulations for them. As indicated by IMF, there is the need for the traditional banking system to consider introducing digital currencies as this form has come to stay.

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 achieved and be effective, with the efforts close to international cooperation. Since crypto-assets know no borders, the framework to regulate them must be global to effectively tackle the relevant and vexing issue. The regulatory approach provides 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. By embracing cryptocurrencies, governments may reduce the cost of the traditional banking and help to 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 biometrics, artificial intelligence and cryptography to enhance digital security and identify suspicious transactions in real time. Having this in place will give law enforcement and regulatory agencies the ability to quickly detect illegal transactions and stop them in time, in order to help to 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 could lead to development of the payment ecosystem, deepening of financial inclusion and promotion of cash-lite economy. Consequently, the study advises Bank of Ghana to continue to deepen the payment system by leveraging on the widespread usage of mobile phones as alternative channels to access finance. This may help to support improvement in the monetary policy transmission mechanism in Ghana. For the traditional banking sector to survivor in the immediate future, there is the need for absolute collaboration between it and the digital currency operations.

Conclusion

The banking sector plays a very important role within the financial sector and economies by providing much-secured platform for transaction that assure the players in the financial sector. The industry also provides employment to numerous people whose services are rewarded in the form of salary. So, efforts to sustain the activities of the industry are very important as they (the industry) provide a strong base to the economies of the world.

In as much as the banks need to be protected by government in order to provide services in the financial sector, there is the need for the banking institutions to be innovative and quickly adapt to changes in FinTech in order to remain competitive.

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ABOUT THE **AUTHOR**

Dr. Joseph L. A. Mensah

is currently the Coordinator for Salford University Master of Science Programmes at Pentecost University College (PUC) Graduate School. He is also a Lecturer in the Department of Economics, Marketing and Services (EMS) at the Faculty of Business Administration (FBA).

He can be reached on Tel. No. 0555 882 133 and Email: joseph.l.mensah@gmail.com