

Fintechs On Kenya's Banking Industry: A Disruptive Threat?

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ABSTRACT
Fintech is a new technology of financial innovations and solutions which are fueling financial inclusion especially in the developing countries. The digital challenge faced by banks is currently intensifying and the emergence of these alternative non-bank players is creating both opportunities and challenges. FinTechs are creating products and services that are disrupting the incumbents' advantage by addressing specific customer needs and enabling them to do more with less. Throughout the world, we have seen the great shifts in the banking industry with changes from the use of bank tellers to ATMs to online banking, and then to mobile banking. These shifts have forced some banks in Kenya to close branches due to reduced businesses in those branches and to cut costs. Could banks reverse the trends by collaborating with Fintech's and leveraging on their strength in technology-driven software, platforms and infrastructure? Or could this be signaling a new era in world payments in which banks can't cope with? How can the banks work around this challenge? This paper answers these questions and considers the potential threats that Fintechs could bring in to Kenya's banking industry and tries to draw lessons from previous literature and relate these insights to the topic under discussion.
Key Words: Fintech, Revolution, Innovation, Digitalization, disruptive threat
DOI: 10.7176/EJBM/14-8-09
Publication date: April 30th 2022

BACKGROUND INFORMATION

Technological expansion has brought many successes to the banking sector but has also led to many common challenges in banks. FinTech or financial technology is the use of technological concepts to offer financial solutions to banking institutions (Douglas W, Barberis, & Buckley, 2015). Fintech is a new technology of financial innovations and solutions which are fueling financial inclusion especially in the developing countries, in the banking sector. The adoption of the FinTech technology in non-banking institution and the Global Financial Crisis of 2008 has led to the major disruptions of FinTech implementation in banks (Nakaso, 2016).

Financial Technology (Fintech) has a long history. Coad, A., & Rao, R.; (2008), traces the first use of the word Fintech to 1950s. As the years progressed, innovation has constantly assumed a key part in the money related industry in ways that the clear majority underestimate and may not ever observe. In looking at the course of events of fintech improvements, the most recent 65 years portray unprecedented developments. FinTech is recognized to be a growing hype, which has forced banks and financial sector to develop and change its models of doing business (Baur et al. 2015).
According to research, the "hype" itself conveys negative undertone, in which researchers by themselves contrast with concepts such as "trust", "hope" or even "progression". Darker (2003; Puettgen et al. (2003); Verfaillie et al. (2002), in their conclusion take a stab at open bias while talking about the word "hype" in technological advancements. The association between the mainstream media and the research world, is affirmed by a few reports in the fields of biotechnology, institutional management and medicine (Bubela and Caulfield 2004; Ransohoff and Ransohoff 2001). Nonetheless, the research done came to a rather equivocal conclusion.

Despite several researches indicating that mainstream media appropriately reflects several financial technology discoveries in scientific journals, (Bubela and Caulfield 2004) says there is still a lot of miscommunications amongst research and media producers (Ransohoff and Ransohoff 2001). The media adopts diverse strategy in contrast with scholarly journals in giving and featuring data Fintech innovations (Mazza and Alvarez 2000), besides the impact of the prevalent media on hypotheses and practices constantly advancing particularly in Europe (Mazza and Alvarez 2000).

With the introduction of Bitcoin Version 1.0 of the digital currency was discharged in 1999 and incorporated an era framework planned to make 21 million bitcoins through year 2140. It was very clear by then that the paradigm has clearly shifted from the traditional forms of banking. In 2011, Google became the first corporate to build up a Wallet, which enables purchasers to utilize cell phones outfitted with a Near-Field communication (NFC) chip which enables them to tap and make payments. By 2015, more individuals were using mobile banking than the individuals who transact at a physical branch. In 2017, when Alibaba's founder Jack Ma announced, a smile to pay technology, which enables consumers to authorize payments by scanning or 'smiling' on a smartphone (Douglas W, Barberis, & Buckley, 2015).

The digital challenge faced by banks is currently intensifying and the emergence of these alternative non-bank players is creating both opportunities and challenges (Nakaso, 2016). Fintechs are creating products and services that are disrupting the incumbents' advantage by addressing specific customer needs and enabling them to do more with less. It goes without mention that fintech services have revolutionized the speed of access, seamlessly offering customers banking services with simplicity and convenience (Navaretti, Calzolari, & Pozzolo, 2017).

For Kenya's scenario, this has been accelerated by the huge uptake of the mobile money and the many innovations that have been done around M-Pesa. Customers can now access banking services directly from their phones at the comfort of wherever they are. Majority of the bank customers have access to loans directly from their phones, with banks like Commercial Bank of Africa (CBA) recently launching CBA Loop, a Fintech Service where customers can fully transact virtually and even access loans of up to Kshs 3 million (Nyathira, 2012).

REVIEW OBJECTIVES.

This content analysis was guided by the following objectives:

a) To establish the emerging disruptions of Fintech in Kenya's banking industry.
b) To determine Fintech financial innovation to banks in Kenya.

Historical development of Fintechs

There has been extensive research in the area of information systems (IS) to try and find out the reasons why people adopt or refuse to adopt a technology. For the last three decades, banks have hired researchers to consider this, understand, predict and explain how they can utilize these technologies for its competitive advantage (Abbasi et al, 2015).

Since the 1990s, Fintechs have grown in leaps and bounds in revenue generation as well have its contribution to easier access of financial services (Michael Saadat, Criterion Conferences; April 29, 2015). Arner et al. (2015, laid out the development of Fintechs in three different eras and, at that point essentially centered around the difficulties that businesses face from the regulatory and legal perspective. Lee and Teo (2015) likewise defined five key standards of a business concept which can help FinTech organizations in overcoming challenges. For instance, Journal of Management Information Systems (JMIS) few years ago called for papers titled "Exceptional Issue: Financial Information Systems, Underlying Technologies, and the FinTech Revolution". Obviously, organizations and researchers from the area of Finance, Consulting, Business and Technology continuously watch out for the growing new areas of Fintechs and structure the field so as to elaborate on the opportunities and threats from these advancements.

Skan et al. (2015) examines future threats and opportunities for the disruption of the banks, while Cuesta et al. (2015) takes a look at FinTech in connection to digitalization and digital change of the financial institutions especially in the managing of accounts and progressively in the three existing progressive periods of digitalization of bank's procedures: response to the new rivalry, strategic adjustments and technological advancements. The report from the World Economic Forum (2015), demonstrates that technology innovation is inescapable, and its impact will be more pronounced in the banking industry. Also, Fintech disruption is viewed as a continuous process which prompts the business to advance as per the changes in customers' needs and expectations (Nakaso, 2016).

The Fintech Revolution: Emergence of disruptive technologies

It was in 2008 in the America that the Fintech's first breakthrough was realized after the global financial meltdown where the bank needed bailouts, and the banker bonus scandals became a turning point in the financial services sector. Brainard, Lael (2016), clearly stipulates how experts and customers started moving away from the traditional banking service. Its then that the future of the tradition also came into sharp focus and criticism. Most banks are still stuck to the traditional banking while Fintechs offers several arrangements in which its users can easily make payments so conveniently. Fintechs have turned out to be progressively fundamental to the advancement and change of money related services already controlled by banks. Cash exchanges and vendor Mastercard payments that were once difficult and complicated, now have easy interfaces, as organizations keep on creating innovative options (Nyathira, 2012).

With the coming of web innovation, fintech started to directly affect how financial services were finished by the conventional banks. Edge, W. S., and White, L. J. (2014), indicates that Fintechs gave services used by banking institutions that were generally unnoticed by people in general. In the 2000s progressions in Internet, it made it easy for several fintech firms to offer new advanced financial services. PayPal is well known as the pioneer Fintech firm that changed the way people viewed cash while e-Bay was the first online business site that enabled customers to set up online businesses and made it easy for customers to purchase goods online (Coad, An., and Rao, R.; 2008).

Douglas Arner and Janos Barberis (2015) contends that, web opened a totally new era for Fintech business. People looking to offer services similar to the existing banking channels, were now able to offer the same seamlessly. World Wide Web then came up with Web 2.0, which led to the great liberation of Internet services, enabling anyone with good programming skills to develop dynamic solutions running on internet (Coad, An., and Rao, R.; 2008). The trading of cash amongst users and organizations, was decreased to a click and services availed on a mobile phone.

Peer-to-peer lending has been a disruptive trend in banking for several years now, with companies like Lending Club, Prosper, and others taking unsecured loan market share away from banks. For a while, these companies experienced breathtaking growth in their business, with companies like Lending Club's growing by over 300% month on month through 2016 Douglas Arner and Janos Barberis (2015). With all these new and very convenient technologies, it's evident that Fintech sector is here to stay and will only get better as the new technologies emerge.

In the U.S., fintech applications, for example, Venmo and Apple Pay give convenient and secure payment platforms. They are quicker and less expensive compared to sending money through banking channels. Millennials are constantly sending money to each other (P2P) or making online purchases with such applications. Lending systems have also come up where individuals can apply loan online or through a mobile and the granted loans being credited to their accounts in real time. Banks however are still not sure and certain on the security of the technology, sustainability at the market and also management of other risks that come with the technology (Nakaso, 2016).

Disrupt Africa's (2016) report, indicates that 26 Kenyan tech startups raised funding of about $10 million over passing Nigeria and putting the country 2nd behind South Africa. For the Kenyan progress to continue being witnessed in the African fintech space and for this to continue attracting more attention from international Venture Capitalists, FinTech's will have to show that their target market is growing and that their technological solutions are economically scalable by either: Quickly expanding to countries where the adoption rate of mobile money is high, such as Uganda, Ghana, Tanzania, and winning a significant market share, or; Expanding their customers reach beyond the urban middle class, and target the roughly 80% of the population in Africa who live in rural areas and need financial services Douglas Arner and Janos Barberis (2015) .

The failure of 3 Kenyan banks in 2016 and a disruptive moment driven by mobile platforms, has attracted attention to the Banking sector in Kenya. As reported in the (Equity Bank Financial reports, 2016), Equity Bank did 3 times more mobile banking transactions than agency transactions representing 151 million transactions verses 51 million transactions respectively and received almost 4 times more loan applications from phones than physical branches (Equity Bank Annual Report 2016). Kenya Commercial Bank (KCB) report (2017), reported a similar phenomenon with 70% of transactions driven by mobile channels.

Central Bank of Kenya Report (2016) on the banking industry performance, indicated that there are 43 banks in Kenya although two of them are under receivership. The report shows that the asset and revenue growth for the 5 years (2010-2015) was a meager 16% and 17% respectively. The profits were growing slightly lower at 13% per annum, which is much slower than the MPESA that was growing at over 100% growth year on year during the same period. This is in comparison, to the inflation that has been 9% per annum so basically banking assets compared to GDP was increased only by 53%. Throughout the same period, the number of branches opened by the bank increased only by 7% per annum while the number of bank agents grew strongly to 40,592 in 2015. These results have showed that consumers really love convenience hence the huge growth in the number of agents.

Financial Innovation

FinTech is highly connected to financial innovation. Frame and White (2014) give the background of how the recent development in Fintechs has changed in the three categories of: new products, new production processes, new banking services and structures. Financial innovation can be additionally defined as "the demonstration of new and advancing financial concepts, and in addition to new financial advancements, establishments, and markets" (Lerner and Tufano 2011).

Digital innovation is explained by Fichman et al. (2014) as "process, product, or business display that is seen as new, and is empowered by IT". Therefore, researchers give comprehension of FinTech as observed from the perspective of the well-known media. This will help distinguishing the connections between the general innovations and the phenomenon of FinTech.
Researchers have over time changed their focus to financial innovations from alternate points of view: historical view (Miller 1986), functional view (Merton 1995), regulatory view, organizational view, etc. As indicated by Cuesta et al. (2015), FinTech enhancements comes together with worldwide digitalization, and, in this manner, it is likewise imperative to characterize digital innovation, which we additionally allude to technological advancements.

Researchers are keen on distinguishing the key factors that have contributed to the growth FinTech. Studies have shown that tax changes and changes in governmental regulations are by all account not the only motivation to innovations, which creates new opportunities and potential effectiveness of innovations (Frame and White 2004; Miller 1986; Tufano 2003). Frame and White (2004), indicates that one major driver of financial innovation is fundamental advancements in media communications and data processing, which has empowered the use of dig data analysis more precisely and viably (Frame and White 2004; Tufano 2003). Another factor which may encourage financial innovations, as indicated by Frame and White (2004), is unstable macroeconomic conditions, which make financial institutions quite a bit vulnerable to loses and risks of losing revenues, hence they must innovate to stay in business.

Besides, having summarized literature on financial innovation, Tufano (2003) infers different components which fortify financial innovation. This incorporate market inadequacy, to the specific unfulfilled needs of market players; office issues and data asymmetries, alluding to irreconcilable situation between transaction volumes and reduced cost measures, which use innovations to reduce costs. These are primary elements impacting and invigorating financial innovations, proposed by the literature.

It’s important to concede at this point that it’s not every one that alludes to the steady growth of financial innovations is right but instead it’s the dynamics and the evolving customer needs. This relates to the approach of our study – looking at financial technology changes over time. To completely perceive these opportunities, community banks must assess their fundamental product and administration channels considering the new risk postured by fintech organizations. This begins with the retail branches, which is the establishment of product and administration conveyance for most community banks today Douglas Arner and Janos Barberis (2015).

The reduction of the bank branches has been anticipated since the 1990's, as the internet keeps on enabling the users to achieve more remotely. Notwithstanding, we are no place near a branch-less banking at the present reality. As per the Bankrate's Financial Security Index review distributed in December 2017, found that four out of 10 clients had not gone to a bank branch in the previous a half year. To keep up the significance of branches, community banks should search for approaches to make their branches more appealing. One case is simply the utilization of agents and financial booths rather than full-fledged branches. Another option is by transforming branches into well-structured financial support centers that can offer help when clients who lean toward online or mobile banking need personalized assistance (Frame and White 2004; Tufano 2003).

METHODOLOGY

The research employed desktop research to compare the literature available on the emerging of Fintechs, its disruptive effect to banks, innovations and the future of banks with the Fintech technology. Findings, conclusions and recommendations made by other researchers was reviewed hence giving recommendation on the way forward Kenya’s banking sector.

Will we see more Disruption of the Banks?

In the last decade, a couple of enterprises have been immune to the effects of innovative technologies and disruption. Media, retail and transport are three most disrupted of the numerous industries that have experienced technological advancements (Iwamura, Mitsuru and Kanda, Hideki 1995). Management of a bank account has remained generally steady and has not experience much changes, it’s the payment section that has really been affected. Newer and faster modes of payments have emerged. Regulatory frameworks on the management of accounts have been steady too. Entrepreneurs, and organizations looking for capital are progressively being offered more prompt and less expensive access to funding by Fintech organizations. This pattern presents existing credit officers and specialists with numerous challenges ranging from assessing the risks to pricing such conveniently accessed loans (Frame and White 2004; Tufano 2003).

A significant part of the emerging and more revolutionary financial products and services are being driven by supposed 'twenty to thirty-year old's'. Most customers have become acclimated with removal of middle man. Services, for example, Uber, Airbnb and Kickstarter have all upset their services bringing together the consumers and the providers, bypassing the middlemen. It is by this inspiration that we have seen the growth of FinTech adoption throughout the most recent couple of years (He, Habermeier, Leckow, et al (2016).

As indicated by EY Report (2016), users are attracted in to FinTech services by the more alluring rates they give contrasted with the traditional banks. The convenience and easy access to the various products and services are further drivers. The convenience associated with FinTech services was by and large the most appealing feature, as indicated by EY. Arner et al. (2015) opines that much like these other forms of social exchanges, FinTech has turned out to be a great force that can't be ignored in the industry. In countries like Kenya where mobile money is so entrenched, Fintechs have started to usurp the traditional moneylenders, as it offers customers an easier way to access credit and organizations an easier way to run and manage their businesses. FinTech has advanced lately to affect a wide range of payment related services, including Insurance, loan access and processing, savings and remittance.

He, Habermeier, Leckow, et al. (2016), hypothesizes that financing in the worldwide FinTech industry has grown in leaps and bounds in the last few years. They additionally show that FinTech could likewise have enormously affected the incomes of banks. An ongoing report by Santander InnoVentures, the Spanish FinTech venture finance, recommended that the blockchain (the virtually unhackable public ledger technology) could spare moneylenders up to $20bn multi-year in settlement, regulatory and cross-country transfer charges. Nonetheless, while the blockchain could chop down significantly on time and speed of transfers, the presence of such an unregulated framework poses a danger to conventional banks, which could be left with obsolete and legacy frameworks if the blockchain and other FinTech advancements genuinely take off and move toward becoming standard (Frame and White 2004; Tufano 2003).

Vice President of Communications at Klarna, Dr. Erik Engellau-Nilsson (2016), says that given the expanding use of mobile devices and different contactless payment channels, business to consumer payments and other financial developments, appears characteristically favoring the FinTech set ups. As technology and customer expectation keep on evolving, the market for financial services must keep pace, and figure out how to advance. Online payment companies, for example, PayPal made a tremendous progress in the 2000s and influenced organizations to change the way they viewed the new payment channels. FinTech, as well, is fueling online payments, assuring customers that these channels are safe and much convenient.

Few people still adore going to the bank to withdraw money as it used to be in the 1990's, most now prefer using online payment channels, mobile payment channels or even using the ATM rather than queueing in banking halls. This clearly shows that the customer expectations have shifted. It's for this reason that FinTech organizations will have the high ground with regards to building better services for clients. For the time being, it gives the idea that a great part of the focal point of FinTech services will spin around the customer access to their monies and the speed at which they access the same. FinTech is set to affect how customers pay for merchandise. Gradually, we are moving far from conventional online payment modes of Visa or Mastercard's but rather to mobile devices and contactless exchanges. ApplePay's launch in the UK was one of the biggest Fintech stories for the payments space in 2016 (Frame and White 2004; Tufano 2003). With any semblance of Apple and the levels of contactless adoption for the most parts of UK, it is hard to perceive any new start up player breaking into that market. In any case, there will still be some space for progress in the basic innovations which will introduce open doors for little-known FinTech firms.

He, Habermeier, Leckow, et al. (2016), infers that with the advent of Biometric technologies, it's now even easier for Fintech firms to break into geographies that didn't have proper customer registration data. Accordingly, venture capitalists have furrowed many billions of dollars into the FinTech business lately, in the expectation of huge returns following high adoption of technology in the payment space. Throughout the most recent years, the growth of the FinTech providers revenues has been growing in double digits, as per information from a joint (KPMG/FinTech Innovators Report, 2016). Financing the worldwide FinTech industry has significantly increased in the course of recent years, with over $20bn put into the Fintech market a year ago, up by 66 percent in 2014, which was just $12bn.

Future of Banks

Rathnam, R. G., Johnsen, J., and Wen, H. J., (2004), outlines how Banks might be confronted with the stiffest competition from the Fintechs, yet in all actuality, banks accounts are still where paychecks get stored. This implies that the bank should simply adjust itself to tap from the innovative breakthroughs introduced by the Fintechs. The customer deposits still sit with a bank, where the bank can run several products with those deposits from providing fixed deposit services, standing order services etc. Banks give a level of guaranteed security especially in cases where the amounts are too huge to sit in virtual wallets. While new Fintechs seem to be capturing market share in the payment space through its effectiveness and convenience, it is hard to envision a future where banks totally vanish. It will instead rather mutate to begin embracing new innovations in its activities.

Understanding the future of banks comes down to understanding the part that banks play in various markets and locales. At a small retail level, banks gather deposits and make credit options, while likewise encouraging payments. In most developed nations, the use of bank's credit cards for their purchases is considered the most convenient. To show this difference more broadly, the banking penetration in Africa is approximately 35%, compared to 93% in Europe and America. In America for example has about 82,000 bank branches compared to India's 102,000 bank branches for a population that is roughly four times higher (International Data Corporation Report, 2016).

Venkatesh, V., Davis, G. B., & Morris, M. G. (2003), also argues that given the frenetic pace at which the industry is evolving, and the amount of infringement and disruption unleashed upon it by the Fintechs, there is a clear recognition by industry players that only those who understand what the future looks like and are prepared for it are going to play a winning hand and rise to the top.

Some of the key considerations are:

- Banks will need to embrace full digital services: (Frame, W. S., 2014), notes that classic banking activities such as deposits and withdrawals, transfers and payments, loans (both borrowing and repayment), account and funds management, account opening, and customer onboarding are now all possible in customer self-service mode via electronic channels. Due to the ubiquity and trust of customers in their digital gadgets, this has become the preferred mode of accessing bank services for many customers. The wave of banking anytime anywhere has caught on and any bank is in peril whose customers cannot pull money out of their accounts via their gadgets like a magician pulls rabbits out of a hat.

- Banks will need to converge everything on the cellphone: Industry boundaries are getting more blurred by the day, driven by more customer centric service offerings where the consumer is no longer very aware and doesn't give much regard to what industry player is providing a financial service so long as the service is fulfilled satisfactorily. Driven by digital tools, enabling regulation, and the need to bundle complex financial services for simplicity and optimal pricing, the border between previously separate industries of telecommunications, insurance and banking among others is getting erased by the day (Frame, W. S., and White, L. J. 2014). In Kenya today, for example, we have a telco, Safaricom, offering financial services to a customer base bigger than any bank, and Equity Bank providing telecommunication services as a platform to extend the reach of their financial services to millions of their customers.

- Banks will need direct Interface with the customers: A newly established layer of Fintechs is becoming the direct customer interface through which customers are now accessing some of their financial services. A look at the payments and digital lending space in Kenya will reveal a huge volume of business that has been taken away from banks by Fintechs. With the emergence of more customer centric regulation, and the evolution of the classic banking customer into a more empowered and informed individual, barriers that allowed banks to lock in their customers have been broken down, as evidenced very clearly in the multi banked nature of many bank customers today. The future is going to involve very high customer mobility between banks and other financial service providers. There is also a greater level of sharing of customer data between financial institutions e.g. through the Credit Reference Bureaus (Frame and White 2004; Tufano 2003).

- Banks will need customer facing technology: (Broadbent Ben, (2016) indicates that wholesome digital customer experience should be designed, which cuts across different electronic channels with consistency.

Banks now need to plan for a migration from the current silo-based channel solutions scenario to Omni channel digital banking platforms, which provide capability for seamless transition between channels for the customer without a break in the experience or service or any data inconsistencies. These platforms also enable stronger branding via uniform look and feel across channels. The platforms are capable to provide seamless internet, mobile, kiosk/ATM, wallet, customer onboarding and agency banking channels from one backend engine also making new product rollout quick and efficient.

- Banks will need to invest on internal technology: It is imperative that banks invest in the operation of world class core banking systems and keep them up to date on the latest versions to take advantage of system evolution and stability improvements. Frame, W. S., and White, L. J. (2014), indicates that banks must also build the supporting tech around the core banking, especially in the areas of risk management, data management and analytics, as well as integration for straight thru and real-time processing.

CONCLUSION

In conclusion, it's now evident from the preceding empirical data that the banks are facing a threat, which if they manage well, they could turn it into a big opportunity for growth. Whether Fintechs will eliminate traditional banks in the future remains to be seen. But from the empirical evidence gathered in this paper, it's clear Fintechs are here to stay. It's also evident that Fintechs will continue to disrupt the banking sector and the payment space in general. It's up to the banks to think quickly, innovate aggressively and try to catch up with what Fintechs are doing. It's no longer a secret that the customer expectations have shifted, more customers now prefer to carry out their payments at the comfort of their homes using either their mobiles or online channels of payments.

The Accenture Banking Customer Survey (2015), showed that an average bank customer interacts seventeen times with a bank in a month. Out of the seventeen, only two are face to face interactions, all the rest are on other available channels e.g., the mobile application, social media etc. From these numbers, it's evident that banks will have to change tact. The customer behavior already changed. Kenya Commercial Bank (KCB), financial report of 2017, it showed that only 13% of all transactions they processed in 2017 were done at the branch level. Mobile channels accounted for a whopping 60% of all transactions. The statistics above cannot be ignored. Banks need to urgently relook at the strategy especially on channels of access, and how they can serve their customers conveniently. They will have to provide a means by which customers can easily reach them and transact seamlessly. They need to be flexible and embrace social media and all other online channels of access, while mitigating the risks associated with such channels of banking.

RECOMMENDATIONS

With the emergence of fintech in Kenya, a lot of disruption have been realized in the banking sector. Since this technology is here to stay, banks should strategize and deal with the disruptions. They should come up with policies to control the technology and set pace in the use of the fintech in the banking sector.

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