Key Considerations for Optimal Payment Service Banks (PSBs) in Nigeria

January 2020

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Acknowledgements

The MSC research team and authors[1] of this study would like to express their sincere gratitude to all the representatives from the financial services sector who provided their valuable data and perspectives.

We would like to thank the EFInA team for their crucial support and insights to this work. We also thank the internal and external peer reviewers who took time to review this study to ensure the best quality possible.

Finally, we would like to thank the research team for their effort in collecting the data, developing and reviewing the content of this study: Nancy Kiarie, Maansi Sharda, Peter Karah Charagu, Anup Singh, Tomi Eromosele, Norah Igwe, Folasade Agbejule and Ashley Immanuel.

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Executive summary

National commitment to advance financial inclusion

The Government of Nigeria has made concerted efforts to enhance the economic and social growth of citizens with a special focus on enhancing financial inclusion. Nigeria continues to experience challenges in advancing financial inclusion that stem from various physical, regulatory, and cultural challenges. Stakeholders from the financial services ecosystem have been taking initiatives to enhance financial inclusion. The Central Bank of Nigeria (CBN) wishes to minimise the rate of exclusion down to 20% by 2020[2]. It therefore continues to introduce and implement various strategies to enhance financial inclusion. One of its key strategies is a dedicated focus on national payment systems to drive digital transactions. Payments systems in Nigeria have recently seen some growth with various innovative and timely national payment strategies.

The current onus to advance financial inclusion lies with the banks, with other players providing supporting roles. To achieve the targeted 80% rate of financial inclusion, all stakeholders within the financial ecosystem need to cover a lot of ground. The opportunities are vast in driving financial inclusion through digital financial services, predominantly through mobile phones. Women, youth, and populations in Northern Nigeria will be a key segment to target in order to deepen financial inclusion. However, the value of collaboration and partnership and a clear vision of the existing opportunities will be paramount to achieve the objectives of PSBs to advance financial inclusion.

Right strategies critical to manage new and existing challenges for PSBs

The concept of PSBs draws conflicting opinions from stakeholders on their potential impact in the financial services ecosystem. Telco-owned PSBs are perceived to have the financial muscle, agility, and technological capabilities to advance financial inclusion. However, the biggest concern is the acceptability of PSBs in the market due to brand unfamiliarity. PSBs may additionally face pricing challenges, as financial markets in Nigeria have incumbents that compete purely on lower prices, which may not be sustainable. However, with the right strategies, PSBs – especially telcos – may capitalise on their ability to offer connectivity services to offset the costs incurred.

Regulatory constrictions on offering credit facilities undermine the business case for PSBs, particularly with the associated cost implications to set up and operate. As a new model, PSBs will face new risks particularly regarding KYC requirements in the opening of accounts. Additionally, some applicants lack experience in banking operations, which will require them to build their knowledge while exposing them to risks. Due to their inability to lend, PSBs will be safe from some systemic risks. However, technical and operational risks associated with infrastructure and skilled human resources will be critical to manage.

Competition and collaboration among stakeholders in the Nigerian industry is inevitable with the introduction of PSBs. Industry participants should critically review how they would approach the market and benefit most from these new entrants. While most incumbents do not perceive the entry of PSBs as a threat, the market forces will definitely experience a shift. It would be wise to explore the

[2] Central Bank of Nigeria (2018). *National Financial Inclusion Strategy (Revised)*. [online] Available at: https://www.cbn.gov.ng/out/2019/ccd/national%20financial%20inclusion%20strategy.pdf.

ability to work together to achieve the financial inclusion objectives that have been difficult to achieve this far.

PSBs hold great potential to advance financial inclusion through their inherent strengths: large amounts of capital, strong brand presence, technological advancement, market presence, effective marketing and communication strategies, and ability to scale, among others. While these characteristics are not uniform among all potential PSB applicants, these are evident among telcos that have so far taken the lead in applications for the license. In light of these, measures by the regulator that aim to eliminate the dominance of one single player may be somewhat undermined by the participation of telcos as PSBs.

Key determinants for the successful implementation of PSBs

A majority of the incumbents do not perceive PSBs as a strong contender in the financial space. This could have the negative implication of laxity in innovation efforts in the design and delivery of financial products and services for the end-users. PSBs that are able to implement effective business strategies that focus on the customer value proposition and build strong agent networks will be sustainable. In the following section, we highlight key findings from the financial service ecosystem in Nigeria that will influence the successful implementation of PSBs.

1. **Interpretation and implementation of financial inclusion efforts:** The premise of financial inclusion involves four main components: access, usage, quality, and impact of service. The general understanding of financial inclusion among sector stakeholders leans all financial inclusion efforts towards the rural and marginalised populations. While this is partially accurate, some financial service providers seem to undermine the need for financial inclusion efforts for under-served customer segments in urban areas who are at a higher risk of dropping out of formal financial services. Additionally, experience shows that existing users play a big role to encourage the use of digital financial services among rural populations. Existing financial service providers (FSPs) are missing out on this advantage. New players with this mindset may also fail to advance in their efforts towards financial inclusion.

2. **Infrastructure:** Nigeria faces multiple infrastructure challenges. These challenges, while not new, hinder PSBs from focusing on digital channels of delivery. The absence or limited presence of Information and Communications Technology (ICT) infrastructure has a negative impact on the expansion and reliability of delivery channels. Moreover, the regulations mandate that the PSBs need to have 25% of its business spread across rural areas. The cost implication to establish these access points may be prohibitive to players that lack sufficient liquidity. Additionally, system fluctuations that present challenges for customer transactions will adversely affect customer trust and confidence in digital financial services and PSBs.

3. **Regulatory frameworks:** The regulator has taken a reactive approach to formulating regulations in an effort to learn from other markets and avoid mistakes encountered. In a bid to create an enabling environment and limit monopolies, regulations have been introduced that may hinder participation of certain sector players. Multiple similar regulations, such as the agent banking guidelines, mobile money guidelines and the PSB guidelines that all govern the roll out of agent networks, are challenging to follow and may create confusion. Sector players also perceive the

regulations as lacking clarity and exhibiting gaps in PSB operations. Stakeholders exhibit concerns that the regulations change too frequently and hence limit the willingness to invest. Additionally, the regulator may not have adequate resources to enforce compliance with multiple regulations.

4. **Identity systems:** The identity system in Nigeria is highly fragmented. It is characterised by multiple government agencies that offer Identity Document (ID) services in the country. These ID systems have different uses and may create confusion among users. Many Nigerians lack a form of identity, which contributes to financial exclusion. There is no clear mandate on which form of KYC PSBs should utilise. PSBs are not mandated to utilise the Bank Verification Number (BVN) to open accounts, which exposes them to the risk of fraud in registering customers. Harmonisation or integration of various databases managed by different government bodies will assist to create a unified identity system to facilitate customer acquisition for PSBs.

5. **Competitive landscape:** Many stakeholders are optimistic about the impact of PSBs in advancing financial inclusion. There are expectations that the competitive landscape will be shaken up by the participation of telcos due to their existing strengths and low-cost outreach. Telcos are perceived to have the potential to take financial services to the users in contrast to incumbents. This is due to their capital and liquidity strengths, adaptability, flexibility – especially as compared to traditional banks, and effective marketing and branding strategies. Smaller non-bank players expressed concerns about the capital requirements that may hinder their participation in the PSB bandwagon. The CBN is concerned about creating a balanced collaborative environment. This is because telcos that provide the network connectivity for the delivery of digital financial services through mobile phones may have a strategic advantage over others. The high cost of USSD codes currently charged to players by the mobile network operators may also undermine the business case.

6. **Interoperability:** Interoperability among PSBs will ensure seamless system and transaction processing.

7. **Distribution networks:** Distribution networks are mainly located in urban and semi-urban areas. Existing agent networks experience lower than anticipated rates of activity; Ineffective agent network strategies and agent management structure have contributed to fraud and agent workarounds to earn higher commissions. With an attractive agent value proposition, agents may provide a cost-effective opportunity for PSBs to expand financial inclusion by enhancing the accessibility, affordability, and availability of financial services. The absence of interoperability among mobile operators may limit the uptake of digital financial services or create dominant players.

8. **Financial products and services:** Many formal financial products target high-income or corporate customers. They feature high charges and unfriendly terms for mass-market users. The financial needs of the mass market are not addressed adequately, as existing products are either unaffordable or inappropriate for their unique circumstances. Where products exist, customers have limited awareness of the products, which results in a preference for informal mechanisms. Users of informal mechanisms for financial services find them convenient, trustworthy, and

reliable. The design of formal financial products, therefore, needs to complement existing informal mechanisms.

9. **Users:** The target market for PSBs are low-income, low-literacy individuals who reside in geographically inaccessible areas characterised by information and communications technology infrastructure that are weak or absent. Additionally, cultural and religious influences determine the uptake and usage of formal financial services. The populations most affected by financial exclusion are women, youth, and populations in northern Nigeria. Such excluded participants prefer cash transactions. Therefore, the shift to digital transactions will require intensive financial education efforts to encourage uptake and usage. To serve these customers adequately, PSBs will need to put in place innovative measures to drive awareness, acceptance, uptake, and continued use of digital financial services.

PSBs are likely to face the same challenges experienced by existing financial service providers. This will greatly hinder their ability to advance financial inclusion. Additionally, resistance by other players and the lack of a digital ecosystem that facilitates the advancement of customers on the user journey could greatly affect the potential to scale.

The requirement to have 25% physical presence in the rural areas presents high cost implications due to the necessary investment in technology for scale and reach. The CBN also mandates the establishment of customer service centres which increases set up costs for individual PSB[3]. However, the opportunity to utilise agent networks gives an option for PSBs to establish sustainable agent networks through which they can meet this requirement. The cost to establish and manage these agent networks in addition to other access points may be prohibitive for players without deep pockets.

In addition, the PSBs have been stripped of the ability to offer credit facilities, which include credit cards – a big revenue stream for traditional banks. Regulations also limit how much a customer can hold in a PSB account as compared to traditional banks. However, the ability of PSBs to invest in CBN and government securities reduces their exposure to market risks, as these securities are relatively stable.

PSBs will struggle with aspects, such as low financial literacy, lack of proper KYC documentation, and poverty as they try to provide financial services to the unserved – particularly in the lower market segment. They will need proper marketing and communication efforts for financial education and have to build trust and credibility in the market. The PSBs will have to offer affordable pricing initiatives that are favourable to the lower market segment and provide proper use-cases for the market.

Success of PSBs is hinged on identification of a viable business case for all stakeholders in the ecosystem. However, all stakeholders must exhibit full commitment towards the creation of an

[3] Central Bank of Nigeria (2018). *Guidelines for licensing and regulation of Payment Service Banks in Nigeria*. [online] Available at: https://www.cbn.gov.ng/Out/2018/FPRD/Guidelines%20for%20the%20Licensing%20and%20regulation%20of%20Payment%20Services%20Banks.pdf.

enabling environment not just for PSBs but also for other traditional financial players. Collaborations and partnerships among stakeholders be key to drive PSB sustainability.

1.0 Introduction

In this report, we have analysed the PSBs' ecosystem in Nigeria with a focus on the macro, meso, and micro layers. In addition, we draw a comparative analysis on the implementation of payments banks in India, particularly the regulatory environment, the status of payments banks in India, and the lessons from this implementation of differentiated banking strategy to enhance financial inclusion. The concept of payments banks is new around the world. India provides a good bed for its testing. Hence, the report captures the challenges faced in the design and implementation of payments banks in India, which will be useful for other countries that plan to launch such differentiated banks—as is the case with Nigeria.

Throughout the report, we analyse the readiness of the Nigerian financial ecosystem for the implementation of PSBs in comparison to India's experience in doing so. At the macro level, the report covers the regulatory environment and national-level payment strategies. At the meso level, it provides details of the financial product and services. At the micro level, this report highlights the use-cases for payment service banks and various payment tools available in the country.

2.0 Overview and analysis of the Nigerian ecosystem for PSBs: A contextual analysis

2.1 Macro layer review

2.1.1 High rates of financial exclusion mar the growth of financial services in Nigeria

According to the EFInA Access to Financial Services in Nigeria 2018 Survey, only 48.7% of the Nigerian adult population have access to formal financial services in terms of access to deposit money banks, microfinance banks, mobile money, and insurance or pensions, or both. The CBN declared its commitment to pursue a financial inclusion strategy at the Maya declaration in 2011. The National Financial Inclusion Strategy of 2012, further revised in October, 2018, targets to promote a financial system that all Nigerian adults can access, at an inclusion rate of 80% by 2020.

Advancing financial inclusion in Nigeria would require deepening and broadening meaningful financial services for the citizens in the country. Nigeria faces unique challenges in advancing financial inclusion. 'Banking deserts' exist due to the size of the country combined with the size of the population, which hinders the expansion of distribution networks. This is particularly evident in frontier areas, such as Northern Nigeria and among key segments, such as women, the youth, and micro and small enterprises where the rates of financial exclusion are higher.

According to a cash-in cash-out study by Lagos Business School and BCG, the viability for providers and agents to offer financial services in these regions reduces as they progress further into frontier areas.[4]

[4] Lagos Business School. (2018). *CICO Economics in Nigeria*. [online] Available at: http://sustainabledfs.lbs.edu.ng/FI-Resources/Nigeria_CICO_Economics_Study.pdf.

The following table provides high-level country indicators to set the operational context and compares Nigeria and India.

Table 1: Comparative operational context country indicators

Country indicators	Nigeria	India
Population	195 million[5]	1.37 billion[6]
Rural financial exclusion	78.5%	20.8%
Literacy	79.6%	74.0%
Mobile phone ownership	68.9%	87.3%
Rural population	63.3%	66.5%

2.1.2 The evolving regulation and policy aligned to advance financial inclusion in Nigeria

The CBN has made various efforts to advance financial inclusion, including:

1. Introduction of the Biometric Verification Number (BVN) and tiered KYC regulations to facilitate formal financial access for individuals who lack formal identification;
2. Development of agent banking guidelines to enhance rural access to formal financial services – this was complemented by the Shared Agent Network Expansion Facilities (SANEF) initiative that targets the rollout of 500,000 agents to offer basic financial services and facilitate BVN registration by 2020. Additionally, in 2015, CBN introduced guidelines for the regulation of Super Agents, which allow telcos to offer agent services. This regulation was directed at increasing financial services touchpoints by encouraging multiple player participation in developing agent networks;
3. Development of the National Financial Literacy Framework that seeks to enhance the financial literacy of the Nigerian population;
4. Implementation of the Consumer Protection Framework to enhance trust and confidence in formal financial services;
5. Continued policy reviews to support mobile payment systems and other cash-less payments to enhance affordability, access, and ease of use of financial services;
6. Implementation of credit enhancement programmes to facilitate access to credit for micro, small, and medium enterprises (MSMEs).

The evolving regulation indicates a continued alignment with advancing financial inclusion in Nigeria. Enabling regulations play a key role in driving financial inclusion. The implementation of regulatory and policy frameworks that support digital transactions has been particularly beneficial in growing e-payments.

However, the CBN is yet to implement a clear digital strategy to advance digital transactions that are key for the development of cost-effective distribution networks for operators and users. As providers grow the agent networks, the calculation of cost against revenue in serving populations in the rural and frontier areas may not attract service providers. Establishing physical access points may be challenging. Therefore, a digital strategy is needed to drive digital transactions.

The government developed Vision 2020, a strategic document that acts as a blueprint for the economic and national development of Nigeria. Its key objectives were to optimise the potential of human and natural resources to achieve rapid and sustained economic growth and translate

[5] World Bank, *Nigeria | Data*. [online] Available at: https://data.worldbank.org/country/nigeria?view=chart.
[6] Statisticstimes.com. (2019). *Population of India 2019 - StatisticsTimes.com*. [online] Available at: http://statisticstimes.com/demographics/population-of-india.php.

economic growth into equitable social development – in guaranteeing a dignified and equal existence for all citizens. Key action points included addressing the key constraints to economic development in Nigeria including weak infrastructure, inadequate and unreliable electricity supply; investing in human capital and in creating an enabling environment for industrial growth and infrastructural development[7].

The National ICT policy of 2012 articulates the need to converge various players and policies within the ICT sector to "organise the sector for performance and efficiency, so that it can support the development goals of Nigeria's Vision 20:2020". The key objectives touch on various aspects of ICT, including infrastructure development, universal access, and public and private partnerships that would influence the implementation of PSBs, particularly where a telco expresses interest. However, the oversight institution expected to oversee its implementation has not been set up, which undermines the implementation of the policy.

Key regulatory reforms that drive financial inclusion in India

Payments banks in India are considered a step forward for banking systems and digital payments at large. From the very beginning, the Government of India (GoI) focused on creating a cohesive ecosystem for digital payments that the payments banks could use with ease. The aim was to provide banking services in a reachable and affordable manner through technology. Some key initiates taken by the government to build the payments ecosystem are listed below.

- **Nationwide bank account enrolment programme for *Pradhan Mantri Jan Dhan Yojna* (PMJDY)**: The Government of India launched a nationwide bank account enrolment initiative that did not impose any conditions on minimum deposits. An individual can open a bank account with any bank branch or business correspondent outlet with zero balance. The main objective of this programme was to ensure financial inclusion of every individual who does not have a bank account and provide financial services in an affordable manner to all. The PMJDY programme offered an instant bank account, debit-and-ATM card, accidental insurance and overdraft facility of up to INR 10,000 (USD 140).

  This increased the rate of financial inclusion with many new accounts opened by banks. As per World Bank data, of the 514 million bank accounts opened globally from 2014 to 2017, India accounted for 55% of these accounts. From the launch of the PMJDY programme in August, 2014, until 2018, bank accounts increased by 27%, bringing financial inclusion to 80%[8]. This served to introduce and increase trust and awareness of banking systems with first-time users.
- **Central bank's master direction on issuance and operation of PPIs (digital wallet license)**: Mandatory security requirement from the regulator has heightened the trust in digital payment space for users. The directions have fostered competition and encouraged innovation in the digital space. It has also led to harmonisation and interoperability of prepaid payment Instruments (PPIs).

- **Guidelines on interoperability**: The formation of the National Financial Switch (NFS) brought about interoperability between almost all banks. Most national banks and regional rural banks

[7]The National Planning Commission. (2009). *Economic Transformation Blueprint.* [online] Available at: http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/nigeria/nigeria-vision-20-20-20.pdf
[8] Business Today news. (2018). *India accounts for 55% of new bank accounts opened globally: World Bank.* [Online] Available at: https://www.businesstoday.in/current/economy-politics/india-accounts-for-55-per-cent-of-new-bank-accounts-opened-globally-world-bank/story/275348.html#targetText=Of%20the%2051.4%20crore%20bank,within%20the%20formal%20banking%20system.

(RRBs) are connected through this switch. Customers are able to make interbank transactions easily and instantly. Regulators further issued guidelines to enable interoperability between bank accounts and e-wallets through the Unified Payment Interface (UPI) interface. This means that a user's mobile phone number acts as a key to interoperability between bank accounts and digital wallets. Payments banks have also joined the NFS, enabling ease and convenience of payments via the digital space and through multiple kinds of financial accounts.

- **Building ecosystems around digital payments**: Launch of systems like *Aadhaar* Payments Bridge (APBS) for transfer of government benefits through *Aadhaar* biometrics authentication acts as a core platform for a payments bank to transfer government subsidies to people.

- **Launch of domestic card**: India launched its own domestic debit card – RuPay. This would support various small banks and regional rural banks (RRBs), which are unable to partner with card networks, such as VISA and MasterCard. RuPay came as a pre-bundled offer with new bank account enrolments under the PMJDY programme.

2.1.3 A national strategic focus towards driving digital financial inclusion is evident

The CBN has implemented various payment strategies and supporting bodies to encourage innovation and drive cashless transactions for financial inclusion:

- The **Nigeria Payments System Vision** acts as a guide of the payments landscape strategy with a vision to be 'Nationally utilised, globally recognised'. In 2007, the CBN released National Payments Systems vision 2020 (PSV 2020) that focused on a shift to cashless transactions and a growth in electronic payments systems. In 2009, the government mandated that all payments from the federal entities would be made through electronic channels. It deployed a 'cashless policy' in 2012, which intended to drive the prevalence of POS devices to facilitate electronic payments. Yet this was suspended in 2017 in 30 states. However, full nationwide implementation is expected to commence in March 2020. Additionally, reviews on withdrawal charges for certain transactions were swept away but later re-introduced, which reduced the momentum towards the growth of e-payments.

- The **National Payments Vision 2013 (PSV 2020 release 2)** was created to benchmark the national payments systems against global standards, enhance standards of consumer protection and risk management. The benchmarking process would be encompassed in a regulatory framework that encourages innovation but protects and maintains the stability of the payments systems.

- CBN has introduced various payments guidelines and frameworks, such as the Mobile Money regulatory framework and the agent banking guidelines.

- Various payments processing institutions responsible for facilitating payment systems came into existence. **Nigeria Inter-Bank Settlement System Plc (NIBSS)** was set up to facilitate electronic payments and interoperability among member banks. It supports all interbank credit and debit transactions, electronic funds transfers, automated cheque clearing, and real-time account-to-account payments, among others.

A number of other key players are also in the fray. **Interswitch** is a commercial institution that offers payments processing services and a switching infrastructure for payment routing. **SystemSpecs** provides electronic payment platforms to government entities and corporate organisations. **eTranzact** provides a multi-channel electronic transaction switching and payment processing platform. **Unified Payments** provides payment services that support different payment options and programmes. These payment programmes enjoy majority ownership by licensed banks in Nigeria. This means that the participation of institutions other than banks in these payment programmes could be costly or complicated and would require unique partnerships or collaborations with licensed banks.

Following the launch of the PSV 2020, Nigeria has seen a growth in numbers of electronic payments. The CBN mandates interoperability for all card and mobile-based payment channels. By policy, all organisations that offer payment services must connect to the Nigeria Central Switch (NCS) facilitated by NIBSS. The current financial system in Nigeria is highly fragmented, with many proprietary branded DFS players. Although possible, transactions across the different players are rare. The lack of open APIs and MOUs between the financial institutions and other stakeholders creates a gap in the adoption of DFS while increasing network complexity.

National payment strategies in India

The Government of India has worked extensively to ramp up the digital banking and payment infrastructure of the country in the past decade. Through its various initiatives, the government continues to bring banking services closer to the people and has framed legislations to make formal banking and payments more attractive to the customer. The section below lists key national payment strategies that would also affect the growth of payments banks in India.

Digital India is an umbrella programme of the Government of India, which contains a host of initiatives that work to create a digitally empowered society. Various initiatives pertaining to digital payments in the areas of infrastructure and services have been undertaken under this programme:

Infrastructure related

- *Aadhaar*, a biometric-based identification system finds extensive use for social and financial inclusion, and public sector delivery reforms, among others. Out of the 1.3 billion population, 1.2 billion Indians have enrolled under *Aadhaar* systems as per its database;
- DigiLocker is a platform for issuance and verification of documents in a digital way, thus eliminating the use of physical documents;
- Direct Benefit Transfer (DBT) using APBS was introduced to ensure efficiency, transparency, accountability, and effectiveness in the Government delivery system. DBT came into being to ensure accurate targeting of beneficiaries and reduction of fraud;
- SWIFT (Single Interface for Trade) allows exporters and importers the facility to lodge their clearance documents online at a single point.

Services related

- Bharat Interface for Money (BHIM) is an app that uses UPI and enables direct bank-to-bank payments and collection of money using a mobile number or Virtual Payment Address. It makes payment transactions simple, easy, and quick without the hassle of remembering bank account numbers and IFSC codes.
- The National Scholarship Portal is a digital solution for an end-to-end scholarship process. It came into being to make the disbursal of scholarships faster and effective and deliver funds directly into the beneficiaries' account without any leakages.
- The Crop Insurance mobile app is an Android application that farmers can use to calculate insurance premiums for notified crops. It can also be used to get details of the normal sum insured, subsidy information of any crop, among other information.

Empowerment related

- The AEPS model allows online interoperable financial transactions at PoS through a BC agent using *Aadhaar* authentication.
- PayGov India is a national payment service platform that provides a common e-governance infrastructure to offer an end-to-end transactional experience for citizens. It facilitates access to various government services using the internet with a payment gateway interface for payments.
- The government has also undertaken other regulatory initiatives, such as no excise duty on point-of-sale devices, capping of merchant discount rate, benefits of lower income tax on digital turnover, among others under the Digital India programme to pave the way towards a cashless society.

India Stack is a collection of open application programming interfaces (APIs) that allows governments and businesses to utilise the unique digital infrastructure and lead the country towards presence less, paperless, and cashless service delivery.

Unified Payments Interface (UPI): With the withdrawal of high-denomination currency in November 2016 and the subsequent policy push for digital payments, UPI worked as a game-changer in payments or remittances for all banks. With a simple interface, UPI has picked up the pace with the government and all banks promoting it. The government launched UPI 2.0 in 2018 with new features like doubled transaction limit to INR 200,000 (USD 3,000), linking an overdraft-enabled bank account, a one-time mandate to pre-authorise payments, invoices in the inbox, among others. The new features will allow payment providers, including banks, to access data on customer behaviour. This can enable better credit risk assessments for all its partners – including PSBs.

Shared KYC to eKYC norms: In 2015, the RBI ruled that payments banks would need to do their own KYC as any other bank, even if the promoter company was a telecom company. However, realising a shared KYC will be more cost-effective than duplicating the same effort, in 2016, the Unique Identification Authority of India (UIDAI) allowed sharing of eKYC based on users' consent. The *Aadhaar*-enabled eKYC process is estimated to cost INR 5 compared to the regular paper-based KYC process, which is estimated at INR 40 (USD 0.6) (GSMA, 2016). The process, however, saw its own uncertainties when it moved from the restriction of eKYC for private entities by Supreme Court in 2018 and later being removed to only customer consent-based eKYC in 2019.

Bharat Bill Payment System is an integrated bill payment system that uses the NPCI structure to offer interoperable and accessible bill payment services to customers, enabling multiple payment modes. BBPS is allowed for bill payment in five categories: electricity, water, direct-to-home, gas, and telecom (post-paid). For customers, BBPS was initiated to increase the number of payment touchpoints, and the ability to pay a wide range of bills using any mode of payment. For billers, BBPS came into being to decrease collection costs significantly and to move bill collection from an expensive process that involved multiple follow-ups, into a cost-effective, low-touch process.

Globally, payments systems are a key concern, not only among traditional financial institutions but also among other key stakeholders within the payments ecosystem. The existence of non-bank and informal financial institutions requires a concerted effort by regulators to evolve. This is key to ensure that the national payment system supports innovation in payment products and services without compromising the safety, effectiveness, and efficiency of the payments ecosystem. However, in keeping up with the changes, regulators must be careful to limit regulatory changes that prohibit implementation.

2.1.4 Inadequate physical and ICT infrastructure constrains the landscape of financial services

The ICT sector in Nigeria has experienced reduced investment after the economic recession in 2015 and 2016. According to a study by Research ICT, political and regulatory pressure compounded by forex scarcity that affected exchange rates negatively has reduced investment into the ICT sector.

Table 2: ICT industry statistics

Indicator	Score
Tele-density	91.65%
Subscribers on mobile GSM	174.67 million
Subscribers of Internet data on GSM	122.7 million
Broadband penetration	33.72%
Source: Nigeria Communications Commission, Industry statistics, July 2019	

Four key players currently dominate the ICT sector. They are MTN (37.56%), Globacom (27%), Airtel (26%), and 9mobile (9%).[9] Voice and SMS bundles are still more dominant in Nigeria as compared to data bundles – although they are priced affordably. This could negatively affect the ability of ICT players to offer digital financial services that rely on applications that utilise data.

Adequate regulatory frameworks for broadband rollout have not been implemented, which has hindered the necessary investment in network expansion. This, in turn, means less infrastructural investment, which has left massive areas of Nigeria unserved by telecommunications infrastructure. Additionally, Nigeria lacks sufficient network for transmission of data – an issue that is coupled with poor quality of voice and data services. In certain regions, the dominance of one player is evident, characterised by strong reception on one network and not on the other. Currently, Nigeria lacks frameworks that encourage infrastructure sharing among sector players.

MTN is capital-heavy enough to extend its investment in network expansion. However, this dominance presents a competitive liability that could allow it to monopolise in delivering digital financial services. The ability to extend networks presents the largest barrier for many financial institutions. As a PSB, this ability could be the key driver to ensure service delivery to rural populations. The absence of incentives for external players to enter and operate in the Nigerian market, such as lower licensing fees, tax rebates, and fiscal rebates, among others, has seen some players like Etisalat exiting the market. Punitive penalties, such as the NGN 5 billion charged to MTN for SIM registration failures could discourage further investment. As a result, the expansion of networks to facilitate the operations of PSBs and other players could be constricted greatly.

Additional challenges negatively influence the investment by operators to expand broadband services in Nigeria. These include:

- Heavy taxation of service providers, which arises from multiple levels of taxation at the federal, state, and local governments;
- Delayed and bothersome processes in approvals for the right of way permits and arbitrary costing models for leasing of transmission infrastructure;

[9] Nigeria Communications Commission. (2019). Industry Statistics. [online] Available at: https://www.ncc.gov.ng/stakeholder/statistics-reports/industry-overview#view-graphs-tables-2

- Lack of political will, political influence, and lack of commitment towards encouraging investments from operators;
- Inadequate maintenance standards and damage to existing infrastructure;
- Absence of a reliable power and energy grid;
- Limited foundational infrastructure to support network expansion;
- The fact that operators continue to experience deteriorating operating conditions within the regulated communications sector, including challenges with licensing and approvals to set up base stations;
- Destruction and damage to masts and network infrastructure, particularly in areas of unrest.

NCC supports MNOs to invest in areas with low viability. It does this through policy changes, subsidies, licensing of infrastructure companies, and by creating awareness among government officials involved in licensing and taxation on the necessity of network and internet connectivity. USSD pricing is a key concern, with many banks complaining of exorbitant charges by telcos.

In August 2019, NCC released a circular on determination of USSD pricing based on a cost study conducted by PwC to determine the fair cost of USSD services. This pricing took effect in September, 2019. It has been fronted as a first step towards managing some of the issues between telcos and banks around USSD pricing.[10] However, this price determination was not well accepted by the financial services providers as it is seen as an increase in USSD cost. Communication of the USSD price by a major telco in Nigeria further led to a lot of backlash from consumers and the public. This led to the Minister for Communication directing that all customers charges be suspended till further notice, leaving the telcos to bear the USSD charge. The telcos are negotiating with the financial service providers on paying up the charges as the costs being incurred may discourage the telcos from providing optimal USSD services, if not profitable.

All these play a key role in the ease with which Financial Service Providers (FSPs) are able to roll out and deliver easily accessible and reliable financial services. Our work with various financial institutions and agents in Nigeria indicates that system downtime is the biggest challenge that agents encounter in serving customers. It is paramount that transactions are real-time and issue instant receipts, particularly for the targeted segments, to build confidence in using digital channels. Reliable networks that adequately support mobile or card transactions alone can build this.

2.1.5 Fragmented identity systems limit access to formal financial services and increase risk

Nigeria hosts a fragmented ID landscape, which creates significant costs for the federal government. Over 13 government agencies and at least three state agencies offer ID services in Nigeria. The government agencies include the National Identity Management Commission (NIMC), National Population Commission (NPoPC), NIBSS, Independent National Electoral Commission (INEC), and Nigerian Communications Commission (NCC). Many of these agencies capture biometrics and issue identity cards independently without establishing links with other systems, which results in duplication and waste of resources. The multiple identity systems in Nigeria create duplication and increase costs.

[10] Nigeria Communications Commission. (2019). Determination of USSD pricing. [online] Available at: https://ncc.gov.ng/docman-main/legal-regulatory/legal-determinations/831-determination-on-ussd-pricing/file

National Identification Number (NIN) is linked to a National Electronic Identity Card (eID)

The new NIMC implementation roadmap has shifted its focus from card issuance to issuing NIN. NIMC has further partnered with other public and private entities who will act as franchises to issue NIN for Nigerian citizens. The pilot phase of distributing 13 million eID cards began in August, 2014. As of November 2018, Nigeria issued 33 million NIN, covering 34% of the adult population and 18% of the total population in the country.[11] Residents pre-enrol through filling a form online on some of the personal details but can only finish registration upon visiting a registration centre to offer their physical details, such as ten fingerprints, head-to-shoulder photo, and digital signature. The card can be used for electronic identity, payments, electronic public key infrastructure (ePKI), and International Civil Aviation Organisation (ICAO) for travel.

Bank Verification Number (BVN) is designed to secure financial transactions

Registration involves walking into any bank branch where the individual has a bank account or intends to open a bank account. Anyone above the age of 18 years can acquire a BVN. NIBSS shares the BVN via an SMS alert 24 hours after registration. The BVN can be used across all banks. In a bid to increase enrolment, NIBSS has made the provision of offline BVN kits to register people who live in rural areas[12]. Additionally, agents may register customers through the BVN. They receive the biometric scanner from NIBSS but have to acquire other required devices for registration. The BVN was made mandatory for all who own a bank account by the end of October, 2015. It expires after 10 years and the customer is required to re-register for it.

At the time of writing, the programme was still actively enrolling after the deadline to register for a BVN was extended to October 31st, 2015, at which point it would be required for all formal banking and financial transactions in Nigeria. As of November 10, 2019, NIBSS has issued BVNs to about 39.9 million people in Nigeria or about 40% of the adult population in the country.

[11] ITU Focus Group. (2016). Review of National Identity Programs. [online] Available on: https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/Review%20of%20National%20Identity%20Programs.pdf

[12] ITU Focus Group. (2016). Review of National Identity Programs. [online] Available on: https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/Review%20of%20National%20Identity%20Programs.pdf

Case study: Identity systems in Nigeria

The technical underpinnings of NIN and BVN vary significantly

Basic details

ID type	Target population	Registration age	Launched	Coverage rate (amongst adults)	Coverage rate (amongst target population)
NIN and eID	All citizens and residents	Birth	2007	34%	18% (entire population is target)
BVN	Only citizens who are eligible for banking	Not specified	2014	40%	60% (all banked adults are the target)

Technical details

ID type	Physical credentials	Electronic component	Personal information				Biometric information					Physical credential includes a photo
			Name	Gender	Date of Birth	Other (religion, birth place, etc.)	Fingerprint	Face	Eye	Voice	DNA	
NIN and eID	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes
BVN	No	Yes	Yes	No	Yes	No	Yes	Yes	No	No	No	No

NIN is used for a wide range of digital governance applications

Utility

ID type	Financial services	Social transfers	Health	Agriculture	Elections	Other functions
NIN and eID	• Digital banking • Know-Your-Customer	• Social security • Registrations	• Registrations	• Distribution of subsidies • Digitally monitoring delivery and receipt of subsidies	• Voter registration	• Know-Your-Customer • Tax payments
BVN	Know-Your-Customer	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Source: Review of National Identity Programs, ITU-T Focus Group Digital Financial Services, MSC analysis

Figure 1: Identity systems in Nigeria

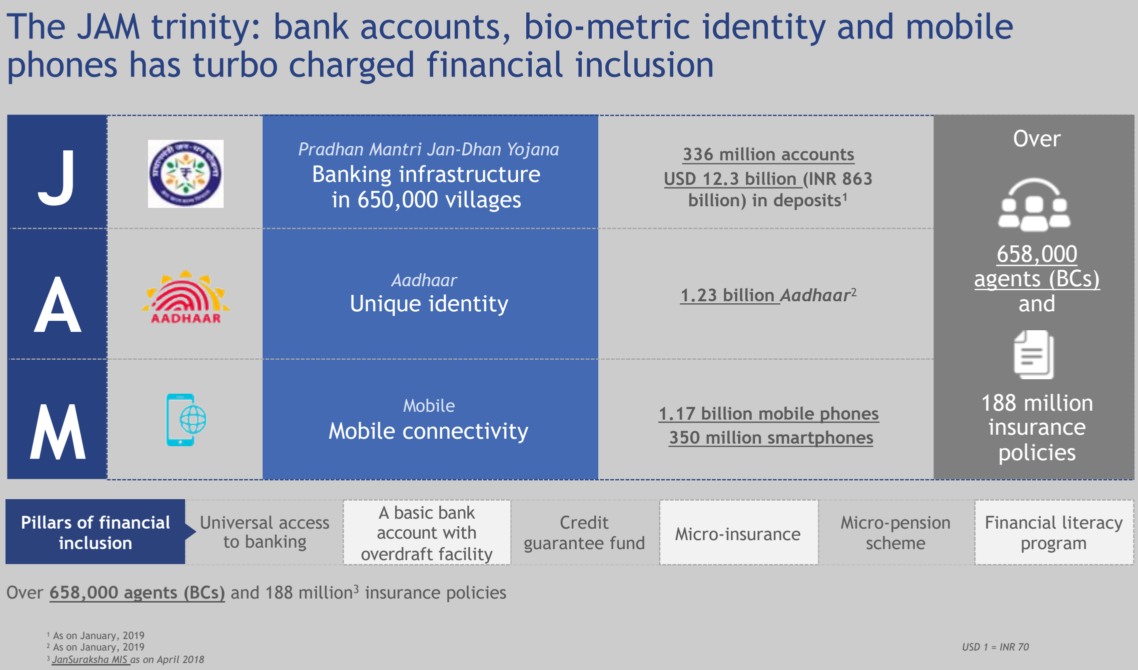
A number of challenges plague the existing identity systems

- **Low enrolment**: Limited access to resources acts as a barrier to carrying out effective registration campaigns. Further, the lack of logistical support, guidelines, or public awareness regarding the enrolment process, geographic barriers comprises the key constraints to comprehensive coverage
- **Interoperability**: The lack of clear legal frameworks and delegation of responsibilities by governing bodies in Nigeria results in challenges in the interoperability of identification programmes with other national systems. The National Identity Management Commission (NIMC) contested the legal right of the BVN programme to register citizens using biometric information, which claimed the dominant role in identification matters. However, NIMC and CBN later agreed to harmonise the databases
- **Lack of harmonisation** has led to considerable duplication of efforts and poor use of resources. Government agencies have been trying to solve the same problem through parallel efforts, which leads to poor fiscal spending
- **Lack of clear policy direction** has created a sense of confusion among Nigerians on the proper identification to acquire

- **Need for BVN for financial inclusion:** The connection between KYC for financial transactions and the BVN initiative poses a possible threat to increased financial inclusion. BVN assigns a single identification number to bank account owners for verification at all banks and points of transaction. The centralised biometric-based system is expected to increase the efficiency of banking operations and establish a single, standard identification form that meets KYC requirements for all customers. However, BVN became the only accepted form of verification to access accounts or make transactions following the end of the registration period in 2015. NIMC contested the legal right of the BVN program to register citizens using biometric information. NIMC claimed the dominant role in identification matters, both parties later agreed to harmonise the databases
- **Limited access to resources** bars effective registration campaigns for the populace. The technology required for BVN registration is expensive to acquire. Weak network infrastructure to support the BVN devices hinders effective customer registration
- Lack of clear, legal frameworks and delegation of responsibilities by governing bodies in Nigeria cause **challenges in interoperability** of identification programmes with other national systems
- Lack of logistical support, guidelines, or public awareness regarding the enrolment process, geographic barriers are the **key constraints to a comprehensive coverage**

Case study on JAM from the Indian market

An abbreviation of *Jan Dhan Yojana, Aadhaar*, and mobile number, the JAM trinity refers to the initiative of GoI to link *Jan Dhan* accounts, mobile numbers, and *Aadhaar* cards of Indians to implement the Direct Benefit Transfer (DBT) at a large scale. The initiative relies on these three modes of identification to deliver benefits directly to India's poor. The main objective of the JAM trinity was to plug the leakages of government subsidies. With *Aadhaar* helping in direct biometric identification of the beneficiaries and *Jan Dhan* bank accounts and mobile phones allowing direct transfer of funds into their accounts, it worked to cut out all the intermediaries.



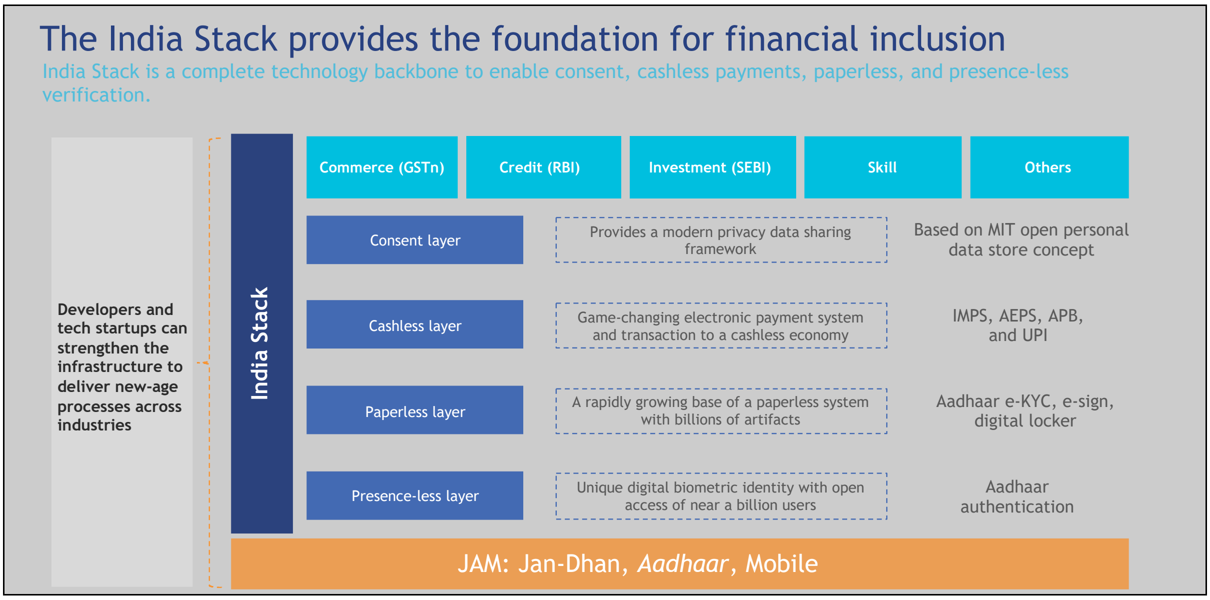


Figure 2: Case study of JAM trinity from India

2.2 Meso layer review

2.2.1 Mobile Network Operators (MNO) perceived as key potential PSBs

A considerable number of industry players offer slightly differentiated products but have been unable to deepen financial inclusion. The Nigerian financial ecosystem consists of banks, mobile money operators, FinTechs, and third-party providers (aggregators). These include 23 commercial banks, 920 microfinance banks, and 21 (2014) mobile money operators[13]. The fragmented digital financial landscape features many individual players – each promoting proprietary systems. As of 2016, the top five banks[14] had a combined market share of 62%, with the largest being the FirstBank of Nigeria (FBN). Mobile money operators, on the other hand, comprise most notably Paga and eTranzact. The participation of telcos as PSBs will be key to drive financial inclusion, as mobile phone penetration currently stands at 172 million[15], representing 87% of the population.

[13] Bank of Nigeria. Financial institutions. Available at: https://www.cbn.gov.ng/Supervision/finstitutions.asp Central

[14] Infomineo. (2016) *Nigeria banking sector* [online] Available at: https://infomineo.com/nigeria-banking-sector/nigeria-banking-sector-market-structure/

[15] Jumia. (2019). *Mobile Report*. [online] Available at: https://www.jumia.com.ng/mobile-report/

Number of subscribers and percentage market share by telecom operator

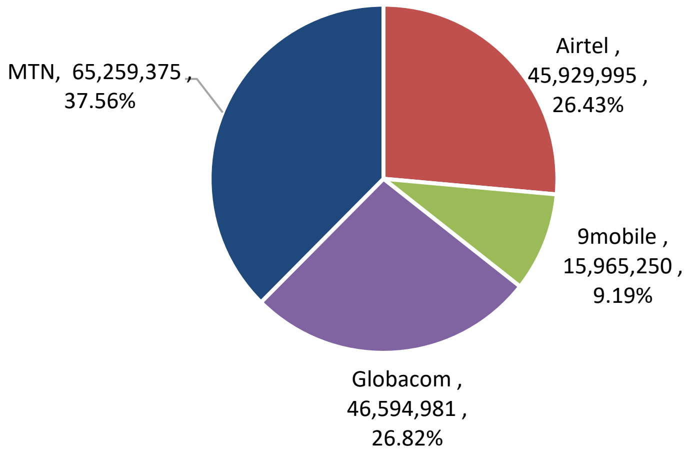


Figure 3: Telco market share and subscriber data, August 2019

The PSBs regulation allows the participation of these players in the financial services space. The participation of bigger players, such as telcos and switches that are able to raise the funding requirement to be a PSB will largely modify the competitive landscape. For smaller fintech players, the business case to warrant the investment of NGN 5 billion is unclear. MTN and Airtel have shown their interest in launching PSBs. Additionally, MTN has applied for a PSB license after recently receiving approval to become a super-agent. Players, such as switches and payment system providers, have an opportunity to participate in the PSB ecosystem mainly by facilitating payments through their technical strengths. Collaborations and partnerships will be key to drive their business case while managing conflict of interests with other partners.

Mobile money operators (MMOs) and super agents have established agent networks and market knowledge from participation in the financial services sector. Additionally, fintechs and other technology providers have technology strength that allows them to participate in the PSB space. The value proposition that PSBs can offer to agents and to the end-users will greatly determine the competitive landscape. This is particularly so as PSBs are operating with a limited scope of investment and product offering. The following tables provide a comparative distinction between various financial institutions in Nigeria and India.

Operational scope for key players in Nigeria

Attributes	Payment service banks	Commercial banks	Mobile money operators
Deposit-taking	Accept deposits for savings and provide withdrawals	Accept deposits for savings and operate current and savings accounts	Facilitate transfer of cash and withdrawals
Payments and remittances	Carry out payments and remittances	Carry out payments and remittances	Carry out payments and remittances
Cards	Issue debit and prepaid cards	Issue debit and prepaid cards	No debit or prepaid card
Investment	Invest in FGN and CBN securities	Invest in non-convertible debt instruments and also undertake fixed-income trading	Not permitted to invest in non-convertible debt instruments
Agent networks	Operate agents	Operate agents	Operate agents
Distribution networks	Establish ATMs	Establish ATMs	Do not own ATMs, as they must have the backing of a bank. Users can cash-out from other ATMs
Presence	Operate mostly in rural areas, not less than 25% in the rural areas	Operate anywhere in the country	Operate anywhere in the country
Credit facilities	Not allowed to issue credit or loan facilities	Provide credit facilities	Not allowed to issue credit or loan facilities
Foreign exchange	Not allowed to deal in foreign exchange	Deal in foreign exchange services	Not allowed to deal in foreign exchange

The competitive landscape for PSBs in India

Attributes	Traditional banks	Payments banks	FinTech players (PPI license holder)	MFI (a type of NBFC)
License	Approval by RBI	Approval by RBI, 11 licenses given so far. Only 5 Payments Banks are live today	Approval by RBI, given for 5 years and then renewed	Approval by RBI
Capital requirements	The initial minimum paid-up capital for a bank is INR 5 billion (USD 70 million). A minimum net worth of INR 500 million (USD 7 million) at all times	The minimum paid-up equity capital is INR 1 billion (USD 14.08m). A leverage ratio of not less than 3% i.e. its outside liabilities should not increase more than 33.33 times its net worth (paid-up capital and reserves)	A minimum net worth of INR 50 million (USD 700K) on application; by the end of the third FY. A minimum net worth of INR 15 crores (USD 2.1 million) to be maintained at all times	The initial minimum paid-up capital for an MFI is INR 100,000 (USD 1,400). A minimum net worth of INR 20 million (USD 280K) to be maintained at all times
Loans	Can lend	Cannot lend	Cannot lend	Can lend
Types of deposits	All deposits allowed	No fixed or recurring deposits allowed – only saving and current	No deposits, no interests allowed on amounts outstanding on PPI.	No deposits allowed
Deposits balance	No restrictions per customer	Maximum end-of-day balance of INR 100,000 (USD 1,400) per customer	Maximum loading of a prepaid account depends on instruments - e.g. amount outstanding not exceeding INR 10,000 (USD 141) for semi-closed with minimum KYC and not exceeding	No demand deposits; NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself

Attributes	Traditional banks	Payments banks	FinTech players (PPI license holder)	MFI (a type of NBFC)
			INR 100,000 (USD 1,400) with full KYC	
Reserve requirements	Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) as per RBI policy	Locked in liquid assets approved by RBI	Locked in escrow with a commercial bank	Not less than 85% of its assets in the nature of qualifying assets

2.2.2 'Silo' functionalities of key players undermine interoperability in the financial space

The CBN has mandated interoperability for all card and mobile-based payment channels. By policy, all organisations that offer payment services must connect to the NCS. NIBSS operates the national switch. It facilitates all mobile money and bank interoperability to allow access to the payment infrastructure across the payment systems of member banks in the financial services system.

The highly fragmented nature of the financial system in Nigeria is characterised by many proprietary-branded digital financial services players. Transactions across the different players although possible are rare[16]. The absence of open APIs and MOUs between the financial institutions and other stakeholders limits interoperability and increases network complexity. To participate in the financial sector, PSBs would need to become members of NIBSS or other existing payment systems.

Nigeria has currently adopted 2 mobile payments models; 'bank-led' which enables a bank to be the lead initiator, or, 'non-bank led' enabling non-bank mobile money operators to work with a sponsoring bank in delivering mobile money services. Experience from various markets indicates complex dynamics in managing these partnerships for the benefit of all partners involved. Identifying a positive collaborative framework would be paramount.

2.2.3 Financial services are not market led to enhance trust in formal financial services

Various key indicators for the access to formal financial usage reflect the lack of confidence in formal financial services. According to the Finclusion Nigeria wave 5 report, usage and access to banks declined in 2017 by 5 percentage points to 30%.[17] At the same time, mobile money usage is at 2%, with most users holding a registered account with a bank.

As per the EFInA Access to Financial Services in Nigeria 2018 Survey, the usage of financial services products in the Nigerian market was as below.

[16] USAID. (2018). *Enabling market conditions for Pay as You Go Solar*. [online] Available at: https://www.usaid.gov/sites/default/files/documents/1860/Enabling_Market_Conditions_for_Pay-As-You-Go_Solar_Executive_Summary.pdf

[17] Intermedia, Financial Inclusion Insights. (2018) *Nigeria Wave 5 Report*. [online] Available at: http://finclusion.org/uploads/file/nigeria-wave-5-report_final.pdf

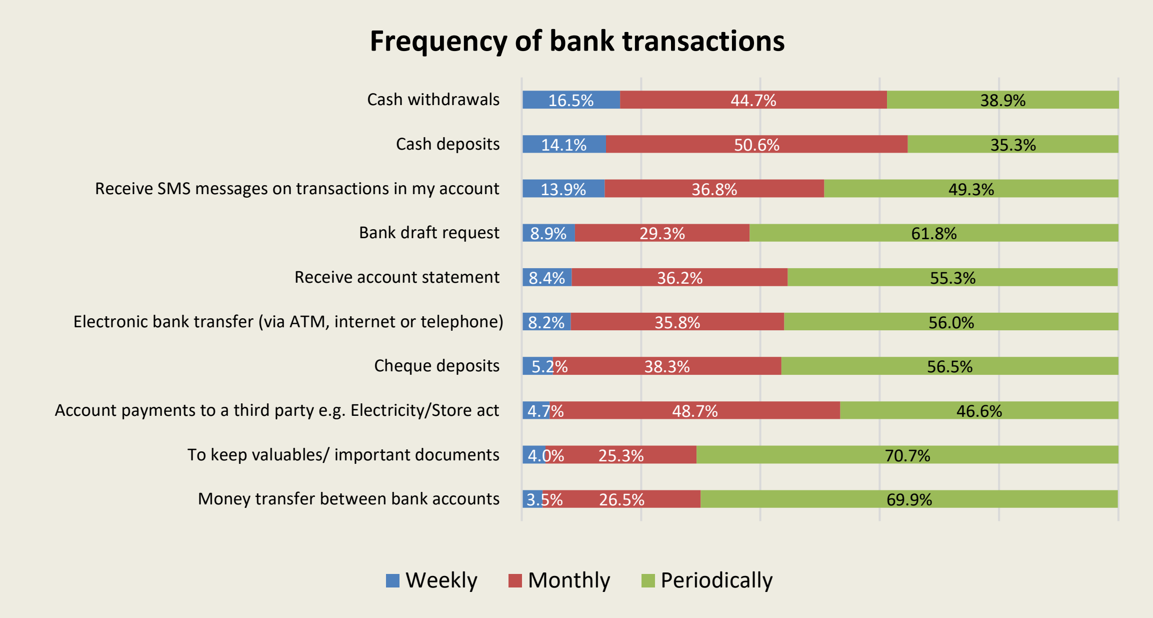


Figure 4: Frequency of banking transactions in Nigeria

The table indicates that 16.5% of Nigerians conduct cash withdrawals on a weekly basis. Whereas 50.6% of the study sample mentioned they conduct cash deposits on a monthly basis. 70.7% of Nigerians also mentioned that they visit a bank periodically to deposit valuables or important documents. This reflects a need among customer segments for savings products that meet their needs.

According to the EFInA Access to Financial Services in Nigeria 2018 Survey, the most commonly cited reasons to use financial services or would use financial services, was to open a savings account and to withdraw money when needed respectively. Of all adults, 59% reported saving money through formal and informal means. Among active users of financial services, 96% reported carrying out savings. This indicates a need to create attractive savings products tailored to the cash flows of individuals to encourage the use of formal financial services.

Nigeria is a predominantly cash-based society. While basic bank accounts are the foundation of providing digital payments, many adults remain financially excluded. The active use of bank accounts continues to decline, however, from 36% in 2014 to 22% in 2017 as per the latest Finclusion report[18] attributed to the downward turn of the economy.

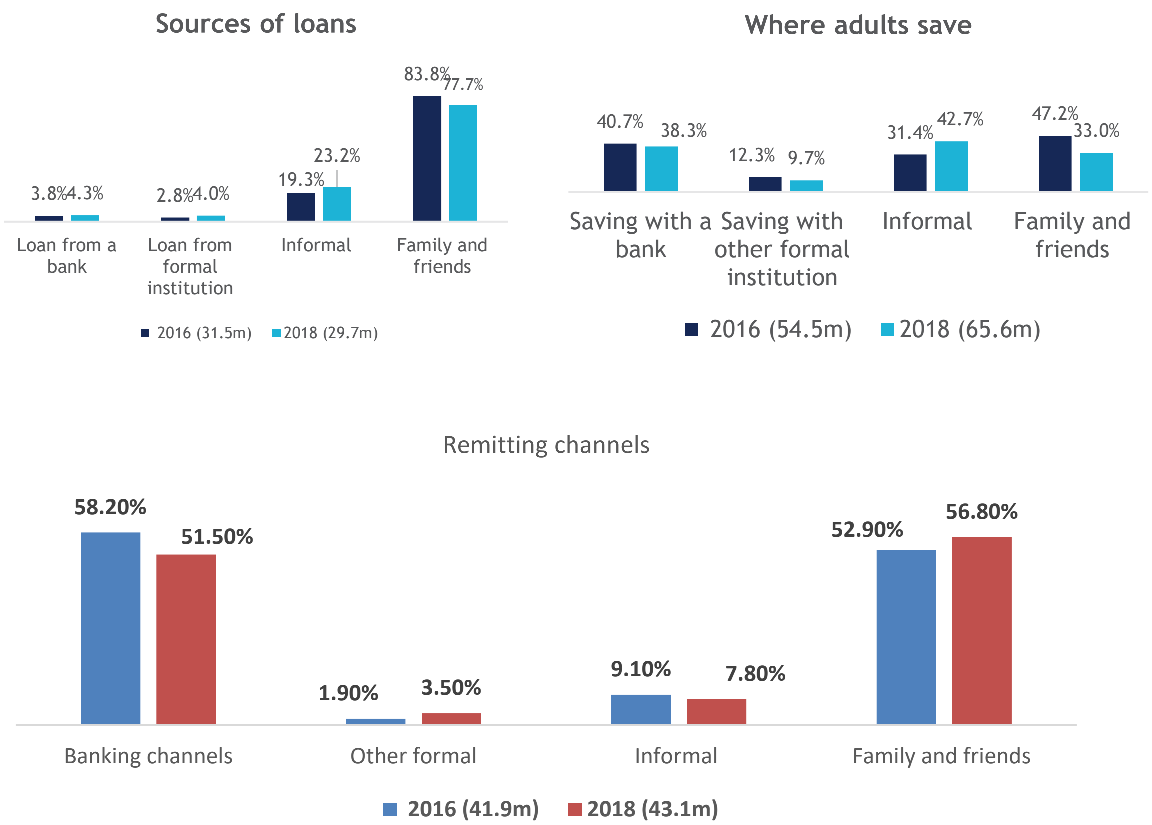
The market needs credit, savings, and remittances products. The majority of Nigerians[19] access credit, carry out savings, and make remittances through friends and family. Of the 17.9 million who remit money through friends and family alone, 82.1% of them have access to mobile phones. The same group is also unaware of mobile money services. This displays a large opportunity for PSBs.

[18] Intermedia, Financial Inclusion Insights. (2018) *Nigeria Wave 5 Report*. [online] Available at: http://finclusion.org/uploads/file/nigeria-wave-5-report_final.pdf

[19] Enhancing Financial Innovation & Access. (2018). *Access to Financial Services in Nigeria 2018 Survey.* [online] Available at: https://www.efina.org.ng/wp-content/uploads/2019/01/A2F-2018-Key-Findings-11_01_19.pdf

Table 3: Use of financial services

Attributes	2018 (Base of 99.6m)	2016 (Base of 96.4m)
Savings	54.7%	68.0%
Not saving	45.3%	32.0%
Remitting	43.0%	44.0%
Not remitting	57.0%	56.0%
Not borrowing	31%	33%
Source: Enhancing Financial Innovation & Access. (2018). Access to Financial Services in Nigeria 2018 Survey		



Source: Enhancing Financial Innovation & Access. (2018). Access to Financial Services in Nigeria 2018 Survey

Figure 5: The different ways adults save, access credit and make remittances

IFC reports that as of 2018, the active usage of mobile money in Nigeria was at 0.20% as compared to 29% in Cote d'Ivoire and 32% in Tanzania[20]. In other countries within Sub Saharan Africa, mobile money has played a key role in advancing financial inclusion.

According to Finclusion, only 29% of the population is financially included through a digital account[21]. Users of digital financial services indicate that the main reasons for using mobile money are the

[20] International Finance Corporation. (2018). *Digital access: The future of financial inclusion in Africa.* [online] Available at: https://www.ifc.org/wps/wcm/connect/96a4f610-62b1-4830-8516-f11642cfeafd/201805_Digital-Access_The-Future-of-Financial-Inclusion-in-Africa_v1.pdf?MOD=AJPERES&CVID=mdz-QF0

[21] Intermedia, Financial Inclusion Insights. (2018). *Nigeria Wave 5 Report*. [online] Available at: http://finclusion.org/uploads/file/nigeria-wave-5-report_final.pdf

convenience it offers them and its ability to better meet their needs as compared to formal financial services. Access to mobile financial services is relatively easier with lower requirements for identification. Additionally, with mobile ownership as at 2017 at 81%, the opportunity to capitalise on the design of attractive and affordable digital products is high. The use of Unstructured Supplementary Service Data (USSD) by key players had made it easier for customers with feature phones to transfer money and make payments

According to MSC research, a gap exists in the financial services currently being offered and the level of awareness of these products and services. Recent times have seen a focus towards driving the ownership of transactional accounts, which tend to go dormant, as they do not offer an attractive value proposition to customers. Additionally, even where these financial products exist, many users do not understand the terms and conditions attached to their use. The lack of clarity of bank charges has contributed to a mistrust of formal financial institutions. Banks need to understand the customers' needs and design solutions and processes that offer value to customers. Customers have been getting sophisticated and increasingly have started to demand modified or new products and efficient processes.

Key stakeholders within the financial space do not yet exhibit an understanding of the unique financial management needs of the targeted segments of youth, women, and marginalised populations in Northern Nigeria. Since banks have historically failed to optimally offer products and services to mass-market customer segments, it has resulted in a bias towards traditional corporate banking strategies. Many financial services and products are tailored towards the middle-income, literate, and salaried users.

The target segments for financial inclusion do not exhibit similar characteristics and hence are not able to adopt existing financial services. An understanding of these segments will be paramount in the design of financial products and services that adequately meet the needs of customers and subsequently encourage the uptake and continued usage. PSBs will need to identify the unique requirements of each segment, including incorporating simple user interfaces and the use of target segment dialects in the design of financial products to encourage adoption.

2.2.4 Unsustainable agent networks due to ineffective agent network management

The demand for the proximity of financial services has seen banks respond through innovative agency channels to reach new and existing customers. Agents present an opportunity to enhance the distribution and access to financial services. CBN has played a key role in encouraging the participation of various stakeholders in developing distribution networks. In 2012, the CBN licensed 16 non-banks and six banks to offer mobile money services. The non-bank mobile money operators most notably include Paga and eTranzact.

Key players including banks, telcos, FinTechs, and super agents have established agent networks across Nigeria. However, these distribution networks face many challenges. They are yet to see the anticipated growth in financial inclusion numbers. Some of these challenges include ineffective agent network management, network and system downtime, risk and fraud. Many institutions have not been able to create an attractive agent business case, which has resulted in high rates of agent dormancy. Additionally, agents face operational issues managing liquidity and low commissions driven by low transaction volumes.[22]

All these factors contribute to the low uptake and use of formal financial services. Regulatory constraints including mandates on pricing structures, agent remuneration structures, and limitations on stakeholder participation have constrained the growth of agent networks. Additionally, existing bank infrastructure including bank branches, ATMs and other provider service points have not been efficient in reaching all corners of Nigeria.

EFInA's Access to Financial services survey 2018 reports that 89.4% of the population was not aware of the agent services closest to them and 76% of adults had no access to a financial institution. Moreover, users who utilise agent networks face challenges, including complicated user interfaces, limited understanding of DFS, instances of fraud, and lack of affordability of financial services. Additionally, the requirements to use these access points, such as BVN, are often beyond the reach of the target segments.

Various structural, technical, and infrastructural problems complicate the access to services for the end-user and need to be resolved. These include a fragmented DFS ecosystem, network complexity, complex regulatory framework, and a lack of interoperability, where interoperability between mobile money operators does not exist, or its poor use.

Key stakeholders within the ecosystem recognise that the agents do not have an attractive value proposition. Stakeholders need to review the strategic considerations in designing distribution networks carefully to ensure effective distribution and access to financial services.

[22] Enhancing Financial Innovation & Access. (2018). *Factors and Trends Influencing Agent Networks in Nigeria.* [online] Available at: https://www.efina.org.ng/wp-content/uploads/2019/01/EFInA-Summary-Report-Factors-and-Trends-influencing-Agent-Networks-in-Nigeria-1.pdf

India's financial services distribution network

The lack of sufficient banking infrastructure, especially in rural locations, has played a key role in emergence of PSBs in India. The graphs below provide details of the trends in digital infra carefully structure in India.

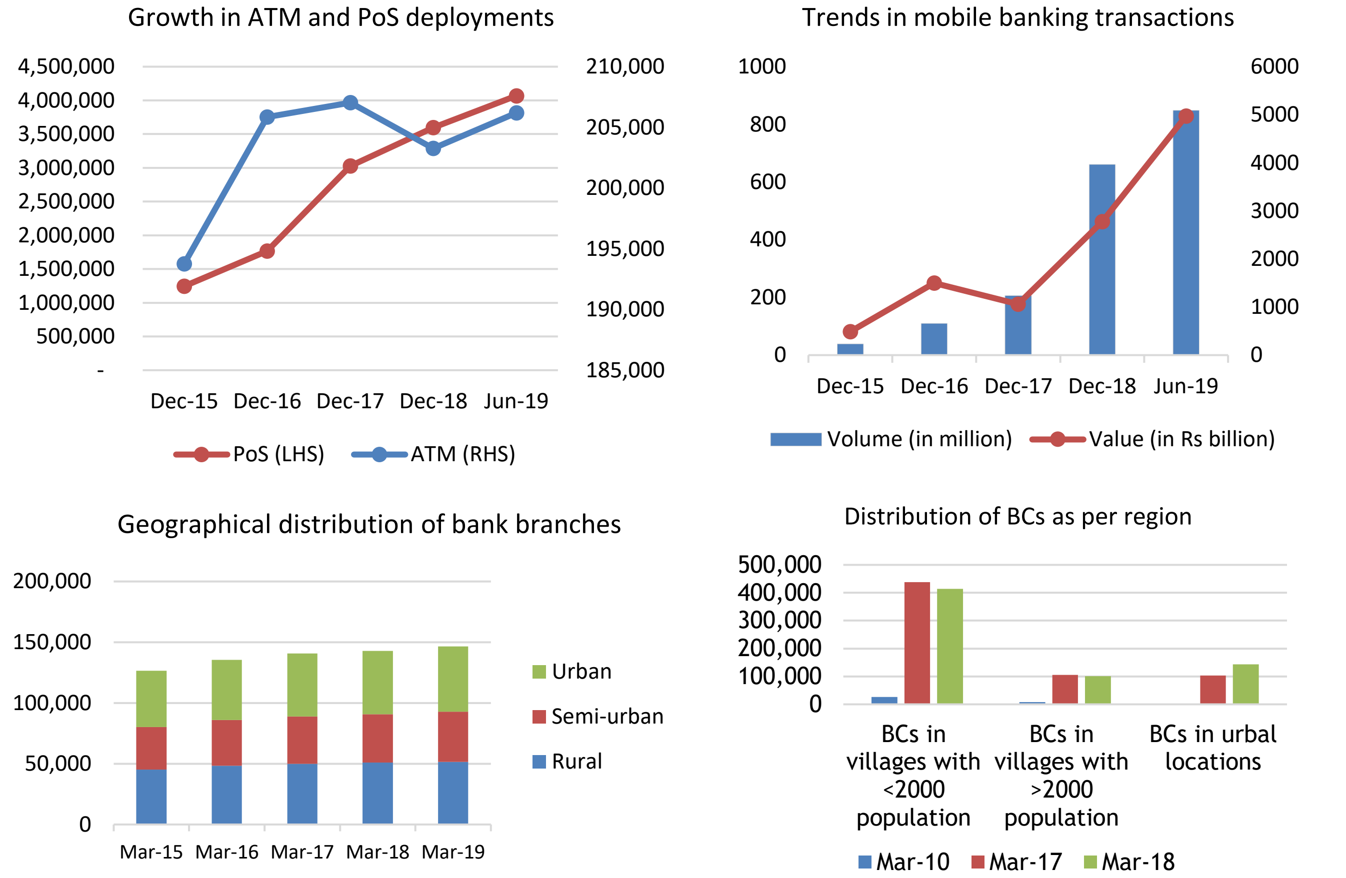


Figure 6: Trends in ATM, PoS, and mobile banking (Source: RBI database)

2.3 Micro layer review

2.3.1 Financial exclusion high among women, youth, and populations in northern Nigeria.

EFInA report 2018[23] highlights that the gender gap in financial inclusion in Nigeria is at 8%. Challenges with acquiring identity documentation to facilitate access to formal financial services and lower levels of mobile phone ownership by women have contributed to the gap. The most excluded groups are women, youth, rural populations, and people living in Northern Nigeria.

We may attribute the lack of mobile ownership among some to affordability and low financial literacy levels. Other issues have made it hard for many to use financial services. These issues include cultural issues and practices, family disapproval – especially for women, and inconsistent income – particularly for populations that depend on agriculture. Other constraints include geographical inaccessibility and poor, or non-existent, infrastructure with many unbanked communities living in remote and rural areas.

Combined with the high cost of banking services and a lack of financial education, this creates high barriers to traditional banking and other financial services for rural populations. According to the GSMA[24], 86% of the population in Nigeria owns either a smartphone or a feature phone. As witnessed in other markets, the majority demographic of non-user of financial services were below the poverty line.

The Nigerian population continues to show better signs of financial inclusion readiness. According to the Financial Inclusion Insights, Nigeria Wave 5 report, SIM card ownership increased between 2016 and 2017 from 79% to 83%. Over three-quarters of the adult population had documents necessary to open a financial account. However, during the same period, the ability to text by adults decreased from 78% to 66% and financial literacy remained low at 16%.

In Nigeria, 81% of the population own phones, with the larger percentage being basic and feature phones consistent across rural and urban areas. Although there might be concerns about those that do not own phones being as a result of religion or culturally influences, only 22% reported that they were not allowed to use a phone by a family member. The phone, however, was rarely found to be used to conduct financial transactions.[25]

23 Enhancing Financial Innovation & Access. (2018). *Access to Financial Services in Nigeria 2018 Survey.* [online] Available at: https://www.efina.org.ng/wp-content/uploads/2019/01/A2F-2018-Key-Findings-11_01_19.pdf

24 GSMA. (2019). *The Mobile Gender Gap Report 2019.* [online] Available at: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/GSMA-The-Mobile-Gender-Gap-Report-2019.pdf

25 Finclusion Insights 2018. Wave 5 Report Fifth Annual FII Tracker Survey. Available at: http://finclusion.org/uploads/file/nigeria-wave-5-report_final.pdf

In the diagram below, we indicate use of financial services by different segments and the progression on the customer journey.

2017: Demographic groups, by customer journey segment

(Shown: Percentage of Nigeria adults in each segment)

Demographics	Non-Users (n=3,554)	Unregistered users (n=527)	Registered inactive users (n= 304)	Active basic users (n= 73)	Advanced users (n= 1,584)
Male	45%	41%	64%	41%*	65%
Female	55%	59%	36%	59%*	35%
Above poverty	27%	49%	44%	78%	66%
Below poverty	73%	51%	56%	22%*	34%
Rural	77%	72%	75%	67%*	54%
Urban	23%	28%	25%	33%	46%

*Fewer than 50 observations

Source: Intermedia Nigeria FII Tracker survey, Wave 5 (N=6,042, 15+), August-December 2017

Figure 7: Use of financial services by different segments and the progression on the customer journey

2.3.2 Opportunity to address existing use-cases in design of financial products and services

According to a recently conducted research by Insights2Impact, dominant use-cases within the Nigerian context include remittances, credit facilities for personal and business use, savings, investments, and pensions[26]. Notably, airtime purchase appears as a key use-case due to the proliferation of mobile phones and the ease of access to purchase points. However, cash flow streams must be digitised to reduce the reliance on cash and encourage the use of digital channels for these use-cases. Digitisation of government-to-people (G2P) and people-to-government (P2G) transactions provides an attractive use-case to drive familiarity with the use of digital channels for the mass-market segments.

The International Monetary Fund[27] estimates that a transition to digital payments for Nigeria, specifically mobile wallets, could save the government between USD 5 billion to USD 9 billion each year[28]. Payments to governments and payments by governments can benefit highly from the use of digital means. The trail of transactions that digital means offer ensure reduced pilferages, no cost of transport of money, removal of 'ghost' beneficiaries, and the possibility of a proper audit. Additionally, the digitisation of agricultural value chains may not only increase efficiency but also provide an attractive customer value proposition to utilise digital channels.

[26] Insights to Impact. (2019). *Advancing financial inclusion I Executive summary: Nigeria pilot study.* [online] Available at: https://i2ifacility.org/insights/publications/advancing-financial-inclusion-executive-summary-nigeria-pilot-study?entity=blog&offset=12

[27] International Finance Corporation. (2018). *Digital access: The future of financial inclusion in Africa.* [online] Available at: https://www.ifc.org/wps/wcm/connect/96a4f610-62b1-4830-8516-f11642cfeafd/201805_Digital-Access_The-Future-of-Financial-Inclusion-in-Africa_v1.pdf?MOD=AJPERES&CVID=mdz-QF0

[28] International Finance Corporation. (2018). *Digital access: The future of financial inclusion in Africa.* [online] Available at: https://www.ifc.org/wps/wcm/connect/96a4f610-62b1-4830-8516-f11642cfeafd/201805_Digital-Access_The-Future-of-Financial-Inclusion-in-Africa_v1.pdf?MOD=AJPERES&CVID=mdz-QF0

The digitisation of government and social payments has played a key role in driving uptake of digital payments in India. PSBs have focused on tailoring products to the financial management needs of the target customer segments. The key product offerings for PSBs in India are:

- Small savings account and current account;
    - Access to funds through small savings accounts[29] provided to low-income individuals, migrant workers, among others and current accounts to small merchants, grocery stores, and traders, for their deposits;
    - Although current accounts do not earn any interest, PSBs earn money through the charges on the transactions conducted.
- Demand deposits
    - There is an opportunity to earn a margin[30] on deposits, as these are enforced as part of the statutory liquidity ratio (SLR). PSBs are restricted mainly to investment in government securities, which can give a return of 8-9% per annum;
    - There is an opportunity to earn revenue from the time or fixed deposits held with other scheduled commercial banks for liquidity purposes.
- Distribution of third-party services
    - Distribution of third-party products—especially insurance, mutual fund programmes, and credit (as a BC) offer a huge opportunity for PSBs to earn revenue.
- Domestic remittance
    - Remittance is an important financial activity for many, especially the burgeoning migrant workforce in the country whom the traditional banks are unable to serve adequately.[31]
- Utility bill payments and other opportunities
    - Utility bill payments, mobile recharges, and ticketing services offer a huge market potential with an annual growth rate of 20-22%[15] for bill payments and about 8-10% for mobile recharges. These payments are especially important for the target segments, as aspirational products are converted to daily use.

In implementing the PSBs in Nigeria, the various use-cases offered in India can provide a learning experience for the regulators. The use-cases need to be created as per the target segment demand. More importantly, the use-cases need to be marketed well so that consumers are well aware of these use-cases.

2.3.3 Proliferation of mobile apps and USSD opportunity for use of mobile as a delivery channel

The majority of financially included Nigerians (39.7% of the adult population) use banks to access formal financial services. EFInA reports that 39.7% of Nigeria's adult population use bank accounts while an additional 0.3% of the adult population though formally unbanked, use mobile wallets. The bankable population features an overlap of 3.1% between those who operate a bank account and

[29] Reserve Bank of India. (2011) *Opening of Small Account.* [online] Available at: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=6663&Mode=0
[30] The Business Today. (2015) Reaching out. [online] Available at: https://www.businesstoday.in/magazine/features/new-payment-niche-banks-to-promote-access-to-banking-services/story/214434.html
[31] Nielsen. (2018). *Payments Banks Could Be Unbanked India's Banking Solution.* [online] Available at: https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/nielsen-featured-insights-payments-banks-unbanked-indias-banking-solution.pdf

those who use mobile money. Nigerians use bank cheques and ATMs but their prevalence has declined as card and online payments increase.

However, NIBSS reports[32] that in the past few years, a majority of transactions on the switch were carried out through mobile apps. USSD made the most gains in channel acceptance – growing from 25% to 35%. Mobile apps are still the most preferred channel, as they recorded 44% of total transactions. The shift has been from the use of bank tellers and internet banking, which have lost 5% respectively of the total transaction share as of 2018.

3.0 The Payment Service Banks concept

Among the national payment strategies that will drive financial inclusion in Nigeria, the key strategy has been the introduction of regulations on differentiated banks known as payment service banks (PSBs). We expect PSBs to be a revolutionary step to cater to the financially excluded and underserved customer segments in Nigeria. PSBs will offer an array of services to complement those offered by traditional banks and increase access to financial services. They will focus on the use of technology to advance financial services with extensive distribution networks in rural areas.

CBN recently launched guidelines for licensing and regulation of PSBs that will enhance financial inclusion to meet the objectives of the National Financial Inclusion Strategy. The key objective for the introduction of PSBs in Nigeria is to enhance financial inclusion in rural areas. PSB will increase access to deposit products, payments, and remittance services to small businesses, low-income households, and other entities through high-volume, low-value transactions in a secured technology-driven environment. CBN has set up key guidelines for the implementation of PSBs to drive financial inclusion. These are to:

- Utilise mobile and digital channels to enhance financial inclusion and stimulate economic growth at the last mile;
- Facilitate high-volume, low-value transactions in remittances, micro-savings, and withdrawals (deposit and remittances);
- Establish expansive distribution networks that make use of agents, ATMs, and other digital channels;
- Have 25% presence in rural areas; and
- Establish customer service and support centres.

The introduction of PSBs in Nigeria borrows heavily from payment banks implementation in India. The Reserve Bank of India (RBI), India's central bank and chief financial services regulator, launched payments banks with the primary objective to further financial inclusion. PSBs in India would provide small savings accounts, payments, and remittance services to the country's sizeable migrant labour workforce, low-income households, small businesses, other unorganised sector entities, and other users. PSBs enable high-volume, low-value transactions in deposits, payments, and remittance services in a secured technology-driven environment. Payments banks were expected to ensure reach customer segments that traditional banks find difficult or unattractive to serve.

[32] NIBSS. (2018). *Interbank Instant Payment annual* report. [online] Available at: https://nibss-plc.com.ng/wp-content/uploads/2019/02/InstantPayments2018-New.pdf

Payments banks fill the gap between a full-sale commercial bank with its high cost of transactions, and the limited role that mobile money instruments play in facilitating payments. The key to viability lies in keeping costs low and aiming at economies of scale through digital modes. We may compare the concept of payments bank in Nigeria and India as follows:

Requirement	Nigeria	India
Application fee	NGN 500,000 (USD 1,375)	Not applicable
Minimum capital requirements	• NGN 5 billion (USD 13.75 million) • The minimum Capital Adequacy Ratio (qualifying capital/total risk-weighted assets) for PSBs shall be 10% or as may be prescribed by the CBN from time-to-time	• INR 1 billion (USD 14 million) • Maintain a minimum capital adequacy ratio of 15% of its risk-weighted assets (RWAs) on a continuous basis
Licensing fee	• NGN 2 million (USD 5,500) • Change of name fee NGN 1 million (USD 2,750)	Not applicable
Permissible activities	• Deposits and withdrawals covered by the deposit insurance scheme • Payments and remittances including cross-border inbound remittances • Issue debit and prepaid cards (no credit cards) • Electronic wallets • Invest in Federal Government of Nigeria (FGN) and Central Bank of Nigeria (CBN) securities • Render financial advisory services • Sale of foreign currencies realised from inbound cross-border personal remittances to authorised foreign exchange dealers	• Accept demand deposits: Maximum balance INR 100,000 (USD 1,426) by the end of the day from resident Indian customers only (No deposits by non-resident Indians) • Issue ATM and debit cards (No credit cards) • Allow walk-in customers as per KYC norms, simplified KYC/AML/CFT norms for small accounts and digitisation of other traditionally manual processes • Allowed to participate in Real-Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), and Immediate payment Service (IMPS) payments channels • Allowed non-risk sharing services like distribution of mutual funds, insurance, pension products, among others
Non-permissible activities	• Issue any form of loans, advances or guarantees • Accept foreign currency deposits or deal in foreign exchange markets, or both; insurance underwriting • Accept any closed-scheme electronic value (such as airtime) as a form of deposit or payment	• Deposits of more than INR 100,000 (USD 1,400) • Fixed or recurring deposits • Grant loans and issue credit cards • Trade in the foreign exchange market • Insurance underwriting

While the guidelines reflect some similarities between payment service banks operations in both contexts, reservations exist on ability to develop an attractive business case based on these requirements. KYC requirements in the PSB guidelines for Nigeria are not clearly articulated leaving room for self-interpretation. Additionally, there is no clear definition of deposit limits on PSB accounts which may introduce a question of how the PSBs differ from traditional bank operations.

3.1 Stakeholders exhibit concerns on the limited scope and clarity around PSB regulations

Regulators have to be careful in the review and launch of new regulations to ensure ease of stakeholder alignment and compliance for ease of implementation. Multiple complex and continuously changing regulations from various regulatory bodies that are increasingly resistant to comply with sector players characterise the current regulatory framework.

Stakeholders within the sector express concerns around PSB regulation. These include:

- The multiplicity of regulations that govern the delivery of financial services through agent networks including the mobile money regulatory framework, guidelines for super-agent operations, and the agent banking regulations. Sector players expressed the need to have a universal regulation on agent network operations in Nigeria for various providers;
- Lack of clarification on pricing and tariff guides for PSBs. Potential PSBs expressed concerns on how to develop pricing and tariff guides to deliver digital financial services through the PSB model. Potential PSBs are not clear on how existing deposit bank regulations apply to PSB operations. For these players, the lack of regulation brought in gaps that inhibit their ability to adequately develop tariff structures that would be acceptable to the regulators;
- Lack of clarity on the KYC requirements for PSB operations. Potential players are not clear on whether they would be required to use BVN or basic KYC currently required for registration of mobile SIM cards;
- The proactive tendency of the regulator to prevent monopolies of non-bank players in advancing financial inclusion, which has inadvertently hindered the optimisation of capacities of other players, such as telcos. Such telcos may be better placed to advance financial inclusion through small-value transactions in high volumes;
- The limited clarity around the ability of PSBs to offer loan facilities directly or indirectly through partnerships with other sector players, such as banks or fintechs;
- Regulations for PSBs that fail to address stakeholder concerns with the branding of subsidiary companies formed to operate as PSBs. Telcos, in particular, are not sure if they are allowed to conduct PSB business under the same name as the originating company;

The regulations do not clearly stipulate the nature of distribution points that PSBs should implement. Potential PSBs were unclear on whether they have the mandate to implement ATMs, branches, or agent networks to advance the distribution network

4.0 Operationalisation of PSBs in Nigeria

4.1 Lessons from implementation of Payments Banks in India

In 2015, the Reserve Bank of India (RBI), which is the central bank of India, issued licenses to 11 payments banks. Of these, three payments banks surrendered their licenses within one year of receiving them and one player merged its license with another licensed player to increase profitability and sustainability. After that, the focus shifted to the Indian Post Payments Bank (IPPB) that evolved from the Department of Post (DoP). It boasted an unparalleled distribution network with 250,000 postmen turned into banking correspondents (BCs) to provide a doorstep banking experience. IPPB started its operations by riding on the DoP’s network and achieved a customer base of 10 million by July 2019. IPPB indicated its interest to offer credit facilities as well. By August 2019, RBI provided the approval in-principle (AIP) to convert IPPB into a small finance bank (SFB) to allow it to provide credit services to the underserved sections. This was essentially done due to its immense reach and credibility with the rural customers. Recently, Aditya Birla Payments Bank closed down its operations after four years due to challenges in the business. At present, there are only five payments banks in

India at various stages of deployment, operationalisation, and development of customer base. These payments banks are listed below:

- Airtel Payments Bank
- Fino Payments Bank
- Paytm Payments Bank
- Jio Payments Bank
- National Securities Depository Limited (NSDL) Payments Bank

Airtel Payments Bank was the first payments bank that launched in January 2017. It has so far managed to pull through with a few ups and downs including temporary suspension from new sign-ups after reportedly breaking RBI's customer data rules. In October 2018, National Securities Depository Limited (NSDL) became the latest firm to launch their payments bank after receiving the approval in-principle from RBI. While most of the telecom-backed firms have found it difficult to leverage their existing customer base to build their business, some of the other firms are looking to build partnerships to strengthen their businesses.

The following case studies provide the details of existing payments banks in India based on their strengths, status, and future plans:

Case study 1: Airtel Payments Bank[33]

airtel Payments Bank	Launched in:	January, 2017
	Parent organisation:	Bharti Airtel
	Type of organisation:	Mobile network operator
Strengths	• First-mover advantage in the payments banking space • Leading telecom player in the country with high brand recognition • Leverages the joint venture partnership with Kotak Mahindra Bank Ltd. • The existing telecom customer base of Airtel stands at 304.9 million	
Status	• Resumed operations in July, 2018 after being barred by RBI (in January, 2018) from adding new customers to its existing customer base of more than 10 million • Created a network of more than 250,000 banking access points across 29 states with a customer base of 30 million[34] • Entered into a strategic partnership with Hindustan Petroleum Corporation Limited (HPCL) in August, 2017 to boost its digital payments; 14,000 HPCL fuel stations will act as banking points for Airtel Payments Bank • The bank suffered a loss of INR 338.8 crore (USD 47.5 million) in the financial year 2018-19	
Future plans	• Plan to scale its network to 0.6 million banking points • Plans to make banking services available at all the 5 million touch-points (through onboarding of merchants)	

[33] Telecom, E. (2019). *India's total mobile subscriber base stands over 1 bn in March; Airtel leads with 29.37% market share - ET Telecom*. [online] ETTelecom.com. Available at: https://telecom.economictimes.indiatimes.com/news/indias-total-mobile-subscriber-base-stands-over-1-bn-in-march-airtel-leads-with-29-37-market-share/64001454 [Accessed 15 Aug. 2019].
and
Jain, U. and Raj, A. (2019). *Airtel Payments Bank launched, with vow to shake up old banking system*. [online] https://www.livemint.com. Available at: https://www.livemint.com/Industry/FxxxxsTZvCQuJt4I90upnK/Airtel-Payments-Bank-to-be-launched-today.html [Accessed 25 Jul. 2019].
[34]Business today. 2019. Airtel Payment Bank loss widens to Rs 339 crore in FY19, revenue jumps 59%. Available at: https://www.businesstoday.in/current/corporate/airtel-payment-bank-loss-widens-to-rs-339-crore-in-fy19/story/373765.html

Case Study 2: Paytm Payments Bank[35]

Paytm Payments Bank	Launched in:	November, 2017
	Parent organisation:	One97 Communications Ltd.
	Type of organisation:	E-commerce, payments, and digital wallets
Strengths	• The existing wallet customer base of 300 million • 7 million offline merchant bases • As an online utility payments service provider, it is available in 3,000 cities and towns	
Status	• 180 million Paytm payments bank accounts created • Paytm fell under the regulator's scanner due to lapses in e-KYC procedures that resulted in a ban on the addition of new customers—placed in July, 2018. The ban was lifted in January, 2019 • Launched 3,000 "Paytm ka ATM" outlets in Delhi and the National Capital Region, Lucknow, Allahabad, etc. to provide basic banking facilities	
Future plans	• Paytm plans to build their corporate customer base by offering incentives to strengthen ties with the customers • Plans to roll out on-demand fixed deposits among other products through partnerships with multiple banks and a dedicated app to facilitate investments in mutual funds • Plans to achieve the target of 500 million accounts by 2020 and set up more than 1 million banking outlets by the end of 2018	

Paytm Payments Bank reported a profit of INR 190 million (USD 2.6 million) for the fiscal year 2018-19 and is the first payments bank to become profitable in its operations. After operating extensively as a mobile wallet provider, it has successfully migrated many of their customers to the Paytm Payments Bank with full KYC to provide higher transaction limits.

Case Study 3: Fino Payments Bank[36]

Fino Payments Bank	Launched in:	July, 2017
	Parent organisation:	Fino PayTech
	Type of organisation:	Financial technology services
Strengths	• One of the largest corporate banking correspondents with an experience in financial inclusion • Experienced in use of technology for financial inclusion	
Status	• Resumed operations in October, 2018 after being barred in May, 2018 from adding new customers due to breaking RBI rules for payments banks • RBI imposed a penalty of USD 142,000 (INR 10 million) for allegedly opening new accounts despite directions from the RBI • The bank currently has 400+ banking outlets and over 50,000 access points • It has an existing customer base of 1 million	

[35] Mukherjee, S. (2019). Digital Payments Giant Paytm Revamps App, Makes It More Intuitive. [online] Inc42 Media. Available at: https://inc42.com/buzz/digital-payments-giant-paytm-revamps-app/ [Accessed 6 August, 2019].
and
Mukherjee, S. (2019). With 180 Mn Customers, 500+ Corporate Clients, Renu Satti of Paytm Payments Bank Is Shooting For 500 million Bank Accounts By 2020. [online] Inc42 Media. Available at: https://inc42.com/features/paytm-payments-bank-renu-satti/ [Accessed 7 August, 2019].

[36] Bureau, F. (2019). *Fino Payments Bank gets RBI go-ahead to resume opening new accounts*. [online] The Financial Express. Available at: https://www.financialexpress.com/industry/banking-finance/fino-payments-bank-gets-rbi-go-ahead-to-resume-opening-new-accounts/1358900/ and Khatri, B. (2019). *RBI Fines Fino Payments Bank $137K For Opening Accounts Despite Ban*. [online] Inc42 Media. Available at: https://inc42.com/buzz/rbi-fines-fino-payments-bank-137k-for-opening-new-accounts-despite-being-told-not-to/

Future plans	• Plans to increase the customer base to 2 million by March, 2019 • Plans to add 100 branches to the existing 425 branches and 12,000 more merchant points to the current 25,000 points

Fino Payments Bank has been focused on the underbanked, urban, and rural populace. Their customers have an income level between INR 0.3 million (USD 4200) and INR 0.5 million (USD 7000) annually[37]. They follow a "phygital" (physical and digital presence) approach to expand the network covering all platforms—Micro ATM enabled physical outlets, mobile banking, and net banking.
80% of their network is in rural areas where access to banking is required. The value of their daily cash handling has grown over six times, from INR 500 million (USD 7.1 million) to over INR 3 billion (USD 42 million) since June, 2017. The Current Account and Savings Account (CASA) customer base is over 1 million with plans to double in the financial year 2020. After Paytm Payments Bank, they expect to be the next bank to become profitable at the operating level by the end of 2019.

Case Study 4: Jio Payments Bank[38]

	Launched in:	April, 2018
	Parent organisation:	Reliance Industries Limited (the parent company of Reliance Jio) and the State Bank of India (SBI)
	Type of organisation:	Financial services and MNO
Strengths	• A joint venture (JV) of Reliance Industries Limited with the State Bank of India (SBI—the most trusted name in Indian banking) to offer financial services and tap into their customer base with a stake of 70:30 (Reliance and SBI) • Use of the existing customer base of 252.3 million of Reliance to build the customer base of Jio Payments Bank	
Status	• Jio has recently launched its payments bank • It is currently beta testing the payments bank services through its employees • Reliance is gradually moving customers from its JioMoney prepaid mobile wallet to the Jio Payments Bank	
Future plans	• Through the expanded partnership, the MyJio app of Reliance will offer the YONO digital banking app of SBI along with its own Jio Payments Bank	

Nearly 17 months after it began operations, Aditya Birla Idea Payments Bank Limited decided to fold up its operations on 21 July, 2019 due to the considerable time taken for the payments bank model to become viable.

The payments environment has changed significantly over the years since the licenses were issued to payments banks. Today, the five payments banks that are operational face stiff competition from FinTech players that are innovative in their business model and have been able to get the right technology platform. Payments banks have to keep pace with the payments demand of the customers to survive and the regulatory bodies need to support them.

[37] IBS Intelligence. (2019). *PBs with large distribution base, scalable tech will be winners: Fino CEO*. [online] Available at: https://ibsintelligence.com/ibs-journal/ibs-news/fino-rishi-gupta-payment-bank-model/
[38] Bureau, F. (2019). *Fino Payments Bank gets RBI go-ahead to resume opening new accounts*. [online] The Financial Express. Available at: https://www.financialexpress.com/industry/banking-finance/fino-payments-bank-gets-rbi-go-ahead-to-resume-opening-new-accounts/1358900/ and Khatri, B. (2019). *RBI Fines Fino Payments Bank $137K For Opening Accounts Despite Ban*. [online] Inc42 Media. Available at: https://inc42.com/buzz/rbi-fines-fino-payments-bank-137k-for-opening-new-accounts-despite-being-told-not-to/

4.2 Key business challenges for Payment Service Banks

To draw lessons for the implementation of PSBs in Nigeria, we need to understand the challenges faced by payments banks in India.

4.2.1 Business viability and acceptability

We interacted with various stakeholders who raised concerns about the business viability of the PSB model. The key concern is that PSBs may find it hard to gain acceptability in the market. Traditional banks are mistrusted by the mass market segments and this will be one of the key hurdles that PSBs will need to overcome to drive customer acquisition and increase the business volume.

Many players posit that the business will be difficult to sustain due to the high start-up requirements and the consequent high cost to scale operations. PSBs also face challenges with restrictions on lending and operating in a hyper-competitive market for retail payments. The restrictions on lending greatly undermine the opportunity for PSBs to offer an attractive value proposition for their customers and agent networks. The ability of PSBs to drive customer deposits and provide interest on these deposits has been limited by the Central Bank of Nigeria (CBN) due to the account limits of PSBs and the limitations on lending. The accumulated deposits can only be stored as government securities and the differential rates used to gain a margin.

However, the crux of viability lies in keeping the costs low and aiming at economies of scale through the digital modes. This will be a sustainable approach for PSBs in Nigeria. To keep the costs low, key regulators will have to put in place measures that incentivise the development of infrastructure, especially for network connectivity and power, that will be key to sustain the PSB digital delivery channels.

Similar to India, PSBs in Nigeria have to differentiate themselves from other traditional banks and offer attractive value propositions to the underserved and unserved low-income customers. Payments banks in India are expected to tap into alternate revenue streams like micro-savings that allow the payments banks to target customers with lower costs of acquisition. This would enable a merchant-acceptance model and create a marketplace for advanced digital financial services, such as insurance and investment.

Payments banks in India were expected to capitalise on the use of technology to deliver services. However, many different payments service providers, including the Unified Payments Interface (UPI) by the government, have entered the market and reduced the share of the pie.[39] Additionally, the assumption that telecom operators would be able to capitalise on their existing capital base has not materialised for many. This has created a profitability slump for many of the payments banks in India that are now hesitant to invest further to grow their business.

[39] Anand, N. (2019). *The next big thing in Indian banking is already fizzling out*. [online] Quartz India. Available at: https://qz.com/india/1350259/why-indias-paytm-fino-airtel-payment-banks-are-struggling/

4.2.2 Capital requirements

The GSMA study on Payment banks set up cost, "The business case for payments banks in India"[40], highlighted that the paid-up capital requirements are INR 100 crore (USD 15 million). This is only one-fifth of the requirement for a universal bank but significantly higher than the paid-up capital requirement seen globally for mobile money businesses (around USD 200,000). Payments banks in India are required to maintain a minimum net worth of INR 100 crore (USD 15 million) at all times. They also need to maintain a leverage ratio of not less than 3%, that is, its outside liabilities should not exceed 33.33 times its net worth (paid-up capital and reserves). This may necessitate the significant and periodic infusion of incremental capital from the promoters of the bank over time.

Payment banks in India have struggled to break even due to the high initial cost of investment in technology and other necessary resources coupled with limits on the scope of operations[41]. However, Paytm has reported profits for the financial year 2018-2019[42]. According to McKinsey, mobile money providers reach the break-even point at USD 2-3 billion in transaction value[43]. For this to happen, the payments banks must focus on cash-in and cash-out (CICO) transactions that, for many providers, drive the business value. This indicates the need to drive low-value but high-volume transactions for PSBs to achieve a return on their initial investment.

We interacted with stakeholders who indicated concerns over the high costs of USSD transactions charged by mobile network operators. The determination of USSD pricing that took effect from 1st September, 2019 is envisioned to resolve some of the key issues, though with its own accompanying issues and resistance from the financial services providers[44].

For Nigeria, the requirement for the capital base of NGN 5 billion and a licensing fee of NGN 2.5 million will eliminate smaller players that lack the financial capacity to raise the necessary capital. Potential PSBs also expressed concerns over the ability to raise sufficient liquidity for licensing and the subsequent investment in distribution networks.

The requirement to have 25% presence in the rural areas will make heavy financial investment necessary to provide network connectivity and energy expansion. The investments must be collaborated by other stakeholders, such as telecom operators and the Power Holding company of Nigeria (PHCN). PSBs may have to explore delivery channels such as solar-powered point-of-sale (PoS) devices that are better adapted to challenging terrain characteristics of rural and northern regions of

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[40] GSMA 2016. The business case for payments banks in India. [Online] GSMA. Available at: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/12/GSMA_The-business-case-for-payments-banks-in-India_2016.pdf/

[41] Joel Rebello, Ashwin Manikandan. (2019). Payments Banks: How RBI's move for financial inclusion quickly went downhill. [Online] Economic Times India. Available at: https://economictimes.indiatimes.com/industry/banking/finance/banking/driving-financial-inclusion-from-panacea-to-pain/articleshow/69226977.cms

42 Business today. Paytm Payments Bank posts profit of Rs 19 crore in FY'19. May 2019. Available at: https://www.businesstoday.in/sectors/banks/paytm-payments-bank-profit-of-rs-19-cr-in-fy19/story/349320.html

[43] McKinsey & Company. (2018) Mobile money in emerging markets: The business case for financial inclusion. [Online] McKinsey & Company. Available at: https://www.mckinsey.com/industries/financial-services/our-insights/mobile-money-in-emerging-markets-the-business-case-for-financial inclusion.

[44]The Nigerian Communications Commission (NCC). (2019). Determination of USSD Pricing. [Online} Nigerian communications Commission (NCC). Available at: https://ncc.gov.ng/docman-main/legal-regulatory/legal-determinations/831-determination-on-ussd-pricing/file

Nigeria. This will require extensive capital investment with minimal assured returns that may discourage smaller individual players. To address this, it is important that various industry stakeholders collaborate to establish the shared channels for the delivery of financial services to minimise the cost implication on individual players.

Agent networks are arguably the most cost-effective delivery channels. They also provide an opportunity for direct customer interaction that is key to drive the uptake of digital financial services. PSBs will need to invest heavily on the various aspects of agent network management if they are to build sustainable agent networks.

4.2.3 Regulatory restrictions

When licenses were issued to 11 payments banks of India in 2015, it was expected that the introduction of new players in the financial space would help advance digital financial services. Payments banks in India lacked clarity in the operational guidelines—even after 11 PSBs received their license, three of the applicants returned the permits after approval[45]. After operating for 2 years as a payments bank, one of the PSBs—Indian Postal Payments Bank (IPPB)—recently converted to a small finance bank that lends small sums of money. Currently, only five payments banks remain in operation. Many believe that their future is uncertain unless the regulatory bodies support and review operational restrictions in the current model to make the payments banks more effective for deepening financial inclusion.

Regulations need to be designed to keep the costs of compliance low, especially in the initial years of operation, which is not the case in India. Regulatory and procedural barriers, such as PSB capital requirements, lengthy application processes, and operational limits on PSBs significantly impede the low-cost operations and reduce the attractiveness of payments banks to fill the financial inclusion gap. The restrictions on lending limit the participation of PSBs in the market. However, with no lending portfolio, systemic risk is curtailed significantly in the business of payments banks.

In addition to restrictions in the operational scope, PSB licensees in Nigeria face long delays in the approval processes from the CBN. This is detrimental to the overall objective of meeting financial inclusion targets by 2020. It creates mistrust in the processes of approval and halts the planning necessary for implementation. Payments banks in India faced delayed launches due to the processes of setting up the necessary technology and resourcing requirements.

The regulator has put in efforts to encourage the participation of multiple players in the digital financial services sector. However, the multiplicity of relatively similar regulation may create unnecessary confusion and complicate the compliance efforts by sector players. For an enabling regulatory environment, the clarity of regulatory guidelines and carefully controlled “trial and testing” of new business models must be evaluated and implemented.

[45] Joel Rebello, Ashwin Manikandan. *Payments Banks: How RBI's move for financial inclusion quickly went downhill*. [online] Economic times. Available at:https://economictimes.indiatimes.com/industry/banking/finance/banking/driving-financial-inclusion-from-panacea-to-pain/articleshow/69226977.cms

4.3 Key operational challenges for Payment Service Banks

4.3.1 Optimisation of distribution networks

Payments banks in India have had to rethink the way they use distribution networks as compared to traditional banks. Several players have focused on various access points, such as branches, business correspondents (agents), merchants, and postal networks. At the time of launch, many of the existing agents were both exclusive and dedicated. This could negatively impact the profitability of agents. Agents receive minimal administrative and technical support from the payments bank. This further reduced their motivation to promote the products and services of payments banks and affected sustainability. The inability to sustain a well-trained and effectively monitored agent network[46] is one of the biggest challenges for payments banks.

Agent networks in Nigeria face similar challenges, though they are neither exclusive nor dedicated. Most of them do not receive adequate support from the providers and hence experience high dormancy rates. PSBs need to be innovative to provide an attractive agent value proposition that is not hinged purely on monetary compensation. Diverse product offerings and concerted efforts to create customer awareness on agent services are necessary to enhance the agent value proposition. Agent training and effective customer and agent support structures will be critical to ensure the sustainability of agents.

PSBs will have to invest heavily in the systems to ensure reliable service for the end-user. This will include both network connectivity and technology platforms that support financial transactions. For users to develop trust in the digital financial services, PSBs must ensure that the downtime of systems is limited and that the customers get real-time confirmation of transactions.

4.3.2 Customer value proposition

Payments banks in India struggle to provide a suite of products that are customised to the needs and aspirations of the customer. The design of products that subscribe to the mental models[47] of the customer has been particularly challenging due to the profile of the target segments. Mass market customers have variable incomes and financial needs. This calls for the customer-centric design of products and services along with clear communication of the customer value proposition[48]. Digital financial products and services need to adapt to the current money management models used by the target segments. Due to the limited scope of products for PSBs, customers who have opened accounts with them may also need to open accounts with mainstream financial institutions to access other financial services.

Due to the similarities of the target segments in Nigeria and India, PSBs need to conduct a demand-side assessment to accurately understand the needs of the mass market and to inform the design of

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[46]Graham Wright. (2016). *Can payments banks survive*. [Online] MSC consulting. Available at: http://blog.microsave.net/2016/06/06/can-payments-banks-survive/

[47]Ignacio Mas, Premasis Mukherjee. (June 2013). Basing product development on mental models and metaphors. MSC Consulting. June 2013. Available at: https://www.microsave.net/2013/06/20/basing-product-development-on-mental-models-and-metaphors/

[48] Graham Wright. 2014. The Mor Committee report – The demand side conundrum. MicroSave Consulting. February, 2014. Available at: https://www.microsave.net/2014/02/08/the-mor-committee-report-the-demand-side-conundrum/

financial products. A diverse serving offering that moves beyond cash-in and cash-out should be developed to achieve sustainability and scale. Paytm in India has enhanced the customer value proposition by exploring partnerships that allow the diversification of the product offering. PSBs need to be proactive and help develop a digital payments infrastructure through partnerships with online e-commerce and physical, offline merchants.

4.3.3 Regulatory compliance

Payment service banks will have to comply with the regulations of CBN and the prudential banking norms. They need to maintain the prescribed bank ratios, such as statutory liquidity, cash reserve, and capital adequacy. PSBs must also conform to the guidelines of the Anti-Money Laundering and Combating the Financing of Terrorism (AML-CFT) policy.

The RBI is keen to keep up with the performance of payments banks in India to monitor and audit their operations. It was recently revealed that some payments banks in India had violated the regulations and participated in unacceptable practices—particularly around the onboarding of customers. Due to this, they were temporarily barred from recruiting new customers[49]. These unlawful practices arise from the growing impatience and lack of planning by the payments banks to add more customers and increase revenue. It was found that some PSBs in India did not comply with the maximum deposit requirements set at INR 100,000 (USD 1,393). This has been attributed to weak internal processes and technology. The RBI issued sanctions on the culpable PSBs and ordered the cessation of customer recruitment until the issue has been addressed. This is currently under review by the payments bank under the supervision of the RBI.

Compliance with the KYC guidelines of the bank may be challenging for players like telecom operators, for whom the KYC requirements are less stringent. KYC requirements for banks go a step further—they need additional customer documentation and a Biometric Verification Number (BVN). Differentiated mainstream traditional bank regulations, as compared to PSB regulations, may create gaps and loopholes that could be manipulated by the players. Currently, some ambiguity exists in the PSB guidelines on the KYC requirements for onboarding of customers—particularly around the use of BVN.

PSBs must be careful to adhere to the regulations. The CBN will need to ensure compliance of the PSBs to set the guidelines—particularly around consumer protection. It will also need to put in place sanctions to deal with PSBs who do not comply with the regulations to protect the financial ecosystem and achieve the objectives of financial inclusion.

4.3.4 Shift the interactions to ATMs and mobile phones

According to the World Bank, just 33% of all account holders in India own a debit or an ATM card and only 2% of the adults use their mobiles for money transactions[50]. These numbers are much lower in remote locations and rural areas. Compared to branch banking, ATM and especially mobile banking are far less expensive per transaction as well as more convenient for the customers.

[49] Vishwanath Nair. India's Payments Banks Trip On E-KYC Rules. Bloomberg Quint. August, 2018. https://www.bloombergquint.com/business/indias-payments-banks-trip-on-e-kyc-rules/
[50] World Bank. 2017. Databank –Global Financial Inclusion, country report India, 2017. Available at: https://datacatalog.worldbank.org/dataset/global-financial-inclusion-global-findex-database

Payment service banks have a great potential to change the patterns of interactions between the customers and the banks by conducting bank transactions through agents, ATMs, and mobile phones. These transactions are self-assisted, seamless, convenient, and fool-proof. PSBs must create a positive customer experience for the use of mobiles and PoS machines through the design of user-friendly interfaces for the end-user. This will encourage the trial and continued usage of digital financial services. PSBs must capitalise on mobile ownership across the country to design delivery channels that are easily accessible, affordable, and available to the end-user.

4.3.5 Human capital resourcing

Payments banking is an innovative concept that is a hybrid of banking and distribution and a running thread of technology. Thus far, business leaders from the Fast-Moving Consumer Goods (FMCG) and technology sectors have led the teams in the payments space in India. But with payments now offered with banking, it is critical to have the right set of skills to steer the growth of payments banks. Payments banks struggle to take strategic decisions without the right mix of people.

PSBs in Nigeria need to identify the critical skills to implement the business. It is necessary to identify and recruit experienced skill sets that drive the business operations and ensure compliance to the CBN, especially due to the relative lack of prior experience in banking among the licensees.

4.4 Defining the business case for Payment Service Banks

Based on our research and the comparative study conducted with India, it will be paramount to take a few points into account in the implementation of PSBs within the Nigerian context. The sustainability of PSBs will be dependent on the scale of access and the variety of usage dependent upon the creation of an attractive stakeholder value propositions.

4.4.1 Grow customer numbers

PSBs must define clear strategies to understand, recruit, and retain the target segments. Customer acquisition should include a combination of new customers and the existing customer base of various institutions. The perception of financial inclusion should involve serving the underserved and the underbanked. PSBs should explore the mechanisms through which the banked and the underbanked segments can be used to champion the uptake of formal financial services by the excluded segments. Many incumbents exhibit a limited understanding of the targeted customer segments. PSBs should put concerted effort to understand the target segments and inform the development of financial services that adequately meet their financial management needs. This will require a specific focus on the following:

- **Target the youth, women, and unique customer segments:** To meet the set objectives, PSBs need to reach the specific underbanked and excluded segments of the population. As highlighted by the National Financial Inclusion Strategy (NFIS), these include the unique demographic groups excluded as a result of the gender gap, age gap, urban-rural gap, formality gap, and regional gap. The PSBs need to understand their unique circumstances including low literacy levels, mistrust of formal financial services, and residence in areas that are difficult to access. The rapid increase of mobile phones, particularly among the youth aged 18-24 who have the potential to easily understand, can be tapped for the design and delivery of digital products and services. Once the scale of access is achieved, payment service banks can diversify to offer other financial services like insurance, among others. PSBs need to apply a behavioural lens to understand the end-user so that the products are designed according to the financial management behaviour of the targeted segments. They need to develop an attractive launch offering guided by key business activities specific to different rural communities.

- **Drive the volume of transactions:** Due to a lower customer base, it will be a challenge for small players to drive the volume of transactions to sustain their agent networks. Telcos have a competitive advantage due to a relatively wide presence within the Nigerian market. Telcos have large customer bases that can be easily converted into customers for PSBs. PSBs must drive high volumes of small value transactions through CICO transactions and remittances.
  PSBs will need to tap into the existing local and national cash flow streams, such as remittances, government payments, and savings need to enhance the use case for the user accounts. They need to consider the digitisation of merchant payments, school fees payments, transportation, hospital bills, etc. to create a digital ecosystem that supports the use of digital tools.

- **Enhance the customer value proposition:** PSBs need to define appropriate strategies to drive the customer value proposition by ensuring the convenience, ease of access, and affordability of financial services. They should use data analytics to segment and design the customised products tailored to the existing use cases. They must address the pain points in the current financial tools through innovative solutions on user-friendly interfaces. PSBs should digitise informal payment mechanisms for the ease of acceptance and to reduce the risk and cost they are associated with.

- **Enhance the agent value proposition:** Most of the potential PSBs already have existing agent networks. However, these networks experience low rates of activity. To establish sustainable agent networks, they need to review the agent network strategies to support the implementation of operational frameworks that enhance the agent value proposition. Agent network management will play a key role to enhance the agent value proposition. It includes the recruitment of high-quality agents, liquidity support, and appropriate compensation structures.

- **Expand the distribution networks:** PSBs should focus on the physical distribution and geographical reach. They can partner with incumbents, third party players, or FMCG companies and organisations to further their distribution network. PSBs must create support infrastructure for digital payments in all regions—identity, network connectivity (real-time instant payments), and high-quality agent networks (sufficient liquidity). Physical touch-points encourage trust among the customers and address the obvious demand for human touch.

  PSBs need to use technology effectively in processes to reduce costs and increase the scale. Use of digital applications in place of manual processes can also help increase the scale for payments banks. Training agents effectively can help create the awareness of, and subsequently the demand for, products and services. PSBs should empower agents to provide high-quality assistance for customers who frequent the agent outlets. They must implement effective agent network management structures to drive agent sustainability and ensure consumer protection.

4.4.2 Competitive positioning

- **Develop a differentiated brand:** PSBs need to cultivate a differentiated brand that inspires confidence along with a different *modus operandi* from the incumbents. Many customers exhibit a lack of trust in formal financial providers and prefer informal financial services due to various reasons. Developing a brand that encourages confidence and trust will be key to increase uptake and usage.

- **Leverage the existing brand:** PSBs can leverage their existing brand positioning to encourage the trial of services. This is particularly relevant for mother companies that are Telcos and already have a strong market presence. Awareness and marketing campaigns should build trust in the new entities, create visibility, enhance the knowledge of the available services, and create an understanding of the terms of use of the available services.

4.4.3 Collaboration and partnerships

- **Strategic partnerships***:* These will play a key role to leverage the strengths of existing financial sector players, such as liquidity, human capital, market experience and presence, and significant customer base. They also allow smaller sector players to scale their operational strengths, such as innovative products, technology, and agent network management.

  In Kenya and other markets, Telco and bank partnerships have seen a lot of success in driving customer growth and developing innovative products such as digital lending. M-Shwari, a pioneering digital lending platform, arose out of a partnership between Safaricom and CBA, and has more than 22 million[51] customers capitalising on the extensive customer base of the telco, and the ability to lend by the bank. Similar partnerships are also evident in Rwanda and Uganda driving the uptake of digital financial services.

  PSBs must consider partnerships with non-bank payment service providers, such as FinTechs and other competitors in the market to draw on their existing strengths. They should build on partnerships with other banks to enable the PSBs to lend to customers. PSBs will need to partner with players that have an abundance of traditional and alternative consumer data for the design of third-party products. They should develop a credit assessment platform based on the user data informed by financial transactions along with alternate data to design attractive micro products that can be delivered through the partnerships.

  PSBs will also need to identify opportunities to cross-sell and upsell other services, such as insurance and health. This could be through collaboration with insurance companies to design low premium and simplified products suitable for a variety of use-cases and client segments. PSBs must utilise the shared agent networks to minimise the investment into agent network management and to expand the business, particularly through rural and low-income clients.

[51] Nation media group. 2019. Mobile money at centre of Safaricom's success story. Available at: https://mobile.nation.co.ke/business/Mobile-money-at-centre-of-Safaricom-success-story/1950106-5308266-100yd3iz/index.html

- **Open APIs and platforms:** PSBs and other players within the market should explore open APIs to facilitate the availability of payments platforms to all users and providers. These will also encourage the participation of smaller players that may have key strengths in products or application development to enhance the customer value proposition. PSBs must develop a payments platform based on the open standard APIs to allow third-party players to innovate and design products for niche customer segments. They should identify, test, and scale the innovative approaches that will drive greater use of digital payments at the point of sale (PoS).

- **Digital financial ecosystem:** PSBs must explore the options to digitise value chains and cash flow streams. To advance the digital ecosystem and encourage the uptake of digital financial services, it is necessary to leverage the use of technology, recruitment, and digitisation of payments of various ecosystem participants, such as merchants, retailers, supermarkets, hospitals, schools, and the government.

  It is imperative to build an enabling ecosystem for various digital financial services to improve their usage. This can be achieved through the onboarding of merchants who accept and facilitate digital payments. The onboarding must be accompanied with the right value proposition so that it is vibrant and effective.

  An acceptance network should be developed for digital payments in the ecosystem through merchants. This could be achieved by offering the merchants services that can be bundled with their current accounts or lower transaction costs for the merchants to boost digital payments modes. PSBs can cross-sell different financial services to various customer segments according to their relevance. They must also use agent networks to facilitate assisted e-commerce transactions in partnership with the leading e-commerce players in areas that are currently unserved or underserved.

4.4.4 Regulatory review

- **Enabling the regulation:** Various regulators from different sectors will need to work together to develop positive operation policies and frameworks to guide the operation of PSBs. Conflicting or redundant regulations need to be reviewed and a universal "agent networks" license can be introduced for the operators to reduce confusion and encourage compliance. The value-addition of existing regulations and guidelines needs to be critically reviewed and the targeted guidelines need to be developed to provide clarity and eliminate complexity. The regulator must also provide clarity on the KYC requirements that will be implemented by the PSBs in customer recruitment.

  The regulatory framework exhibits a defensive position that is important to limit the risk and discourage monopolies but could also hinder the innovation and participation by sector players. It is important that the regulators do not limit the stakeholder participation and opportunities to advance financial inclusion as they seek to learn from the other markets and their challenges.

  The inter-sectoral collaboration of regulators is necessary to drive the implementation of relevant guiding policies for a positive collaboration and sharing of resources, such as USSD. Various regulators must work together to ensure the expansion of necessary infrastructure to support digital financial services. It is not enough that these policies exist—there must be proper enforcement and sanctions for noncompliance.

- **Review the taxation policies:** Taxation policies of different sectors should be reviewed to lighten the burden on mobile network operators and encourage investment in ICT infrastructure—on which digital transactions are reliant—and voice and data communication networks to support financial messaging among providers and end-users. A review of the taxation policies in the country at the federal, state, and local levels would ensure the uptake of data and voice services among the price-sensitive rural populations.

  It is necessary to implement the national strategic interventions that facilitate investment into laying of fibre across the country, such as educating the key stakeholders on the need for infrastructure development and putting security measures in place to discourage the vandalism of fibre networks. Policies need to be developed that encourage open access to common carrier networks and the sharing of commercial infrastructure to reduce the costs of duplicating networks. Additional incentives can also be considered, such as subsidies for mobile network operators to invest in infrastructure.

- **Enhance the revenue structures:** To enhance the cost and revenue structure for PSBs, a review of the capital requirement for licensing of PSBs can be conducted. This will allow direct or indirect participation of smaller players with the technological capacities or distribution networks.

  PSBs can be allowed to provide microloans to enhance its business case. It's counterparts in India continue to struggle without the ability to lend and enhance the business case. They will need to drive transactional income as their key source of revenue. Digital microloans will allow the PSBs to meet the credit needs of the targeted segment and build additional revenue streams.

- **Establish a working group on PSBs for monitoring and seamless operations:** A working group on PSBs must be instituted immediately by the CBN to examine all the operational guidelines and regulations that increase the cost base of the PSBs and reduce their operational flexibility. The objective of this group should be to make recommendations and modifications to existing regulation, that bring about requisite changes that will ensure a truly low-cost banking model to serve low-income customers, especially in the rural and remote geographies. The working group will also be responsible to review and recommend necessary modifications in the PSB operation guidelines from time to time. Consider the review of the regulation to allow PSBs to offer non-risk sharing services like distribution of mutual funds, insurance, pension among others to enhance the business case.

  This group should ideally comprise members from the Central Bank of Nigeria (CBN), the Nigeria Communications Commission (NCC), the National Identity Management Commission (NIMC), the Association of Licensed Telecommunications Operators of Nigeria (ALTON), independent experts, universal banks, and various Payment Service Banks so that it can draw insights from a range of stakeholders in the financial inclusion ecosystem. A large number of entities that fall under the supervision of the CBN and the magnitude of the country demands a dedicated effort to enforce compliance for consumer protection.

4.4.5 Financial literacy

- **Government:** The Central Bank of Nigeria (CBN) and other stakeholders recently re-launched the Consumer Protection Framework (CPF), the National Financial Literacy Framework (NFLF), the Financial Education Strategy (FES), and the revised National Financial Inclusion Strategy (NFIS). All these strategies work together to increase the financial literacy and to protect the consumers. However, the strategies cannot remain at the policy level and will need to be implemented to see actual results. The government should disseminate relevant and targeted information about the financial sector operations and general banking concepts to various target groups, such as school and college students, the youth, women, and the rural and urban poor.

  The government should use mechanisms such as the national media, campaigns on public forums, community leaders, and necessary collateral to provide relevant financial information. The Reserve Bank of India created financial education materials targeted at specific population segments, such as the farmers, entrepreneurs, school children, and the elderly, among others[52]. This material creates awareness on the basic financial processes, such as the requirements to open an account, different products and services, grievance resolution, etc. It also provides information on the role of the Central Bank and various other institutional and banking concepts. This content is delivered through trainers, audio-visual channels, booklets, and online channels and has been adapted to several local languages.

- **Financial sector stakeholders:** Financial sector players must collaborate to provide financial education to the consumer. They should create awareness on the existing financial products, access and use of financial products and services, grievance resolution mechanisms, and consumer rights. Financial education should be incorporated into the financial service delivery channels, such as mobile applications, text messages, branch staff, and agents and provide assisted transactions for the consumers.

4.5 Defining the right strategy and operational framework for an optimal PSB

4.5.1 Capital requirements

A PSB's investments costs will be comprised of fixed expenses or capital expenditure as the initial investment, and the operating expenses. The hypothetical PSB model must incur high initial fixed investments costs to set up its operational infrastructure. However, for success, the PSB should be able to utilize its existing business assets to manage most of the fixed costs. These include acquisition of land and the building costs for PSB office space, furniture and fixtures and the associated business licensing fees at the state, federal, and local government levels. These initial assets are critical to allow the PSB to establish a market presence within the financial sector and to inspire trust in the target customer segments.

Table 4: Key capital expenditure (capex) cost areas for a hypothetical PSB

Establishment costs
Setting up the Customer Service Point (for agent and customers)
Regional office (for back office staff and field managers)
Head office (Sales/ Marketing/ Admin manager (L2) and division head (L3)

[52] Reserve Bank of India. Financial Education and RBI. [Online] Available at: https://www.rbi.org.in/FinancialEducation/Home.aspx

IT software
One-time license fee

Furniture and fixtures
Customer Service Points (for agent and customers)
Regional office (for back office staff and field managers)
Head office (Sales/ Marketing/ Admin manager (L2) and division head (L3)

Beyond the initial start-up costs, the PSB must adequately plan for the management of operational expenses that arise from the day-to-day operations of the business. To arrive at the detailed cost structure for the PSB, following key assumptions are taken:

Key assumptions:

- For simplicity, basic financial products such as account opening, cash deposit, cash withdrawal, remittance, merchant payments, bill payments, airtime top-up and government to person payments have been assumed. All the products will be launched from the year one, however the government to person payments in the form of subsidy disbursements will start eventually by third year. By then PSB would be more sustainable to increase its customer volume arise from government payments.
- Opening a PSB account is assumed to be free for the customer. However, for all other products the customer tariff is charged and 70% of the tariff is passed to the agent as a commission. The rest 30% of the customer tariff is assumed to be retained by the PSB in the form of revenue or for covering the cost.
- The model assumes an average value per transaction for all the products for first year. Subsequently the transaction value is assumed to increase by 10% each year, till year five.
- The model assumes the deposits achieved through cash-in would move out of the system based on the transaction volume and value of cash-out. The deposits for airtime top-up and bill payments will directly go to the vendor. Whereas some percentage of the deposits in remittance, merchant payment and government payment products will be retained in the system and rest will flow out of the PSB system. PSB will earn revenue on the deposits retained in the system by investing in government securities (treasury income).
- The model assumes the active workforce staff for front end and back-end work. The staff numbers depend on the number of agents of PSB. The model assumes that a PSB will start operations with 500 agents and increase by 10% each year.
- The model assumes the daily productivity of field agents for each product. The productivity is assumed in three levels – high, average and low against each product.
- The model assumes the monthly salary of each staff based on the international standards. The salaries are assumed to increase by 5% each year. These are fixed salaries. However, agents will not have fixed salary, they will get performance driven commission pay, which will be variable.

For each financial transaction, the customers will receive communication SMSs. The model assumes transaction acknowledgement SMSs each for agent and customer. The table below lists the broad expected operating expenses and their estimated values for a hypothetical PSB business.

Table 5: Key operating expenses for a hypothetical model of a PSB (all numbers in USD)

Operating expenses	% of total cost	Year 1	Year 2	Year 3	Year 4	Year 5
HR costs						
Agent commissions	**64.81%**	8,982,857	10,978,478	14,180,707	17,932,170	21,525,658
Workforce salaries	**6.59%**	912,794	1,053,017	1,214,911	1,401,833	1,617,659
Agent management cost	**0.08%**	11,500	13,915	16,837	20,373	24,651
Technology costs						
IT software (Annual Management Costs)	**3.17%**	440,000	440,000	440,000	440,000	440,000
SMS cost	**0.30%**	41,143	46,011	70,443	81,813	89,939
Marketing and Branding cost						
Marketing and customer acquisition cost	**12.99%**	1,800,000	1.980,000	2,178,000	2,395,800	2,635,380
Depreciation costs						
Fixed assets depreciation cost	**2.97%**	412,171	413,377	254,703	208,162	171,366
Miscellaneous cost	**9.09%**	12,60,046	14,92,480	18,35,560	22,48,015	26,50,465
Total operating expenses	**100%**	**13,860,511**	**16,417,277**	**20,191,161**	**24,728,167**	**29,155,119**

From the table, it is evident that agent commissions account for a majority portion of the total operating costs. Subsequently, a PSB also has to spend intensively on marketing particularly on below-the-line (BTL) marketing activities that are aimed at encouraging potential customer interactions with the service. Additionally, customer acquisition will be a major cost in the initial 4-5 years as the PSB aims to grow its customer base which is critical to drive transaction volumes. This investment can later reduce once the PSB has established its brand and trust in the market. Additionally, agent commissions for cash transactions are expected to diminish as customers shift to utilising self-initiated digital transactions.[53]

Customer and agent registrations do not necessarily translate to transaction activity and the PSB must plan for this. Substantial marketing initiatives, right use cases, and adequate agent commissions has to be provided to churn transactions. To manage these costs, PSB model will essentially earn revenue from customer tariffs and treasury income.

The hypothetical model assumes a PSB starts its operations with 500 active agents in year 1 and grows it by approximately 10% per year. Transaction fees charged to the customer have been assumed in the range of USD 0.4 -0.6 for each transaction and an average deposit value at USD 30. When the

53 https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/11/2014_Mobile-money-profitability-A-digital-ecosystem-to-drive-healthy-margins.pdf

agent is able to conduct 10 - 14 transactions in a day, the PSB will be able to showcase revenue as per the below table.

Table 6: Key revenue streams for a hypothetical model of a PSB (all numbers are in USD)

Revenue	Year 1	Year 2	Year 3	Year 4	Year 5
Income from customer tariffs	12,538,776	15,353,809	19,867,712	25,157,080	30,247,486
Treasury income	316,800	714,764	1,117,233	1,682,177	2,122,798
Total revenue	**12,855,576**	**16,068,573**	**20,984,946**	**26,839,257**	**32,370,284**

For many PSBs, these revenue streams may not ensure the viability of the business model. Such PSBs have to add other revenue streams such as, income from third party products, term deposits, to make their business profitable.

As per the above assumptions and the cost and revenue table, the hypothetical PSB model will become profitable from the fourth year and will cover up its previous years' losses to breakeven in the fifth year of operations. More details on the financial performance of the hypothetical model of a PSB are covered in the table below.

Table 7: Profitability analysis for a hypothetical model of a PSB

Financial performance of hypothetical model of a PSB					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Income	*all figures are in million USD*				
Income from customer tariff	12.54	15.35	19.87	25.16	30.25
Treasury Income	0.32	0.71	1.12	1.68	2.12
Total Income	13	16	21	27	32
Expenditure					
Interest expended	0.50	1.13	1.43	1.86	2.31
Operating expenses	13.86	16.42	20.19	24.73	29.16
Total Expenditure	14.36	17.54	21.62	26.59	31.47
Profit before tax	-1.51	-1.47	-0.64	0.25	0.90
Cumulative PBT	**-1.51**	**-2.98**	**-2.11**	**-0.39**	**1.15**

It is important to note that the profitability of a PSB and its breakeven depends on whether its field agents are able to pull customers and motivate them to transact. Additionally, the customer value proposition must be driven by the design of customer centric and diversified financial products that tap into the existing use cases. In the absence of sufficient transactions, the breakeven may further shift to the eighth or ninth year of PSB operations.

4.5.2 Human capital investment for the optimal PSB

The hypothetical optimal PSB must invest in diversified and skilled human resources to manage the day to day operations. This is especially critical due to the focus on the use of digital channel to deliver financial services. Continuous training and retraining of staff must be conducted to ensure efficiency and effectiveness of operations. The financial services sector has faced a lot of disruption that has led to the need for specialised skill sets to manage business operations. Digital financial services provision has left many institutions struggling to update legacy systems and enhance operational efficiencies, while maintaining high standards of customer experience. This has created a demand for leaders who understand and can manage changes while creating an alignment of the institution to the organisational vision.

PSBs will struggle to take strategic decisions without the right mix of people. Identifying the necessary skills to implement the business will be critical. It is necessary to identify and recruit experienced skill sets that drive the business operations and ensure compliance to the CBN, especially due to the relative lack of prior experience in banking among the licensees.

Since PSBs will be starting from scratch, internal capacities will need to be built and the cost of developing these capacities is quite substantial. Developing capacities include system orientations as well as building capacities of staff on interactions with various business partners.

Expected staff costs will range from the expenses incurred in recruitment, training, compensation and management. Following technology costs, staff costs are one of the highest operating expenses that a PSB must incur in setting up. This is because the staff will be instrumental in the implementation of all other functions including setting up the head office, customer service centres, agent network management, and leadership and management.

The PSB model is new in the Nigerian context and bringing staff up to speed on the nature of the model will be critical during the initial stages. The PSB will need to recruit staff who are familiar with bank operations which will be cost intensive. Additionally, providing exposure visits for senior management teams to markets such as India where PSBs are operational could be beneficial. Learnings could also be garnered from markets such as Kenya where payments/digital transactions have advanced to third-generation services.[54]

Table 8: Key resource requirements for the optimal PSB

Key resource	Roles
Leadership and management	▪ PSB Management-CEO, MD ▪ Drive alignment to the vision ▪ Regulatory lead for compliance to regulations
Back office and operational teams	▪ Transaction settlement ▪ Issue resolution ▪ Operational validations - account opening, transaction reversals, service requisitions etc.
Market research and product development	▪ Market research to build an understanding of the customer journey in use of PSB services ▪ Design of customer centric digital products for digital channels ▪ Continuous review of product uptake among customers
Customer service centre teams	▪ Customer and agent support

[54]GSMA. 2012. Organizational Design to Succeed in Mobile Money. Available at: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/10/2012_MMU_Organisational-design-to-succeed-in-mobile-money.pdf

	▪ Issue resolution and processing requests ▪ Customer and agent surveys
Administrative staff	▪ Finance functions ▪ Risk function ▪ Legal function
Field sales staff	▪ Recruitment and onboarding of agents ▪ Manage the distribution network ▪ Support customer acquisition ▪ Sell the product portfolio ▪ Identify potential business partners to support the distribution network
Marketing management	▪ Conduct above-the-line and below-the- line marketing campaigns ▪ Market research on perception of PSB ▪ Brand positioning ▪ Targeted marketing communications to build awareness and encourage uptake
Business development teams	▪ Identify opportunities for partnerships and collaborations with sector players ▪ Establish partnerships to support management and operational efficiency of the distribution networks

The PSB should create a project steering board to manage the setup phase. The project team should comprise of Head of Technology and MIS, Head of Finance, Regulatory lead, Head of risk and compliance, Head of Operations and other relevant senior managers that will provide direction, approve resources, ensure regulatory compliance, approve plans and sign off for key decisions during the setup phase.

Recruitment and compensation structure

Recruitment of staff should be guided by business demands. In the initial stages, the focus should be recruiting management, business development, operational teams and sales teams to support the growth of the distribution networks and to manage day-to-day operations of the bank. As the PSB grows, focus may shift to driving the growth of the distribution networks hence more focus on field sales teams and operational staff.

Salary for the staff should include fixed pay- and variable pay (commissions)-based compensation structures. An ideal approach would be higher proportion of fixed pay in the compensation structure for the operational teams, and roughly about same proportion of fixed and variable-pay in the compensation structure for the field teams.

4.5.3 Key technology and MIS concerns for the optimal PSB

The optimal PSB must invest heavily in technology to successfully deliver financial services through digital channels. The technology must be robust, reliable and support integration with other platforms for diversification of services.

Some Payment banks in India such as India Post Payment Banks (IPPB) had at the initial stages experimented with the use of partner institutions' technology platforms to roll out their services[55]. This is however not a viable alternative for a PSB that seeks scale and efficiency in operations. This is due to the relative lack of autonomy on decisions on management of the technology as well as potential conflict between partners that may constrain effective operations. However, integrations between partner platforms and open APIs to allow effective partnerships will be key.

Businesses often think they can buy a major new software system, install it, and it's ready to go. But it usually doesn't work like that. On top of other costs, a buffer in the technology budget for unforeseen expenses—say, 5-10% of the total cost of the system should be included. Additional costs could arise from maintenance, support and updates, configurations and training of staff. These costs are typically around 20% of the original cost of the platform.

PSBs have the option to build an inhouse platform, exclusive of hardware is (USD 80,000-120,000)[56] or purchase a platform that will be customized to business needs. Costs associated with developing inhouse includes the inhouse team such as developers, user interface designers, core developer, app developers, solution architect among other staff that will be involved in developing the inhouse technical solution.

Key considerations in setting up the technology

- Critical business needs: These will determine the effectiveness of the platform. It will require identifying the full functionality of the system with regards to expected transaction volumes, scalability, integration capabilities among others.
- Risk management: Incorporate necessary security measures for consumer data and system integrity
- Transaction and system process flows
- Reporting requirements: Incorporate key aspects such as the frequency, recipients, nature, and formatting of reports.
- Implementation timelines: There should be clearly defined timelines for each stage of the platform set up with clear definition of roles and responsibilities. Product portfolio growth from basic products to third-generation products should be incorporated within the capacities of the platform.

The technology platform that is selected should provide a reasonable assurance on the integrity, resilience, speed and accuracy of the banking systems infrastructure and processing capabilities to ensure the customers are adequately served within an environment of good internal controls.[57] The PSB must invest in a payments platform that integrates the Core banking functionalities with the digital delivery channels seamlessly. The PSB must hold in mind a number of key platform issues:

[55] Business Standard. India post payments bank launch likely this month. Available at: https://www.business-standard.com/article/finance/india-post-payments-bank-launch-likely-this-month-rbi-may-give-nod-soon-118060900026_1.html

[56] Building an inhouse mobile money platform. Available at: http://amaranteconsulting.com/wp-content/uploads/2018/04/84929.pdf

[57] https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/06/2013_MMU_Platforms-for-Successful-Mobile-Money-Services.pdf

- Platform redundancy: PSB must think through ensuring backup systems for the core technology platform
- Disaster recovery: Rapid recovery measures must be instituted in case of system downtime, outage or fail
- Service level agreement: These must be maintained with the vendor to ensure continued support for a period of time as the platform is tested. It should clearly define roles and responsibilities of the vendor and the PSB, scope of work, expected outputs and deliverables, after sales services, penalties and sanctions for the parties involved
- Capacity planning: PSB must consult with DFS experts, vendors and other players in the market to predict and plan for expected growth in transaction volumes as the customer base and product portfolio grows
- Change request management: Plan for any change management requests and incorporate them in the vendor contracting and service agreement process
- Roadmap: The PSB should learn from other sector players in Nigeria and globally to define business requirements for each stage of growth
- Platform environments: PSB should provide a 'live' and a 'test' environment to facilitate testing of platform updates before full roll out

PSBs must be strategic to achieve a balance between acquisition of technology that meets business requirements but also ensures sustainability of the business. It is important that the PSB defines their requirements at three levels, namely, critical, necessary in a few years, and nice-to-have requirements as they invest in technology. This will help to manage the investment cost of technology. Technology should have multiple capabilities; facilitate growth for the PSB beyond transaction processing to enhance efficiencies in customer use cases, strengthen customer engagement and, capture data that can be used to design more customer centric products and services.

The technology a PSB selects influences efficiency of processes, ease of integration with partners, and the choice of agent tools, for instance use of PoS, computer, or a mobile phone. In addition, the choice of agent tool selected as the mode of delivery has an impact on the agent sustainability. Our research has shown that agents who use the mobile phone for daily operations are more sustainable due to the associated low capital- and operating expenses[58]. The use of PoS may also increase the cost of card production for use on the PoS devices. Newer models of PoS devices come with additional functionalities but also at a hefty cost.

Beyond the core banking system, the PSB must also invest in risk management platforms to mitigate risks associated with the use of digital platforms. In many markets, providers have had to invest heavily in purchasing or upgrading systems to deal with cybercrime[59]. Additionally, technology must enable ease of collection and secure storage of customer data.

Additionally, the PSB must take into account the sophistication of the technology on which customers access the financial services. Choice of USSD or STK or mobile applications must consider customer

[58]MSC. 2013. Economics for technology enabled branchless banking. Available at: http://www.microsave.net/files/pdf/Transaction_Economics_for_Technology_enabled_Branchless_Banking.pdf
[59]Standard media. 2019.Cybercriminals up their game, sh30bn in one year. Available online at: https://www.standardmedia.co.ke/business/article/2001325495/cybercriminals-up-their-game-steal-sh30b-in-one-year

demographics such as income and literacy levels. The incorrect channel may negatively affect uptake of digital financial services on the PSB's profile. Some options may be cost intensive to the PSB, but easier to use for the customer encouraging continued usage such as cards and biometrics.

4.5.4 Defining the target customer segments and product offering

Define the unique customer value proposition

To attract these customer segments, the payments bank will need to be intentional in identifying their mental models for financial management. This will be relevant to ensure that the product offering adequately addresses the pain points in the current financial management tools. The payment service bank must understand the unique circumstances, including low literacy levels, mistrust of formal financial services, and residence in areas that are difficult to access. This will be key towards designing products that offer an attractive value proposition for the end user and drive the uptake of digital financial services.

Define primary products and primary access channels

The rapid increase of mobile phones, particularly among the youth aged 18-24 who have the potential to easily understand, can be tapped for the design and delivery of digital products and services. PSBs must tap into the existing local and national cash flow streams, such as remittances, government payments, and user savings needs, to enhance the use case for the user accounts. They need to consider the digitisation of merchant payments, school fees payments, transportation, hospital bills, etc. to create a digital ecosystem that supports the use of digital tools.

The payment bank must evaluate the various access mediums including: point-of-sale devices, Sim Toolkit (STK), Unstructured Supplementary Service Data (USSD) and mobile application, and their suitability for the delivery of financial services. The choice of use will be determined by the ease of use for the end user.

The payment service bank will need to establish a balance between the cost of implementation and ensuring ease of use of the services available. While mobile phones may be easy to use, ownership of mobile devices amongst the target segments may not be adequate. Mobile phones may also present challenges with network and the costs associated with accessing financial services such as data, phone charging among others. Additionally, to encourage trial and further evolve along the customer journey, the payment service bank must focus on the use of agents for its distribution network as these are key in introducing customers to digital financial services. Issuance of point-of-sale devices with agents will be costly but may present an attractive opportunity for customers to build trust in digital transactions through the issuance of physical receipts.

4.5.5 Distribution channels

The hypothetical PSB will require cost effective, efficient and reliable digital channels to deliver financial services to the end users. Consequently, the PSB will need to focus on creation of sustainable agent networks that are effectively managed, trained and supported. In addition, the PSB must set up effective grievance redressal mechanisms to ensure high standards of customer service and agent support.

Traditional banks generally invest in ATMs and bank branches to enhance reach and scale. However, to manage costs associated with physical bank branches and to comply with a focus on digital delivery of financial services, PSBs must focus on establishing sustainable agent networks.

The optimal PSB must take a strategic decision to invest in creating an effective distribution network prior to the start of operations. This will be key in ensuring that agent network management costs such as agent network staff, acquisition of technology solutions such as PoS devices and mobile phone, marketing and advertising, commissions and agent network collateral such as transaction registers, receipt books have been accounted for.

In GSMA's, *Distribution 2.0: the future of mobile money agent distribution networks*, digitising various agent network management process can be key towards reducing costs and driving process efficiency. The optimal PSB should explore the use of digital solutions to onboard agents, monitoring, agent training and liquidity management to manage fixed costs.

According to the [Boston Consulting Group](https://www.bcg.com/publications/2019/how-mobile-money-agents-can-expand-financial-inclusion.aspx), providers breakeven if agents are executing 3-5 transaction per day and 20-30% of agents are enough to generate 80% of the business[60]. However, ensuring this level of activity, particularly in rural areas and in the context of Nigeria target market, will not be an easy fete. Non-dedicated agents are more profitable since business expenses can be catered for by the other existing business hence more sustainable. Bulk of costs for providers tend to be variable costs such as agent commissions rather than fixed costs such as agent monitoring and training. Due to this, it makes more sense for a PSB to recruit non-dedicated agents.

Where the agent is located also determines whether they are profitable due to the demand for services. PSB will need to be strategic about identifying areas where there is demand for financial services. Geo-spatial analysis to identify these demand zones will be critical particularly as PSBs are expected to have 25% presence in the rural areas; this is especially so for the northern regions of Nigeria. Additionally, differentiated commission structures for agents in these regions, where financial services are needed but the demand is not high, could be key to ensuring sustainable agent networks.

4.5.6 Brand positioning

The optimal PSB must focus on the creation of awareness of the brand and a positive user experience driven by high quality services. The PSB must position itself as a reliable and trustworthy financial service provider in the financial sector. Due to the large numbers of financially excluded segments that lack familiarity with formal financial services, digital financial services offered by the PSB will need to focus on creating positive bank-customer relationships. This is critical to address the current mistrust of financial institutions in the Nigerian market by potential customers.

The PSB must redefine the current perception of traditional banks through diversified products and efficient services. The PSB must be able to grow along with the customer needs and progression on the digital financial services journey. They must focus on being flexible enough to provide cheap and accessible products and services that are targeted at the low-income customer segments.

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[60] Boston consulting Group. 2019. How mobile money agents can expand financial inclusion. Online. A Available at: https://www.bcg.com/publications/2019/how-mobile-money-agents-can-expand-financial-inclusion.aspx

The PSB must focus on creating value for the end user and this can best be addressed by resolving pain points experienced in the use of financial management tools. Digital channels will be key to drive the efficiency of services enhancing the customer experience.

PSBs will need to focus heavily on building the brand acceptance in the market. PSBs must explore partnerships with franchises that can support the acceptance of their distribution networks such as FMCGs, Banks, for liquidity management. Additionally, partnerships with companies such as agro-dealers, MFIs, cooperatives, bulk collections that are already established within the market will allow the PSB to tap into existing value chains where payments can be digitised to drive transaction activity.

4.6 Hypothetical optimal PSB requirements and areas of focus at different stages of growth

Summary of optimal PSB requirements and focus areas on different stages of growth		
Aspect	**Setup stage**	**Growth stage**
Capital investment	**Capex** ▪ Buildings and infrastructure ▪ Customer service centres (Direct call lines, computers, office equipment) ▪ Core banking systems, ▪ Business licenses ▪ Customer acquisition-BVN devices ▪ Legal fees ▪ Consultant fees	▪ Customer service centres ▪ Business licenses
	Opex ▪ Agent network management costs-recruitment, onboarding, training, monitoring ▪ Customer acquisition costs ▪ Administrative costs ▪ Marketing and branding ▪ Market research ▪ Human capital	▪ Legal fees ▪ Consultant costs ▪ System maintenance ▪ Agent network management costs-commissions, recruitment, monitoring, training, liquidity management ▪ Administrative costs ▪ Marketing and branding ▪ Market research ▪ Human capital

Technology	▪ Core banking system ▪ CRM system ▪ Agent tools-PoS device, biometric devices, Bluetooth printers, etc ▪ Security management software ▪ Data storage solutions	▪ Integration with ecosystem players ▪ System updates to manage growing volumes ▪ Data analytics ▪ Advanced innovations to cut costs and increase efficiency (AI, data analytics, blockchain) ▪ Integrations with ecosystem players
Human Capital	▪ C-level executives ▪ Digital channel and product development experts ▪ Agent network management experts ▪ MIS experts ▪ Legal ▪ Risk/bank assurance/compliance experts	▪ Agent network management experts ▪ Digital channel and product development experts ▪ Risk management experts
Distribution network	▪ Field sales staff ▪ Customer service units ▪ Call centre teams ▪ Focus on creation of own agent network management structure	▪ Growth in teams involved in management of distribution networks ▪ Focus on developing agent network management structures including master agents
Product Suite	▪ Basic wallet: Cash-in, cash-out, person-to-person, person-to-person off-net, balance check, mini-statement, mobile top-up, bank-to-cash and cash-to-bank, utility payments, charging and commission module	▪ Advanced wallet: Collections and bulk payments, P2G, B2B, B2C, insurance, micro lending, remittances, investment products, e-commerce platforms etc.
Brand positioning	▪ Focus on driving market acceptance and trust in the brand ▪ Drive awareness of financial services and encourage trial ▪ Focus on addressing existing customer pain points in the use of financial management tools ▪ Design a positive user experience for business partners such as merchants, distributors, bulk payments etc.	▪ Focus on creating stakeholder value ▪ Market leader through support of the creation of a digital ecosystem ▪ Seamless customer experience across the digital banking channel ▪ Superior customer service and grievance redressal mechanisms ▪ Enhance integration of business partner platforms and offer value added services such as collections and digital business payments solutions

Partnerships	▪ Business development teams focused on integration of the PSB into the Nigerian financial sector	▪ Establishment of partnerships focused on efficiency of processes and growing the product portfolio

5.0 Critical stakeholder strategies to facilitate financial sector growth

5.1 Banks

- **Widen the scope of customers served at the banks to comprehensively include both high and low-income segments**

  Banks should consider a strategic shift to address low-income segments. This will necessitate a review of the branch operational structures, ease of accessibility, and business process re-engineering. An earlier research study by MSC revealed that low-income customers feel intimidated in accessing formal financial services. They perceive banking halls as unwelcoming due to the quality of service received, languages used, and the overall look and feel. Processes, such as account opening, discourage customers from using formal financial services due to the number of requirements to open an account coupled with their own low literacy levels. To serve corporate and mass-market customers adequately, banks should review operational frameworks, including a review of processes and the corporate culture in the delivery of service.

  Banks in other markets have been able to serve both corporate and low-income customers effectively in three ways:

  - Through the creation of 'supreme' branches dedicated to serving corporate customers;
  - Through the implementation of tariff structures that encourage the status quo for the corporate branches;
  - Through agent networks that are more accessible and standard branches equipped to serve mass-market customers.

- **Review existing product offering to address market needs better**

  Many use-cases remain untapped within the ecosystem, partly due to the challenges with infrastructure, but also due to a lack of focus in addressing the needs of the low-income segments. Additionally, formal financial products that exist do not adequately address the needs of the mass-market segments characterised by price sensitivity, irregular and unpredictable income, and low transaction values.

  Banks must make concerted efforts to understand the mass market to design products that meet the financial management behaviour of low-income customer segments adequately. Ensuring ease of use, affordability, and accessibility of these financial services will enhance the uptake and consequent formal financial inclusion.

- **Implement effective agent network management structures to drive agent network sustainability**

  Implementation of Agent networks in Nigeria has not achieved much success, as measured by the key success factors put forward by The Helix Institute of Digital Finance. Many Banks have focused on the use of third-party agent network managers to recruit and manage agents. These agents experience ineffective support and are frequently not trained, which affects their performance negatively. Even in cases where the bank manages the agent network, the support functions and the agents face a gap. Consequently, many banks have high numbers of agents recruited – of which only a small proportion actively provides agent banking services.

Banks must review the existing structures around agent network management, on the super-agent model and the own network model, to ensure they have put in place effective processes for quality agent selection and recruitment, training, agent support structures for issue resolution, and liquidity management. Additionally, banks must provide attractive agent value propositions through diverse product offerings and drive transactions to agent outlets.

5.2 Mobile network operators

- **Investment into expanding network connectivity to support digital transactions**
  Investment in expanding infrastructure is a significant cost. However, the benefits to those that are able to achieve a nationwide presence are equally significant. Presence denotes opportunity, particularly in digital financial services. Driving access promotes the growth of business models that are most advantageous to those that are accessible and available.

- **Partnerships and collaborations with other players**
  Telcos must work in collaboration with other players to maximise their existing strengths on network distribution and to acquire necessary skill sets to capitalise on existing opportunities fully within the current regulatory frameworks.

- **Utilise existing distribution networks for digital financial service**
  Telcos enjoy a wide presence in most areas of Nigeria due to the proliferation of mobile phones. Due to market presence and extensive marketing and communication efforts, people tend to trust telcos easily. Additionally, airtime sales centres can be utilised easily for digital financial transactions because they enjoy a wide market presence, particularly in areas that would be too cost-intensive for traditional players like banks to set up branches. At the initial stages, a focus on CICO transactions will help to build trust in digital financial services. As the business models evolve, a diversified product offering could help to enhance the value proposition for providers of mobile money.

5.3 Regulators

- **Review the regulatory framework to encourage the participation of all players and derive benefits from unique strengths**
  CBN should review the encompassing regulatory frameworks for digital financial services to promote the participation of both small and large players. The regulator must recognise the individual strengths of various players in advancing financial inclusion. The regulator must strike a balance between establishing effective DFS models and restricting single-player monopoly.

CBN should collaborate with different financial sector stakeholders in the development and review of existing regulations, particularly as concerns KYC, operational scope, and agent network deployment.

Different sector regulators must work together to analyse potential drivers to expand the necessary infrastructure to facilitate the growth of DFS

- **Intensify efforts to support the implementation of effective identity systems to enhance access to financial services and reduce risk**
  As the country continues to register participants under the NIN and the BVN, a singular identification system will be needed that harmonises all these identification efforts. This will make it easy for the unserved populace to acquire – a majority of whom lack the necessary KYC documents. A combined effort by the different agents will also push for faster identification.

6.0 Key action points

6.1 Payment service banks

1. Focus on establishing a sustainable business strategy and model through low cost operations dependent on digital delivery channels and effective agent networks. Low value high volume transactions will be key for driving business sustainability.
2. Drive market acceptance through financial literacy and intensive awareness efforts. This will be key to drive low value high volume transactions characteristic among the financially excluded segments.
3. Drive business revenue through leveraging product integrations of existing use cases such as G2P, P2G, C2B, and B2C. These will be facilitated by collaboration and technology integrations with public and private sector partners. Revenue generation should be focused on data generation rather than transaction fees. Driving high value transactions of small sizes will have an impact on the business case. However, the PSB must focus on collection of data from these transactions that can be utilized in the design of additional products as well as creation of value-added services for customers and business partners. This will be achieved through the sustained manipulation of data using artificial intelligence and the availability of data warehouses that allow access to multiple players and partners. This integration will enable participants to initiate, authenticate, transact, and settle in real time, in turn enabling customers to do everything from buying goods through e-commerce directly linked to their accounts to borrowing money to buy an asset such as a refrigerator or a motorcycle, and having the asset tracked, monitored, and even stop working if loans are not repaid on time.
4. Open standards to facilitate integration with businesses that will be key to mining of data and deposit mobilization. The PSB must rely on open banking digital infrastructure to provide access to fintech partners. This will be driven by partnerships that leverage technology or data or to offer new products to customers. Examples in Africa include Equity Bank and Co-op Bank in Kenya.61
5. Deposit mobilization will be key to the PSB to allow it to invest in government securities. Deposits may also earn returns from depositing these funds with partner institutions such as

[61] IFC. Basic Business Models for Banks Providing Digital Financial Services in Africa. Available at: https://www.ifc.org/wps/wcm/connect/7db6ab09-c30c-4315-bfe5-f761f2a14159/EMCompass-Note-68-Business-Models-for-Banks-DFS-Africa.pdf?MOD=AJPERES&CVID=mIutwXh

banks. The current guidelines do not allow for this mandating PSBs to invest in Government and FBN securities which offer lower returns on investment.

6. Enhanced customer experience that is strategically targeted towards low income customers. Encourage low income customer segments participation through lower costs to access transactions. A seamless bank end customer experience will be key through the back-end customer relationship management (CRM) to the front-end mobile or point-of-sale applications. Additionally, a positive customer experience is instrumental in driving continued usage of digital financial services which has been seen to result in a positive outcome in the enhancement of customer livelihoods as evidenced in markets such as Kenya and Ivory Coast62
7. Attractive agent value propositions to drive agent loyalty and sustainability. According to the IFC, customers who transact through agents transact more, are more loyal and saved up to 80% through their interactions with agents. Agents are highly sensitive to commissions that are paid by the provider influencing their willingness to serve customers and to hold sufficient liquidity63. Many providers in East Africa compensate agents mainly on transactions and accounts opened, providers in markets such as Bangladesh compensate agents on cheque deposits, deposit mobilization, sourcing of loans, loan disbursement and repayments and fixed and term deposits. This reflects the need for a diversified product portfolio that the agent can sell to customers and earn commissions on, enhancing the agent's value proposition.

6.2 Regulators

1. Inter-sectoral collaboration to drive infrastructure development for connectivity. This will help to ensure affordability and accessibility of digital financial services and encourage trust through reliability of service.
2. Clearly define KYC and eKYC requirements for PSSBs to encourage compliance and eliminate varied interpretations. Focus on the establishment of an identity system that adequately supports both financial and non-financial transactions. This will require multiple regulators to collaborate to align existing identity systems. However, in the long term, focus must be based on developing a single identity system with multiple functionality.
3. Establish a PSB working group with EFInA participation to review PSB operational guidelines and support the establishment of sustainable business models. The ability to lend should be a focal point in the review of regulations. The key focus of the working group should be to support the creation of an enabling regulatory environment for PSBs through reviews, recommendations and modifications of existing regulations to keep compliance costs low especially in the initial years of operations
4. Government support through mandating digitisation of government-to-persons (g2P) payments and persons-to-government (P2G) payments.
5. Review of restrictive regulations such as KYC requirements for customer account opening. Lengthy and cumbersome requirements to open a bank account may discourage the target customers.

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[62]***CGAP, 2017. Assessment of M-PESA's role in the economic lives of Kenyans. Available at: https://www.findevgateway.org/library/long-run-poverty-and-gender-impacts-mobile-money***

63 IFC.2018. A New Banking Model for Africa: Lessons on digitization from four years of operations. Available at: https://www.ifc.org/wps/wcm/connect/ccfc72e8-1434-4fcb-9262-990fb864e22c/Longitudinal+study_New+Banking+Model+for+Africa_final.pdf?MOD=AJPERES

7.0 Conclusion

Payment Service Banks is a winner-takes-all business, just like the other network-based concepts. At the end of the day, only those PSBs that are able to innovate in the field of product, distribution, and customer experience, will survive. It is a low-value and high-volume business. It is definitely a long-term business opportunity since the operating environment enables all players. Entities have a greater chance of success if they understand the business and have a large distribution base, secured and scalable technology, and offer simple, innovative, and customer-centric solutions.

Technology can allow Payment Service Banks to reach out to customers in remote areas and difficult terrains through improved accessibility and connectivity. Digital adoption, particularly through mobile channels, is a journey for these segments of targeted customers. PSBs can enhance and enable the growth of digital financial services through concerted efforts to drive customer education and ease of use of access channels. PSBs can use real-time tracking of transactions and send prompt notifications to the customers on the account status to reduce their anxiety and instil confidence, faith, and trust in the system. They should also ensure robust technology platforms to deliver a seamless banking experience to the customers across various geographies and platforms.

The opportunity for PSBs to enhance financial inclusion in Nigeria will not be an easy task with immediate results. This is especially true with the seemingly insurmountable challenges inherent in the journey of financial inclusion for the underserved and unserved customer segments. It will take the dedicated effort of all players to ensure the success of not only PSBs, but also other stakeholders within the financial services space.

The entry of PSBs in the market will drive the growth of the entire financial sector by encouraging competition which drives innovation, quality of service and affordability of financial services. All financial sector players stand to benefit as customers get more experience with using formal financial services, and, digital channels of financial service delivery including, agent networks and mobile phones. All in all, the financial inclusion future looks bright.

Annexes

Annex A: Stakeholder interview questions

Regulators

- What are the internal dynamics that have been implemented to support SANEF and PSBs to ensure adequate supervision?
- What are the operations of SANEF in terms of ownership and agent management?
- What are the opportunities and expected challenges for PSBs as compared to existing players?
- What can PSBs do better than the existing players in advancing financial inclusion?
- What is our role in driving financial education and customer literacy?
- What is the business case for PSBs without the capability to offer lines of credit?
- What are the opportunities for the regulator to support the implementation of PSBs?
- What is the status of ID systems in Nigeria? How enabling is it to facilitate financial inclusion?

Telcos

- Investment in the expansion of networks seems to have slowed down. What support do you think you could receive that could help to encourage further investment?
- What is your perception or opinion on SANEF (SWOT)?
- Have you considered being a PSB? What are the challenges encountered in applying for PSB licenses?
- As a PSB how do you propose to give an attractive value proposition to the customer? Key customer concerns are price, convenience, reliability
- What are the challenges you expect to encounter as a telco in starting a PSB- Liquidity, competition, inadequate market presence?
- How do you think your role as a PSB and as a Super-agent would conflict or be in congruence?
- What would be your business case for becoming a PSB? What opportunities do you foresee?

Fintechs

- What do you believe would be the limitations for you as a fintech in implementing a PSB?
- What would be your business case for becoming a PSB?
- What are the opportunities for you in becoming a PSB?
- What challenges do you envision in applying for a PSB license?

Super agents

- What is your perception or opinion on SANEF (SWOT)?
- Why have agent networks not achieved expected success in advancing financial inclusion?
- What are the challenges encountered in managing existing agent networks?

NIBSS +Interswitch

- SANEF-do we have the capacity to handle large volumes of transactions that are likely to occur
- What challenges do you anticipate?

Banks and MMOs

- What are the market dynamics expected to shift once PSBs start operations?
- What is the biggest competitor aspect coming in from PSBs?
- What are the banks competitive advantage over PSBs?
- What are the opportunities for partnerships between banks?
- What would be your business case for becoming a PSB?

MMOs

- Kindly take me through how your MMO works?
- How do customers access services at your outlets?
- What would be your business case for becoming a PSB?
- What are the expected opportunities, challenges in the introduction of the PSB model?

Annex B: Abbreviations

Abbreviated form	Expanded form
AEPS	Aadhaar Enabled Payment Service
AML	Anti-Money Laundering
APBS	Aadhaar Payments Bridge
API	Application Programming Interface
ATM	Automated Teller Machine
BBPS	Bharat Bill Payments System
BC	Business Correspondents
BHIM	Bharat Interface for Money
BVN	Bank Verification Number
CBN	Central Bank of Nigeria
CFT	Combating the Financing of Terrorism
CRR	Cash Reserve Ratio
DFS	Digital Financial Services
EBITDA	Earnings Before Interest, Tax, Depreciation, and Amortisation
eID	Electronic Identification Document
ERP	Enterprise Resource Planning
FMCG	Fast Moving Consumer Goods
FSP	Financial Service Providers
GoI	Government of India
ICT	Information and Communications Technology
ID	Identification Document
IFSC	Indian Financial System Code
IMPS	Immediate Payment Service
INEC	Independent National Electoral Commission
IPPB	Indian Post Payments Bank
KYC	Know Your Customer
MDR	Merchant Discount Rate
MFI	Micro Finance Institution
MMO	Mobile Money Operator
NBFC	Non-Banking Financial Company
NCC	Nigerian Communications Commission
NCS	Nigeria Central Switch
NEFT	National Electronic Funds Transfer
NFS	National Financial Switch
NIBSS	Nigeria Inter-Bank Settlement System Plc
NIMC	National Identity Management Commission
NIN	National Identification Number
NPCI	National Payment Corporation of India
NPoPc	National Population Commission
NSDL	National Securities Depository Limited
PMJDY	Pradhan Mantri Jan Dhan Yojna
PoS	Point of Sale
PPI	Prepaid Payment Instruments
PSB	Payment Service Banks
PSV	National Payments Systems Vision
RBI	Reserve Bank of India
RRB	Regional Rural Banks

Abbreviated form	Expanded form
RTGS	Real-Time Gross Settlement
SFB	Small Finance Bank
SLR	Statuary Liquidity Ratio
SME	Small and Medium Enterprises
SMS	Short Message Service
SWIFT	Single Interface for Trade
UPI	Unified Payments Interface
USSD	Unstructured Supplementary Service Data

Annex C: Detailed financial modelling assumptions

Products		Base year	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Account Opening			Yes	Yes	Yes	Yes	Yes
Cash IN			Yes	Yes	Yes	Yes	Yes
Cash Out			Yes	Yes	Yes	Yes	Yes
Remittance (P2P)			Yes	Yes	Yes	Yes	Yes
Merchant payments (P2B)			Yes	Yes	Yes	Yes	Yes
Bill payments (P2B)			Yes	Yes	Yes	Yes	Yes
Air time top up (P2B)			Yes	Yes	Yes	Yes	Yes
G2P payments			No	No	Yes	Yes	Yes

Tariff structure		Paid by the customer			Paid to the agent
Account opening	USD	0		Flat fee	0.43
Cash IN	%	0.57		%	0.4
Cash Out	%	0.57		%	0.4
Remittance (P2P)	USD	0.41		Flat fee	0.29
Merchant payments (P2B)	USD	0.41		Flat fee	0.29
Bill payments (P2B)	USD	0.41		Flat fee	0.29
Air time top up (P2B)	USD	0.41		Flat fee	0.29
G2P payments	USD	0.61		Flat fee	0.43

Average value per transaction		Base year	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Ticket size growth %	%			10%	10%	10%	10%
Cash IN	USD		30	33.0	36.3	39.9	43.9
Cash Out	USD		30	33.0	36.3	39.9	43.9
Remittance (P2P)	USD		20	22.0	24.2	26.6	29.3
Merchant payments (P2B)	USD		10	11.0	12.1	13.3	14.6
Bill payments (P2B)	USD		5	5.5	6.05	6.655	7.3205
Air time top up (P2B)	USD		5	5.5	6.05	6.655	7.3205
G2P payments	USD		30	33	36.30	39.93	43.923

Money remaining in the system		Base year	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Active Workforce		Base year	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Merchant payments (P2B) Agents growth	%		10%	10%	10%	10%	10%
G2P payments Cumulative agents in the system	#		500	20% 550	20% 605	20% 666	20% 732
Cumulative field managers in the system	#	6	83	92	101	111	122
Cumulative back office staff (L1) in the system	#	6	14	15	17	18	20
Cumulative Sales/ Marketing/ Admin manager (L2) in the system	#	6	2	3	3	3	3
Cumulative division head (L3) in the system	#	6	1	1	1	1	1

Workforce HIGH field productivity per day (*may or may not be unique customers*)			EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Productivity growth %	%	30%					
Account opening	#		4	5	7	9	11
Cash IN	#		4	5	7	9	11
Cash Out	#		2	2	2	2	2
Remittance (P2P)	#		1	1	2	2	3
Merchant payments (P2B)	#		1	1	2	2	3
Bill payments (P2B)	#		1	1	2	2	3
Air time top up (P2B)	#		1	1	2	2	3
G2P payments	#		0	0	4	5	7
Any other							
Any other							
Total			14	18	26	34	43

Workforce avg field productivity per day (*may or may not be unique customers*)			EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Productivity growth %	%	10%					
Account opening	#		4	4	5	5	6
Cash IN	#		4	4	5	5	6
Cash Out	#		2	2	2	2	2
Remittance (P2P)	#		1	1	1	1	1
Merchant payments (P2B)	#		1	1	1	1	1
Bill payments (P2B)	#		1	1	1	1	1
Air time top up (P2B)	#		1	1	1	1	1
G2P payments	#		0	0	4	4	5
Any other							
Any other							
Total			14	15	21	22	24

Workforce LOW field productivity per day (*may or may not be unique customers*)			EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Productivity growth %	%	-10%					
Account opening	#		4	4	3	3	3
Cash IN	#		4	4	3	3	3
Cash Out	#		2	2	2	2	2
Remittance (P2P)	#		1	1	1	1	1
Merchant payments (P2B)	#		1	1	1	1	1
Bill payments (P2B)	#		1	1	1	1	1
Air time top up (P2B)	#		1	1	1	1	1
G2P payments	#		0	0	4	4	3
Any other							
Any other							
Total			14	13	16	14	13

Workforce field activity levels		Base year	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
High productivity	%		5%	5%	10%	10%	5%
Average productivity	%		50%	50%	50%	50%	50%
Low productivity	%		45%	45%	40%	40%	45%
Total	%		100%	100%	100%	100%	100%

Government security rate of interest (Treasury Income)	%		8%
Deposit account rate of interest	%		7%

Workforce Salary per month		Base year	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Salary growth %	%			5%	5%	5%	5%
Agent	USD		71	75	79	83	87
Field managers	USD		357	375	394	413	434
Back office staff (L1)	USD		571	600	630	662	695
Sales/ Marketing/ Admin manager (L2)	USD		714	750	788	827	868
Division head (L3)	USD		1000	1050	1103	1158	1216

SMS usage per financial transactions		SMS
Account opening	#	1
Cash IN	#	2
Cash Out	#	2
Remittance (P2P)	#	2
Merchant payments (P2B)	#	2
Bill payments (P2B)	#	2
Air time top up (P2B)	#	2
G2P payments	#	2

OPEX cost	UNIT	UNIT cost	EoY 1	EoY 2	EoY 3	EoY 4	EoY 5
Incremental cost %	%			10%	10%	10%	10%
Agent management cost(recruitment, training and marketing at agent)	USD	per agent	23	25.3	27.8	30.6	34
SMS Telecom cost	USD/ SMS	0.01					
Marketing and customer acquisation cost	USD	per month	1,50,000	1,65,000	1,81,500	1,99,650	2,19,615
IT Annual Maintenance charges (AMC)	%	standard AMC of the tot	22%	22%	22%	22%	22%
Fixed asset depreciation	%		20%	20%	20%	20%	20%
Miscellaneous costs (% of total OPEX)	%		10%	10%	10%	10%	10%

CAPEX cost per unit	UNIT	IT Hardware cost (per	IT Software cost (	Furniture and Fixture (	Land and building
Customer Service Point (for agent)	USD	0	20,00,000	0	0
Regional office (for back office staff and field manager)	USD	571		214	0
Head office (Sales/ Marketing/ Admin manager (L2) and division head (L3)	USD	571		214	0