Contemporary Financial Technology Module

Critical Evaluation of Fintech Solution Prototype:

PLEND

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Contents

Introduction

Despite the pandemic and ongoing war between Russia and Ukraine, Financial services all over the world have been able to navigate through these times successfully. This is highlighted in Deloitte (2022) 2023 financial industry outlook article which writes 'financial services organizations across the globe faced the pandemic with remarkable resilience and adaptivity, helping people, organizations, and governments get back on their feet.' While this may seem like a remarkable progress globally, the Nigerian economic situation which has seen its inflation rate rise over these years makes it necessary to ask if the effect of the financial services aid reaches the Nigerian people. According to an article by Luca Ventura (2021), 60% of the Nigerian population are unbanked. Thus, to improve financial inclusion, more digital financial services and fintech innovations need to be created with the aim of reaching the unbanked faster. This notion is supported by Ernst and Young's (2019) Global Fintech Adoption Index which states that 64 percent of the world's population uses fintech applications with 3 out of 4 people being users of money transfer and payment solutions. The prototype employs the peer-to-peer lending model of crowdfunding to provide financial solutions to users improving financial inclusion in Nigeria while providing excellent user experience with the backing of relevant regulatory and privacy laws.

Available technologies

As the world of technology evolves, human usage has continued to adapt to this growth as well. Therefore, it is not surprising that despite the number of unbanked people in Nigeria being at 45 percent, phone ownership and usage is rising standing at 81% in 2020 (British High Commission, 2021). About 25 to 40 million Nigerians use a smartphone with the number expected to rise to 60 percent of the population by 2025 (O'Dea, 2022). With internet penetration at 70% (Ventura, 2021), usage at 37.3% in 2022 and a projected rise to 48% (Sasu, 2022), it is important to build on the current momentum and drive digital financial solutions across the unbanked and SMEs by making financial solutions available through their smartphones. This was the reason behind making the financial solution a mobile application available on the Apple app store and Google play store. According to a survey by MasterCard (2022), 91% Nigerians use digital channels such as mobile apps for financial transactions. Thus, a mobile app would create more inclusion than other channels available. The prototype is connected to relevant banking APIs needed to get relevant customer biometric verification number information as well as credit information and update it when necessary. An article by Gavriluk, V. (2022) featured how APIs are used in Fintech for Banking Integration. Artificial intelligence (AI) was used by the prototype to enhance experience as well as manage risk assessment and reputational scoring; incorporating machine learning to review each user activity and provide suggestions on best ways to manage their credit and reputation score and detect fraud activity. An article titled 'Artificial Intelligence in Fintech Explained' (2022) highlighted how use of AI can improve efficiency and security through threat identification and behavioural analysis. Biometric security was also in place in the prototype providing added security to user. According to an article by Wang, J. (2021), Biometrics can reduce information leakage through simplification of identification in FinTech applications.

User Need

A recent news article by Osuagwu, P., and Umeh J. (2022) headline read that over 17m SMEs still struggle to access loans and research carried out by research from Africa Practice (2021) which stated that 'out of the 59million unbanked Nigerian adults, 73% face lack of documentation as a

barrier to accessing financial services.' With the unbanked and growing number of SMEs in Nigeria, access to enough funds to upscale or start a business idea is very limited. This is due to the numerous procedures and bottlenecks of bank processes when seeking for loan or funding for investors. This has prompted some SMEs, individuals, and entrepreneurs to seek quick loans through loan sharks which leads to loans with very high interest rates and debt-shaming upon inability to pay back. Avoiding such situations, others have sought funds from individuals or a group of individuals to crowdfund the business venture for a lower interest percentage. These individuals who crowdfund are also faced with potential losses due to the borrower inability to pay back or the lack of appropriate risk and value assessment skills by the lender. These financial exclusion problems presented a need to build a solution which will help connect and protect both the lenders and the borrowers. The EFInA report has emphasized that financial inclusion can benefit individuals, families, businesses, and by extension, GDP growth (British High Commission, 2021).

User Experience

Excerpts from a report 'Harnessing Nigerian Fintech's Potential' by Oyeneyin, Kuyoro, and Olanrewaju (2020) on user experience states that 'Digitally savvy, middle-aged and young affluent individuals face poor user experience on products as they expect speed and simplicity'. With that in mind, user experience was improved through digitalization of credit contracts and transactions, automation of credit and repayment activities through wallet creation, and credit risk assessment using artificial Intelligence thereby removing the need for many paperwork and the delays that come with processing in banks. The 'Artificial Intelligence in Fintech Explained' (2022) article highlights the crucial role Artificial intelligence is playing in fintech companies automate procedures and improve outcomes. Insurance on credit was made available to tier-subscribed lenders who give out higher credit amount to borrowers. This is an avenue to boost financial inclusion through the facilitation of micro-insurance as the EFiNA survey suggests that only 2% of Nigerian adults are insured with 18 million uninsured adults interested in microinsurance (British High Commission, 2021). This aim to reduce the effect of losses on the parts of the lenders. Research carried out by Augustine, A. (2019) highlighted one of the threats of crowdfunding as the risk of default by SMEs on the crowdfunding platform thereby leaving the investors at a loss. The digital collateral feature of the prototype was added to provide an option of insurance and collateral for users with digital assets. A 2020 global consumer survey by Statista estimates that 32% of Nigerians have used or owned digital assets at some point (Buchholz, 2021).

Regulatory, privacy and ethical issues

The ethical issue of money laundering through the prototype was raised and this was addressed using the tier system which uses the same Know-Your-Customer (KYC) framework as that of the Central Bank of Nigeria (2013) where users subscribed to higher tiers will have their source of income and wealth reviewed with the need for a reference confirmation as well as other documents required in line with the CBN anti money-laundering and terrorist Financing Laws (2009). Also, in a bid to avoid money laundering and terrorist financing, the prototype follows the ethical stance of the CBN concerning certain digital assets such as cryptocurrencies (CBN 2021a). Thus, abiding by the CBN ban on cryptocurrencies (CBN, 2021b), digital collaterals accepted for use in the prototype was limited to only Non-Fungible Tokens (NFTs). While Biometric security is already a familiar feature amongst technology users, some users might not be comfortable with using their biometric data being stored. Thus, in line with the Nigerian Data Protection Regulation (NDPR) privacy laws, users

have the option of refusing to give consent for storage of their biometric data (OneTrust Data guidance, No date, p. 39).

Personal Reflection

Generally, interests in the prototype were high with much feedback regarding the prototype. For example, concerns regarding ownership of digital assets when used as collaterals. This was a concept I was not educated about and felt I could have been more prepared on. This was clarified by the module tutor who explained that an agreement will be drafted 'on-chain'. Based on the feedback, I read more about the use of digital assets as collaterals, the rise of in-market solutions on ownership such as smart contracts and future transformations such as real-time availability and allocation of tokenized assets and its eligibility as a collateralized asset (Mathieson, 2022). In future engagements, I would be better prepared on topics regarding the use of digital collateral. Another feedback was on the possibility of requesting for credit and getting it approved in advance. For instance, credit request towards a car purchase in two months' time. This feedback was particularly important as it provided insights into a feature that might be important to users.

Finally, the feedback provided were all important and has been useful in perfecting the prototype. Like Serb (2021) in her post about her discussion with Marco Piras, product manager at FYI quoted him saying, 'Product feedback ensures that we aren't going to build products without having an idea of the potential impact of what we build for people. It ultimately helps us to spend less time building things that people don't need.'

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