FinTech Landscape and Impact Assessment Study

2020 Report
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Recommendations and Implications for Stakeholders
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FinTech landscape in Nigeria

**Relative FinTech adoption scale**

- No of FinTechs: 200+
  - No of FinTechs in Nigeria
- Funding: $560mn
  - FinTech funding in last 3 years

**Top sectors by number of players**

- Payments: 39%
- Savings: 11%
- Lending: 28%

**Women in FinTech**

- Of top 50 FinTechs have a female co-founder: 22%
- Of top 50 FinTechs have women in senior management: 48%

**5 imperatives for stakeholders**

- Build a regulatory framework to spur innovation in the financial landscape
- Create pull for digital identity
- Develop central credit infrastructure
- Accelerate digital infrastructure
- Grow the talent pipeline

**Long-term Economic impact**

- $3bn potential investment
- $1bn retail banking revenue increase
- $50bn DFS GDP potential

**Development goal contributions**

- Gender inclusion
- Financial inclusion
- Extending access to Education, Healthcare, Agriculture and Energy

**Multiplier effect**

- Unlock new business models
- Fuel business digitization
- Drive job creation

**SOURCE:** MGI Digital Finance for all 2016, Literature review, customer survey n=215

2. Long-term defined as 5-10 years
Executive summary

Global FinTech growth is driven by a combination of factors – increased funding, modernized payment infrastructure, the rise of tech players and the sharing of data and technology. Threat of big techs and challenging B2C economics in developed markets are contributing to a gradual shift in FinTech models to B2B and increased collaboration between banks and FinTech.

The Nigerian FinTech landscape is attractive and growing, with a concentration in Lagos, focused on banked customers and providing payment and lending solutions. However, dynamics are changing – new pockets of growth are emerging driven by changes in consumer behavior, funding sources, and new business models; leading to an extension of Financial Services to unserved and underserved populations.

Despite the increased activity in the FinTech sector in Nigeria and the positive multiplier effect, economic impact to date is low, with FinTech activity accounting for only ~1.25\% of retail banking revenues in 2019. A concerted effort by all stakeholders to address structural challenges is required to capture a greater share of Nigeria’s $50bn Digital Financial Services opportunity, and mitigate emerging risks as the sector evolves. This could help accelerate the ambition to include more individuals into the formal financial system.

There are a number of actions that could enhance Nigeria’s Digital Financial Services landscape – leading to a higher number of people included into the financial system. However five of them, if well executed could yield the biggest impact – Innovation enablement, Digital ID, Credit infrastructure, Digital infrastructure and Technology talent pipeline.

1. FinTech revenue as a percentage of total retail banking revenue
2. Assuming growth rate pre-COVID-19

## Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>FinTech</td>
<td>A technological innovation in the prevailing model of delivering financial services</td>
</tr>
<tr>
<td>InsurTech</td>
<td>Technology-led companies that enter the insurance sector, taking advantage of new technologies to provide coverage to a more digitally savvy customer base</td>
</tr>
<tr>
<td>RegTech</td>
<td>Companies that address regulatory requirements using technology</td>
</tr>
<tr>
<td>Blockchain</td>
<td>A cryptography-based database technology and enables trustless storage and sharing of data</td>
</tr>
<tr>
<td>API</td>
<td>Application programmable interfaces (APIs) enable the IT function to conveniently build and implement new applications in the ecosystem</td>
</tr>
<tr>
<td>GSI</td>
<td>Global Standing Instruction – links Bank Verification Number (BVN) of all depositors to show credit history of debtors with all banks thereby preventing further loan for defaulters</td>
</tr>
</tbody>
</table>
Glossary

- CBN
  - Central Bank of Nigeria
- NIBSS
  - Nigeria Inter-Bank Settlement System Plc
- SANEF
  - Shared Agent Network Expansion Facilities
- NCC
  - Nigerian Communications Commission
- NAICOM
  - National Insurance Commission
- DFID
  - The Department for International Development
- USAID
  - United States Agency for International Development
- FCPCC
  - Federal Competition and Consumer Protection Commission
## Key questions answered in this report

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Key questions</th>
</tr>
</thead>
</table>
| Global FinTech landscape | What does the global FinTech landscape look like and what areas do FinTechs play in?  
How has funding to FinTech evolved globally and what factors are driving it?  
What are the key trends shaping FinTech activity globally?  
What are the key enablers for a successful FinTech ecosystem based on learnings from global markets |
| Nigeria FinTech landscape and its evolution | What is driving the growth of FinTech in Nigeria (size of the market, unmet needs)?  
How have FinTech evolved over time to take advantage of the opportunity?  
Who are the key FinTech in the market and where do they play?  
How has funding to the FinTech space in Nigeria evolved and what are key considerations?  
How is the FinTech space in Nigeria likely to evolve? |
| Impact assessment of FinTech in Nigeria | What are the areas that FinTech can make impact in Nigeria?  
What is the potential direct impact that FinTech can make on financial services?  
In what ways can FinTech contribute to capturing the overall opportunity from digital financial services? |
| Recommendations for stakeholders | What are the key imperatives for stakeholders in Nigeria’s FinTech landscape? |
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Key messages from Global FinTech Landscape (1/2)

Globally, FinTech play both across the banking and insurance value chains with an emerging shift to B2B models

- FinTech activity is concentrated in consumer and SME segments and insurance with most players leveraging APIs and Cloud as their core technology
- There is an emerging shift towards B2B businesses in Western markets, however emerging markets remain attractive for B2C players
- There is a growing emergence of big tech companies focusing on providing one stop solutions to customers through their developing ecosystems
- This is in turn resulting in increased partnerships between banks and FinTech to provide tailored solution to customers

Funding to FinTech players continues to grow and increased attention is being paid to emerging markets

- Globally, $36 bn invested in 2019 in FinTech players
- Funding is starting to shift to emerging markets as investors search for growth opportunities and markets like India and Indonesia have seen significant funding activity
- Funding to the African ecosystem is also seeing increased traction with a ~73% y.o.y increase in start up funding from 2018 – 2019 driven by FinTech
Key messages from Global FinTech Landscape (2/2)

Observation of successful FinTech ecosystems suggest 7 key elements that enable the growth and drive a deepening of financial usage across the ecosystem

1. Creating an enabling regulatory environment to foster innovation

2. Fostering innovation by enabling ease of access to APIs and data e.g. Advanced analytics is becoming mainstream and there is growing adoption of open banking

3. Enabling global connections and learning with other ecosystems, including growing partnerships between banks and FinTech

4. Significant long term funding pool which is evident in the increase in FinTech funding globally

5. Building strong tech infrastructure which has facilitated the modernization of payments

6. Rise of ecosystem orchestrators, catering to unmet customer needs across the financial services value chain through a range of use cases

7. Building a sustainable talent pipeline
FinTech definition: A technological innovation in the prevailing model of delivering financial services

Could be any type of player…
- Incumbents (e.g. Banks, Insurance companies etc.)
- Non-financial services providers (e.g. tech companies)
- Startups/New entrants

…and delivering a wide range of financial services
- Payments & Transactions
- Accounts
- Savings & Investments
- Lending & Financing
- Life insurance
- Non-life insurance

1. Focus of this document will be in non-incumbent players that are typically startups and early stage companies
Globally FinTech are focused on consumer and SME banking (1/2)

Early disruptors focused on the consumer and SME payments space:
- Payments is a significant market accounting for >15% of SME/retail segments and continuing to grow
- 90% of customer touch points involve payments
- Cost of entry tends to be lower for payments
- Data from payments has led to newer savings and investment models

Increasing shift towards savings, investments & lending:
- Leveraging technology to make attractive savings and investments models available
- The rise in advanced analytics has given rise to newer FinTech business models in saving and lending
- Data generated by payments and advanced analytics creating new lending models
As well as on insurance (2/2)

**ESTIMATES**

**McKinsey InsurTech Landscape, % of Insurtechs in database**

<table>
<thead>
<tr>
<th>Customer segments</th>
<th>Products/capabilities</th>
<th>Life</th>
<th>Non Life</th>
<th>Health</th>
<th>Internal Operation</th>
<th>SME</th>
<th>Large corporate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td></td>
<td>6%</td>
<td>1%</td>
<td></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>SME</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14%</td>
<td>3%</td>
<td>16%</td>
</tr>
<tr>
<td>Large corporate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Share of innovation in McKinsey InsurTech database**

- FinTech: 33%
- Non Life: 14%
- Life: 6%
- Health: 8%
- Internal Operation: 2%

**McKinsey InsurTech Landscape, % of Insurtechs in database**

- INSURTECH has attracted significant activity from investors with 25% of FinTech playing in Insurance.
- Insurance activity globally is predominantly in the retail and non-life segment, driven mainly by P&C motor insurance with sizeable activity in the Internal operations and non-life segment.
- Within Insurance, players have focused on the non-life segment (e.g. asset insurance), deploying innovative models around distribution, risk assessment and customer servicing.
- Global size of Insurtech highlights the opportunity for innovation in Insurance in Nigeria, where activity has been limited.
API and Cloud technology are most utilized by FinTech, but Big Data/AA holds potential in emerging markets

<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
<th>Number of FinTech leveraging tech trend, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>API</td>
<td>Set of programming code that enables data transmission between one software product and another</td>
<td>476</td>
</tr>
<tr>
<td>Cloud</td>
<td>On-demand availability of computer resources especially data storage and computing power</td>
<td>449</td>
</tr>
<tr>
<td>AI</td>
<td>Using machine learning and artificial intelligence for activities such as fraud detection and automated customer support</td>
<td>407</td>
</tr>
<tr>
<td>Big Data/Advanced analytics</td>
<td>Leveraging data and analytics to provide insights that allows for more personalized customer offerings</td>
<td>369</td>
</tr>
<tr>
<td>Blockchain</td>
<td>Distributed ledger and record systems with use cases in cryptocurrency, registries &amp; identity systems</td>
<td>166</td>
</tr>
<tr>
<td>Other</td>
<td>This consists of other tech trends such as Regtech, ComplianceTech, Internet of Things and Virtual Reality</td>
<td>143</td>
</tr>
<tr>
<td>Biometrics</td>
<td>Measurement and statistical analysis of people’s unique physical and behavioral characteristics with use cases in KYC &amp; fraud detection</td>
<td>87</td>
</tr>
</tbody>
</table>

SOURCE: McKinsey Panorama FinTech Database, Press Search

API and Cloud remain foundational technology on which many FinTech are built

Big data and advanced analytics have become mainstream globally but still remain early stages in markets like Africa

Several new technologies emerging across Regtech, ComplianceTech and Internet of Things
The threat of big techs and challenging B2C economics in developed markets are contributing to a gradual shift to B2B models

Most FinTechs utilize B2C distribution models...

…in developed markets, there is an emerging shift towards B2B models …

### FinTech Distribution Model

<table>
<thead>
<tr>
<th>Segment</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SME</td>
<td>Digital wallet for groups to split costs</td>
<td>Expense management, budgeting and reporting for companies</td>
</tr>
<tr>
<td>2 Payments/Remittances</td>
<td>International P2P money transfers</td>
<td>International large enterprise &amp; corporate transfers</td>
</tr>
<tr>
<td>3 Wealth Management</td>
<td>SIGFIG Robo Advisory</td>
<td>White label products for banks</td>
</tr>
<tr>
<td>4 SME</td>
<td>wave SME invoicing</td>
<td>White label SME banking products to RBS</td>
</tr>
<tr>
<td>5 SME</td>
<td>C2FO SME invoicing</td>
<td>Enterprise platform</td>
</tr>
<tr>
<td>6 Insurance</td>
<td>Slice On demand platform</td>
<td>Cloud Platform</td>
</tr>
<tr>
<td>7 Broker</td>
<td>Insurance Robo advisor</td>
<td>White labels to banks and insurers</td>
</tr>
</tbody>
</table>

Source: Panorama FinTech Database, Press Search, Expert interviews, WSJ
Global FinTech investment has grown over the years with $36bn invested in 2019 alone

VC-backed global investment in FinTech
USD bn

Ant Financial is making investments in SE Asia and Africa, focusing on funding startups, tech companies, FinTech in the payment space etc.

+22% p.a.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Deals</th>
<th>Average Ticket Size, USD Mn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>35.7</td>
<td>14.7</td>
</tr>
<tr>
<td>2018</td>
<td>30.0</td>
<td>11.9</td>
</tr>
<tr>
<td>2017</td>
<td>23.2</td>
<td>10.3</td>
</tr>
<tr>
<td>2016</td>
<td>18.9</td>
<td>8.8</td>
</tr>
<tr>
<td>2015</td>
<td>17.4</td>
<td>8.9</td>
</tr>
<tr>
<td>2014</td>
<td>13.3</td>
<td>7.2</td>
</tr>
</tbody>
</table>

SOURCE: Dealroom
These investments have been concentrated in payments

VC funding remains highly concentrated in payments...

VC FinTech Deal value by category¹

<table>
<thead>
<tr>
<th>Total Funding Pools</th>
<th>(USD bn)=</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$10bn</td>
</tr>
<tr>
<td>Payments²</td>
<td>35%</td>
</tr>
<tr>
<td>Retail banking</td>
<td></td>
</tr>
<tr>
<td>SME &amp; corp. banking</td>
<td>23.5%</td>
</tr>
<tr>
<td>WM, capital markets</td>
<td>7.7%</td>
</tr>
<tr>
<td>FI Infrastructure</td>
<td>14%</td>
</tr>
<tr>
<td>Insurance</td>
<td>6.9%</td>
</tr>
<tr>
<td>Process</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

²Ant Financial’s giga round excluded
³Excludes Alipay’s 2018 $14Bn funding. Early stage: Early VC, Seed, Series A / Late: Series B-E, Mature: series F-I and Late VC; Sum >100% due to rounding error

... and investors are increasing funding in late stage businesses

VC FinTech Deal counts by stage³

<table>
<thead>
<tr>
<th>Total Funding Pools</th>
<th>(USD bn)=</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$23bn</td>
</tr>
<tr>
<td>Early stage</td>
<td>82</td>
</tr>
<tr>
<td>Late stage</td>
<td>14</td>
</tr>
<tr>
<td>Mature</td>
<td>4</td>
</tr>
</tbody>
</table>

Average deal size 2019:

- Early stage: $9.3mn
- Late stage: $20.7mn
- Mature: $5.9mn

SOURCE: Dealroom, McKinsey FinTech
North America and Europe still dominate bulk of FinTech funding, but there has been an increase in investments into emerging markets

North America has the biggest share of FinTech funding over the years, receiving almost half of the global VC investments in 2019. The share of total funding for companies in emerging markets has grown over the last 3 years with almost 25% of 2019 investments in emerging markets driven by India.

In 2019 Indian FinTech funding doubled, driven largely by Chinese investments.
US, Europe and China are the leading FinTech ecosystems by funding and number of companies, with India and Indonesia emerging.

Global FinTech Landscape - Experience from successful FinTech ecosystem

1. Total funding over last 3 years
2. China excluding Ant Financial’s massive funding rounds
3. No. of FinTech added based on Dealroom database (non-exhaustive)

**United States**
- Total Funding: USD 32.3 bn
- Number of companies: 3670
- Leading Segment: Payments
- Key Players: PayPal, Stripe, Square

**Europe**
- Total Funding: USD 16.4 bn
- Number of companies: 23200
- Leading Segment: Mobile Payments
- Key Players: Transferwise, N26, Monzo, Raisin

**Brazil**
- Total Funding: USD 1.4 bn
- Number of companies: 93
- Leading Segment: Mobile Banking
- Key Players: Ebansx, NuBank

**Africa**
- Total Funding: USD 1 bn
- Number of companies: 491
- Leading Segment: Mobile Payments, Lending
- Key Players: O’Pay, Branch, Jumia, Mpesa, Bitpesa

**China (including Hong Kong)**
- Total Funding: USD 14.9 bn
- Number of companies: 379
- Leading Segment: Payments
- Key Players: Alipay, WeChat Pay, PingAn

**India**
- Total Funding: USD 8.2 bn
- Number of companies: 357
- Leading Segment: Payments
- Key Players: Paytm, Lending Kart

**Indonesia**
- Total Funding: USD ~10 bn
- Number of companies: 249
- Leading Segment: Super Apps
- Key Players: Gojek, Grab

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SOURCE: Dealroom, Startup and Landscape Analytics (SILA); Bitter Bridges, Press Search, Forbes, Crowdfund Insider
There are 7 key trends shaping the global FinTech landscape, with key implications for extension of finance in Nigeria (1/2)

<table>
<thead>
<tr>
<th>Key Global Trends</th>
<th>Description</th>
</tr>
</thead>
</table>
| Funding to FinTech is increasing | ▪ FinTech funding is reaching record levels and expected to continue to grow.  
▪ Barring the Ant Financial deal in 2018, the $36bn invested in FinTech in 2019 was a record |
| Modernization of Payments infrastructure | ▪ Strong performance in card transactions in combination with innovations in payment solutions (e.g. real time payments and mobile wallets), regulations (PSD2 and open banking) are driving strong shift from cash payments  
▪ Similar trends are seen in emerging markets where payments is the entry point to FinTech |
| Big tech players continue to encroach | ▪ Big Tech players (‘TechFin’) such as Amazon, Google, Facebook & Apple with large customer bases are making bold moves into financial services  
▪ Google and Facebook in particular are aggressively moving into emerging markets such as India where Google Pay dominates the payment market |
| Rise of Super Apps | ▪ In China, two key ecosystem orchestrators have emerged e.g. Alibaba, Tencent, however many FinTech providers globally are developing super apps and emulating the ecosystem players  
▪ This is being replicated in other Asian markets like India (PayTM) and Indonesia (Gojek, Grab)  
▪ Western players such as Uber are also making moves to build super-apps leveraging their core assets |

SOURCE: Expert Interviews, Literature review
There are 7 key trends shaping the global FinTech landscape, with key implications for extension of finance in Nigeria (2/2)

<table>
<thead>
<tr>
<th>Key Global Trends</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open banking</td>
<td>- Regulators are playing a stronger role globally to foster and shape innovation e.g. EU push to offset big platforms, PSD2/Open banking and moving beyond sandboxes</td>
</tr>
<tr>
<td>Big Data/Advanced Analytics</td>
<td>- FinTech players are using a broader set of use cases across the sector to successfully drive the application of advanced techniques (e.g. deep learning) and wave of new AI business solutions</td>
</tr>
</tbody>
</table>
| Shift to B2B models                | - Shift towards B2B and partnership focus continues with startups serving more as catalysts than disruptors; large potential to make financial sector more efficient  
  - B2C likely to remain attractive in emerging markets |
The growth of these FinTech ecosystems has been enabled by 5 key factors (1/3)

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Initiatives</th>
<th>Description</th>
<th>Examples countries with successful implementation</th>
</tr>
</thead>
</table>
| Financial services regulation | Regulatory Sandbox                      | Environments that relax specific regulatory and legal requirements to allow FinTech test                                                      | Singapore  
|                            | Problem statements to address industry pain-points | Developing and publicizing initiatives to encourage innovative solutions to financial services industry problems                          | Singapore  
|                            | Pricing interventions                    | Reduction in tariffs and pricing to drive customer adoption of digital products                                                              | India     
|                            | Fostering data sharing                   | Encouraging/mandating sharing of customer data between various parties in the financial services industry                                       | UK  
|                            | Unbundling licensing                     | Issuance of tiered licenses proportionate to scale of activities                                                                              | Singapore  
|                            |                                          |                                                                                                                                             | India     |
The growth of these FinTech ecosystems has been enabled by 5 key factors (2/3)

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Initiatives</th>
<th>Description</th>
<th>Examples countries with successful implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Global Connections</td>
<td>Global Innovation Agreements</td>
<td>▪ Alliances between regulators and associations in various countries to foster innovation in financial services</td>
<td>▪ UK&lt;br▪ UAE&lt;br▪ Australia</td>
</tr>
<tr>
<td></td>
<td>FinTech Partnerships</td>
<td>▪ Direct cross border partnerships between FinTech to encourage knowledge sharing and expansion of networks</td>
<td>▪ India&lt;br▪ China</td>
</tr>
<tr>
<td>3 Funding</td>
<td>Local Investment Initiatives</td>
<td>▪ Schemes that encourage local investment in FinTech through benefits offered</td>
<td>▪ UK (UK SEIS)&lt;br▪ Hong Kong</td>
</tr>
<tr>
<td></td>
<td>Increased Global Funding</td>
<td>▪ Increased funding to thriving FinTech ecosystems – a case of capital finding opportunity</td>
<td>▪ India&lt;br▪ China</td>
</tr>
</tbody>
</table>
The growth of these FinTech ecosystems has been enabled by 5 key factors (3/3)

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Initiatives</th>
<th>Description</th>
<th>Examples countries with successful implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Infrastructure</td>
<td>Broadband coverage</td>
<td>Ubiquitous broadband coverage and quality and affordability</td>
<td>India, USA (New York)</td>
</tr>
<tr>
<td></td>
<td>Increased device penetration</td>
<td>Improved smartphone and mobile phone penetration due to lower prices</td>
<td>India, Indonesia</td>
</tr>
<tr>
<td></td>
<td>Digital infrastructure</td>
<td>Initiatives that allow easier access to digital payments products e.g. digital ID, eKYC etc.</td>
<td>India</td>
</tr>
<tr>
<td>5 Talent</td>
<td>University ecosystem</td>
<td>Ecosystems where tech alumni have strong affiliations with universities and mentor current students</td>
<td>India, USA (Silicon Valley)</td>
</tr>
<tr>
<td></td>
<td>Training Programs</td>
<td>National digital training programs to scale up tech talent</td>
<td>Russia, Malaysia</td>
</tr>
<tr>
<td></td>
<td>Tech Hubs</td>
<td>Existence of big tech and engineering companies which allows for apprenticeships and development of tech hubs</td>
<td>India</td>
</tr>
</tbody>
</table>
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Executive Summary

Global FinTech Landscape

Nigeria FinTech Landscape
  › The Financial services landscape in Nigeria today
  › Nigeria’s FinTech landscape and its evolution

Impact of FinTechs

Recommendations and Implications for Stakeholders

Appendix
Nigerian FinTech landscape - key messages (1/2)

The Nigerian financial services space represents significant opportunity for FinTech

- The financial services landscape is attractive with banking in Nigeria accounting for over $9bn in value pools
- However, most consumers today face with significant pain points:
  - Access to services
  - Affordability
  - Ease of use and products and user experience
- A combination of unmet needs and increased tech penetration creates opportunities for FinTech to grow in Nigeria

FinTech in Nigeria are gaining traction by addressing customer pain points across the value chain and attracting significant funding in the process – leading to an increasing focus on driving financial inclusion

- FinTech activity is concentrated in consumer segments particularly payments and lending with increasing activity in savings & wealth management. However, gaps exist in MSME lending, insurance and pensions.
- FinTech are mainly located in Lagos with limited presence in Abuja with most employing B2C models
- FinTech in Nigeria have evolved from the early players- FinTech 1.0 focused on B2B to the emergence of FinTech 2.0 players focused on niches and the recent emergence of FinTech 3.0 players orchestrating ecosystems
- These FinTech are addressing critical customer pain points around access, affordability and ease of use of financial services which have historically hindered financial inclusion
- Investors have been attracted to the growing innovation in FinTech with over $1bn invested over the last 3 years
- Customers are also increasingly adopting FinTech products particularly the youth & affluent segment
Despite the flurry of activity, the amount of impact created by FinTech is still a fraction of the potential given the value at stake. A concerted collaborative effort by key stakeholders will ensure enhancement of the FinTech ecosystem and more realized benefits from the promise of digital financial services.

- FinTech can create value across 2 key dimensions:
  - Economic impact: Increasing the value pool for financial services by bringing in new customers or increasing usage of existing customers
  - Developmental goals: Helping realize impact of digital financial services through increasing financial and gender inclusivity and enabling the digital economy
- Across these factors, FinTech have made moderate progress on financial inclusion but impact has been limited elsewhere.

There are a number of actions that could enhance Nigeria’s digital financial services landscape, however 5 of them could yield the biggest impact:
- Foster innovation
- Develop a credit infrastructure
- Create a pull for digital ID
- Increase the tech talent pipeline
- Expand digital infrastructure

A concerted and collaborative effort involving CBN, other financial services regulators (NAICOM, PENCOM), NCC, NIBSS, Donors and Foundations could lay the enabling framework to power the next level of growth.
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Appendix
Nigeria has a large population of ~200M people, ~60% are financially included which we have broken into 8 profiles

Methodology

To assess FinTech adoption across Nigeria, we segmented populations into clusters based on common factors that influence FinTech usage

1. We used a 5 step segmentation process to segment the population into clusters
   - Age
   - Gender
   - Occupation
   - Location
   - Income

2. Per cluster, we determined the likelihood of FinTech usage using education level and tech knowledge as primary filters

<table>
<thead>
<tr>
<th>Segment</th>
<th>Age</th>
<th>18-25</th>
<th>25-40</th>
<th>40-55</th>
<th>55+</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME</td>
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<tr>
<td>SME</td>
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</tr>
<tr>
<td>Affluent</td>
<td></td>
<td>6</td>
<td>7</td>
<td></td>
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</tr>
<tr>
<td>Middle</td>
<td></td>
<td>4</td>
<td>5</td>
<td></td>
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<tr>
<td>Mass</td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOP</td>
<td></td>
<td>1</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

1. Formal mass separated from informal mass despite similar income levels based occupation and educational level, informal mass and informal youth combined as both earnings and tech knowledge are similar
2. BOP combined across ages group due to similar income level

SOURCE: CBN financial inclusion
# Overview of profiles

<table>
<thead>
<tr>
<th>Profiles</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. BOP</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Low income individuals, earning &lt;N20K, uneducated</td>
<td>Rural dwellers, Subsistence farmer</td>
</tr>
<tr>
<td><strong>2. Informal mass</strong></td>
<td>Individuals earning N20k-N100k, low tech knowledge, focused on basic services and FI</td>
<td>Housewife, Petty trader, Okada riders, Artisan/domestic worker</td>
</tr>
<tr>
<td><strong>3. Formal mass</strong></td>
<td>Individuals earning N20k-N100k, medium tech knowledge, formally employed</td>
<td>Teacher, Civil servant</td>
</tr>
<tr>
<td><strong>4. Formal youth</strong></td>
<td>Young adults earning N20k-N100k, relatively tech savvy, low disposable income, interested in savings</td>
<td>Student, Early graduate, Hustler</td>
</tr>
<tr>
<td><strong>5. Middle</strong></td>
<td>Individuals earning N100k–N400k, tech savvy, savings focused with occasional investments</td>
<td>Young professional, Freelancer, Mid-level civil servants</td>
</tr>
<tr>
<td><strong>6. Young affluent</strong></td>
<td>Individuals earning N400K+, medium-high tech savvy, investment focused</td>
<td>Middle aged professional, Mid-level execs</td>
</tr>
<tr>
<td><strong>7. SME owner</strong></td>
<td>Earning N400k - N1M+, runs business in Lagos and other medium towns, interested in business expansion opportunities</td>
<td>Large trader, Family business owner</td>
</tr>
<tr>
<td><strong>8. Senior affluent</strong></td>
<td>Educated seniors with N1M+ income, amassed wealth N20M+, focused on convenience, medium tech knowledge</td>
<td>Senior civil servant, Senior execs, Retirees</td>
</tr>
</tbody>
</table>

<sup>1</sup> BOP: Bottom Of Pyramid
Across the value chain, there are a large number of unmet needs, especially in the mass and SME segments (usually the excluded) Nigerian financial services revenue pool

Key takeaways

Lending presents the biggest revenue opportunity – serving customers across youth, SMEs and affluent.

Growth in the mass market and low competitive intensity makes it an attractive market for FinTech.

Insurance remains underserved and underpenetrated – opportunities exist in health insurance.

---

1. BOP includes rural dwellers and subsistence farmers
2a. Mass market includes housewives, petty traders, okada riders, artisan/domestic workers
2b. Includes teachers, entry level employees, civil servants
3. Youth includes students, early graduates and hustlers
4. Middle market include young professionals, mid-level civil servants
5. Young affluent includes mid level execs & middle aged professionals
6. SME owners includes large traders, freelancers, family business owners
7. Seniors include senior civil servants, senior executives and retirees

SOURCE: McKinsey Africa Retail Banking report, Team Analysis
Across all profiles, there are significant pain points across the financial services value chain which if solved can foster financial inclusion.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Customer pain-points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOP and informal mass</td>
<td>Lack of / limited access to financial services products</td>
</tr>
<tr>
<td></td>
<td>Pricing of products is greatest barrier to adoption</td>
</tr>
<tr>
<td>Formal mass and youth</td>
<td>Lack of tailored, products to cater to needs of population (account benefits, saving)</td>
</tr>
<tr>
<td></td>
<td>Unaffordable rates for financial services products (lending, insurance)</td>
</tr>
<tr>
<td>Middle and young affluent</td>
<td>Poor user experience on various platforms</td>
</tr>
<tr>
<td></td>
<td>Limited value added services / benefits from using products</td>
</tr>
<tr>
<td>SME owner</td>
<td>Limited access to lending products at favourable rates</td>
</tr>
<tr>
<td></td>
<td>Limited access to POS terminals due to high volume requirements</td>
</tr>
<tr>
<td>Senior affluent</td>
<td>Limited availability of value added service such as advisory / estate planning</td>
</tr>
<tr>
<td></td>
<td>Poor user experience</td>
</tr>
</tbody>
</table>
The combination of unmet needs and the growing penetration of smartphones creates an opportunity for FinTechs to grow; which can help drive the extension of Financial services.

There is an increase in smartphone penetration and customer comfort with mobile technology…

There is an increase in smartphone penetration and customer comfort with mobile technology…

Number of smartphones, Millions

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Growth</td>
<td>+14% p.a.</td>
<td>+14% p.a.</td>
</tr>
</tbody>
</table>

Mobile payment transaction volumes, Million

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>252</td>
<td>806</td>
</tr>
<tr>
<td>Growth</td>
<td>+79% p.a.</td>
<td>+79% p.a.</td>
</tr>
</tbody>
</table>

... and FinTech are leveraging technology to innovate address unmet customer needs

- FinTech are creating new products leveraging the data that smartphones provide e.g. multiple FinTech are using BVN and phone number verification to provide loans to customers – using algorithms on the customer’s mobile transactions to determine credit risk e.g. Quickteller

- Mobile data and UX have allowed FinTech to develop products and go to market directly, leveraging app stores as a distribution platform to reach over 23 million smartphone users

- Digital onboarding is becoming easier as banks and FinTech invest in customer education and leverage agents for one-on-one guidance to drive financial inclusion

SOURCE: eMarketer, CBN, NIBSS

1. Extrapolated based on mid-year 2019 data
2. Dependence on app stores for distribution also has implications/risks for FinTech (e.g. Playstore’s recent policy on lending apps)
Executive Summary

Global FinTech Landscape

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› The Financial services landscape in Nigeria today

› Nigeria’s FinTech landscape and its evolution
  › Nigeria FinTech landscape
  › Nigeria FinTech funding trends
  › Customer adoption of FinTech in Nigeria
  › How FinTech could evolve in Nigeria

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Appendix
The Nigerian FinTech market is undergoing dynamic development

### Description

- **FinTech is a fast-growing market**
- **Traditional banks are reinventing themselves in response**
- **The scope of FinTech investment keeps growing**
- **Nigeria is becoming an entry point to Africa and a testing bed for innovation**
- **The regulator is pushing a digital agenda**

- Nigeria is home to **200+ FinTechs**
- FinTech activities are primarily focused on payments with increased activities in the lending and savings space
- Some banks have launched fintech solutions, through inhouse innovations or collaboration opportunities with FinTechs
- FinTech investments in Nigeria grew 197% over the past 3 years, driven primarily by foreign investors, particularly Chinese investors
- Foreign-backed fintechs have a pan-Africa expansion strategy, with Nigeria as their entry point
- Nigerian fintechs are increasingly exporting their business models to other emerging markets
- The regulator has proactively launched initiatives to drive financial inclusion and push for a cashless economy

### Key indicators

- Emergence of 200+ FinTechs addressing various customer pain-points
- First Bank’s FirstMonie facilitated the deployment of 200,000+ agents across Nigeria
- GTB’s Quickcredit provides access to loans up to N5 mn in 2 minutes
- 2019 investments include OPay $170 mn and Interswitch $200 mn
- Flutterwave attracted $35 mn funding in its Series B round in 2020
- Migo scaled its business to Brazil
- Creation of SANEF shared agent network
- Issuance of PSB licenses to drive rural penetration of financial services
- Recent reduction in electronic payment charges

### Key indicators

- First Bank’s FirstMonie facilitated the deployment of 200,000+ agents across Nigeria
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- Issuance of PSB licenses to drive rural penetration of financial services
- Recent reduction in electronic payment charges
The FinTech landscape in Nigeria is composed of several stakeholders across the private & public sector

Primary stakeholders in the ecosystem

**Operators**
- FinTech companies

**Infrastructure Players**
- Interswitch
- NIBSS
- Card Schemes

**Key stakeholders in Nigeria’s FinTech landscape**
- Development Partners
- Universities/Educators
- Innovation labs and think tanks

**Other enablers**
- FinTech Media/online communities and platform

**Regulators**
- CBN
- NCC
- SEC
- State, local and federal governments
- NAICOM

**Providers of Capital**
- Banks
- Telcos
- Big Tech Players
- Industry Association Groups
- Venture Capital
- Incubators/Accelerators
- Angel Investors
- Private Equity

**Private enterprises**
FinTech activity in Nigeria has evolved from focusing on B2B to a growing number of B2C-focused and ecosystem players.

### Key Players

<table>
<thead>
<tr>
<th>Year Range</th>
<th>FinTech 1.0</th>
<th>FinTech 2.0</th>
<th>FinTech 3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 – 2007</td>
<td>B2B services enabling banks and other financial institutions mainly in payments</td>
<td>CBN launched PSV 2020 to drive cashless economy</td>
<td>Ecosystem players offering full array of financial and non-financial services e.g. ride-hailing, music</td>
</tr>
<tr>
<td>2007 – 2018</td>
<td>Prominence of mobile payments</td>
<td>B2C players focused on specific niches</td>
<td></td>
</tr>
<tr>
<td>2019 - present</td>
<td>Ecosystem players offering full array of financial and non-financial services e.g. ride-hailing, music</td>
<td></td>
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</tr>
</tbody>
</table>

### Key Drivers

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Infrastructure</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 – 2007</td>
<td>EurOPay MasterCard and Visa (EMV) to enable pin and chip card transactions</td>
<td>NA</td>
</tr>
<tr>
<td>2007 – 2018</td>
<td>NIBSS Instant Payment</td>
<td>Cashless policy, financial inclusion/ SANEF</td>
</tr>
<tr>
<td>2019 - present</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Nigerian FinTechs are primarily focused on payments and consumer lending across formal and informal segments

**Key insights**

**Payments have served as the entry point for most FinTechs**
- ~90% of customer touch points are in payments
- Lower barriers to entry in payments
- ~15% of revenue pools are in payments

**Lending has also seen growth in FinTech activity**
- Large unmet demand
- Leverage of analytics on available customer data (e.g., phone data, payment data) to determine lending risk
- Reduced barrier to entry (players leveraging MFB and State Money Lender Licenses)

**Rising activity in wealth management:**
- Unmet need for better return
- Payments disruption enabling increased customer control over their money

**Gaps still exist in “non-low hanging fruits” areas, specifically MSME lending and insurance**
FinTech activity has initially been focused on the youth and middle segments; although there has been some efforts in the informal (excluded and included) segments.

<table>
<thead>
<tr>
<th>Accounts</th>
<th>BOP</th>
<th>Informal Mass</th>
<th>Formal Mass</th>
<th>Formal youth</th>
<th>Core Middle</th>
<th>Young Affluent</th>
<th>SME owner</th>
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<table>
<thead>
<tr>
<th>Payments</th>
<th>BOP</th>
<th>Informal Mass</th>
<th>Formal Mass</th>
<th>Formal youth</th>
<th>Core Middle</th>
<th>Young Affluent</th>
<th>SME owner</th>
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<th>Lending</th>
<th>BOP</th>
<th>Informal Mass</th>
<th>Formal Mass</th>
<th>Formal youth</th>
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<th>SME owner</th>
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<table>
<thead>
<tr>
<th>Savings &amp; investments</th>
<th>BOP</th>
<th>Informal Mass</th>
<th>Formal Mass</th>
<th>Formal youth</th>
<th>Core Middle</th>
<th>Young Affluent</th>
<th>SME owner</th>
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<table>
<thead>
<tr>
<th>Insurance</th>
<th>BOP</th>
<th>Informal Mass</th>
<th>Formal Mass</th>
<th>Formal youth</th>
<th>Core Middle</th>
<th>Young Affluent</th>
<th>SME owner</th>
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<td>AutoGeeks</td>
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<td>AutoGeeks</td>
</tr>
</tbody>
</table>

The youth and middle segment have seen early activity due to the low hanging opportunity arising from many unmet needs (e.g. credit) and the higher propensity to switch to digital alternatives.

There has been increasing focus on the mass segments particularly in lending & payments as players have been attracted by the size of the segment and regulatory focus on financial inclusion.

Gaps still remain at bottom of pyramid as very few commercially viable use cases have been developed to serve this segment. The MSME segment beyond payment has also seen limited activity.
**FinTechs are developing innovative value propositions across the financial services value chain (1/2)**

<table>
<thead>
<tr>
<th>Products</th>
<th>Sub-category</th>
<th>Core value proposition</th>
<th>Example players</th>
<th>Indication of traction</th>
</tr>
</thead>
</table>
| Payments | Wallets               | Easy to sign up, easy to use stored value wallets using mobile phones and incorporating key use cases for customers across transportation, food & digital services                                                  | OPay, Paga, Cellulant                                                        | OPay processes ~$10m of transactions daily  
Paga processed $2bn of transactions in 2019 |
|          | Processors            | Simplified channels to allow MSMEs and corporates receive online payments from customers                                                                                                                                  | Flutterwave, InterSwitch, Flutterwave, Etranzact                               | Flutterwave processed over $5bn of transactions in 2019  
Paystack processes over NGN 10bn of transactions monthly |
|          | Remittances           | Easy, instant cross-border transfers at a fraction of cost & time of conventional players often leveraging cryptocurrency                                                                                               | BitPesa, SureRemit, Chipper                                                   | ChipperCash has over 600 thousand active customers and 3 million transactions monthly |
|          | Merchant service providers | Merchant terminal providers allowing merchants receive offline payments                                                                                                                                                | iex, TopPay, Global Accelerex, GOSERVE, Pesa                                 | PTSPs serve over 120 thousand merchants in Nigeria, though merchants are mainly acquired by banks |
|          | Savings               | Automated, disciplined and high return savings for middle class customers & millennials                                                                                                                                  | CowryWise, Piggyvest                                                          | Piggyvest has acquired ~1 million customers, saving over NGN 1 bn monthly |
|          | Wealth management     | Offer customers investment options in diverse industries on online platform at attractive rates (significantly higher than banks savings accounts)                                                              | RISE, Wealth.ng, Trove, Chaka                                                   | Crowdfunding platforms particularly in agriculture have raised over $25mn from retail investors in last 3 years |
FinTechs are developing innovative value propositions across the financial services value chain (2/2)

<table>
<thead>
<tr>
<th>Products</th>
<th>Sub-category</th>
<th>Core value proposition</th>
<th>Example players</th>
<th>Indication of traction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lending</td>
<td>Retail lending</td>
<td>Instant, unsecured, short term loans to retail customers leveraging alternative credit scoring algorithms and data</td>
<td><img src="carbon.png" alt="carbon" />, <img src="FairMoney.png" alt="FairMoney" />, <img src="termoney.png" alt="termoney" /></td>
<td>Carbon disbursed over $35.6M in loans in 2018</td>
</tr>
<tr>
<td></td>
<td>MSME lending</td>
<td>Quick, unsecured working capital loans to MSMEs with minimal documentation</td>
<td><img src="Lidya.png" alt="Lidya" />, <img src="schoolable.png" alt="schoolable" /></td>
<td>Lidya has disbursed over 10 thousand loans valued at ~$12mn to 2 thousand MSMEs</td>
</tr>
<tr>
<td></td>
<td>Lending infrastructure</td>
<td>Lending platform for banks and other lending players to simplify lending process and provide risk assessment</td>
<td><img src="Migo.png" alt="Migo" />, <img src="Indicina.png" alt="Indicina" /></td>
<td>Migo has originated more than 3 million loans to over 1 million customers in Nigeria since 2017</td>
</tr>
<tr>
<td>Services</td>
<td>Personal finance</td>
<td>Automated expense tracking, budgeting and investments leveraging machine learning</td>
<td><img src="REACH.png" alt="REACH" /></td>
<td>REACH tracks expenses for over 50 thousand users</td>
</tr>
<tr>
<td></td>
<td>Merchant solutions</td>
<td>Value added services for MSMEs and merchants such as inventory management, loyalty &amp; accounting</td>
<td><img src="LOYSTAR.png" alt="LOYSTAR" />, <img src="thankucash.png" alt="thankucash" /></td>
<td>ThankUCash has processed over $5.5m in transactions on its loyalty platform</td>
</tr>
<tr>
<td></td>
<td>Financial institutions</td>
<td>Platforms and services for financial services providers to leverage to provide digital services to their customers e.g. software, automation</td>
<td><img src="RIBY.png" alt="RIBY" />, <img src="teampay.png" alt="teampay" /></td>
<td>Ribi has 1.1M members and 30k co-ops Team Apt serves over 26 African banks</td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
<td>Technology enabled, easy to setup and low cost models to scaling agent networks</td>
<td><img src="Kudi.png" alt="Kudi" />, <img src="PayCentre.png" alt="PayCentre" />, <img src="NowNow.png" alt="NowNow" /></td>
<td>Kudi processes over NGN 1bn per day in transactions</td>
</tr>
<tr>
<td>Accounts</td>
<td></td>
<td>Fully digital banking services leveraging smartphones</td>
<td><img src="Kuda.png" alt="Kuda" />, <img src="Rubies.png" alt="Rubies" />, <img src="ALY.png" alt="ALY" /></td>
<td>Alat has signed up over 350 thousand users since launch</td>
</tr>
<tr>
<td>Digital insurance</td>
<td></td>
<td>Insurance marketplaces</td>
<td><img src="AutoGenius.png" alt="AutoGenius" />, <img src="Cassava.png" alt="Cassava" /></td>
<td>Limited traction among players</td>
</tr>
</tbody>
</table>
As the Nigerian financial services market evolves, banks are adopting new strategies to remain competitive

- Build partnerships with FinTechs, opening up their infrastructure for FinTechs to integrate and drive innovation
- E.g. Ecobank hosts an annual fintech challenge, Access bank’s Fintech Foundry which funds and accelerates the growth of Fintech startups

- Compete with different FinTech players as well as industry peers with Fintech propositions
- E.g. First Bank’s FirstMonie to drive agent banking and GTB’s Quickcredit for loans in just 2 minutes

- Reinvent themselves leveraging digital technologies to change operating model and deliver new proposition to the market distinct from existing mode
- E.g. Wema Bank built ALAT, the first digital bank in Nigeria

- Acquire/ merge with FinTechs as a means to capture synergies and drive scale
- E.g. some banks are making equity investments in Fintechs
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Appendix
FinTech funding in Nigeria has grown at ~197% over the past 3 years

**Key insights**

- Funding has grown >190% over the past 3 years driven by increased foreign investments.
- 2019 investments were driven largely by Visa’s $200M investment in Interswitch and Chinese capital in OPay ($170M) and Palm Pay ($40M).

**Funding in Nigeria USD millions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>PalmPay</th>
<th>Opay</th>
<th>Interswitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>459</td>
<td>40</td>
<td>170</td>
<td>200</td>
</tr>
</tbody>
</table>

Funding is concentrated on later stage investments and there is a perceived gap in pre-seed funding partly due to limited local participation.

For deals >$1mn, funding split by stage in Nigeria mirrors global average…

However, there is a perceived gap in pre-seed funding (<$1mn) partly driven by limited local participation.

Issues highlighted by FinTech and investors

Gap in pre-seed funding

“Funding to the industry has improved but it is still difficult for entrepreneurs to raise pre-seed capital of $50-$100k”

“People are asking for unreasonable equity up to 30% for pre-seed rounds”

FinTech founder

FinTech founder

Limited local participation

“Nigerian investors don’t yet understand the venture asset class”

“Less than 5% of investments are from local sources”

Local VC

FinTech founder

Limited support system for early stage FinTech

“Many FinTech founders locally are not prepared upfront for the requirements of fundraising”

“There are very few technology lawyers or support structure for entrepreneurs here”

FinTech leader

Local VC
This is reflected in the fact that >50% of the funding has gone to companies with foreign affiliations.

Key insights

- Accessibility to funds and preparedness differentiates diaspora founders from local founders, who leverage their networks and deliver funding pitches based on requirements of international investors.
- Foreign accelerators like YC Combinator & 500 Start-ups have helped few FinTech to bridge the preparation and access gap.
- ~84% of funds invested in foreign or foreign affiliated FinTech excluding Visa into Interswitch.

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1. Founders with foreign/Western college education and/or professional work experience
2. Y combinator companies
3. Local founders with no foreign/Western college and/or professional work experience
China is ramping up investments in emerging markets like India, however, unlike India, Chinese investment in Nigeria has been focused on Chinese founded businesses.

China is leading investments in emerging markets like India similar to Nigeria.

In India, these investments are typically in local founded and run companies.

…however in Nigeria, the investment has been focused on Chinese founded businesses.
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Key messages from customer adoption of FinTech products

I. Highest adoption in Lagos among middle and affluent customers, early traction in the South and nascent activity in the North

- Customers across segments have the highest FinTech adoption in Lagos, driven by increased awareness, proximity to technology and access.

II. Successful players leverage use cases such as transport, food & bills

- Quickteller and OPay are most widely known & used products and have successfully grown their customer base through use cases integrated with customers lifestyles like transport, food & bill payments.

III. Referrals driving adoption especially for women

- Even with minimal marketing, women play a critical role in driving FinTech adoption through referral programs, particularly savings.

IV. Trust in FinTech is growing

- Customers are increasingly trusting to FinTech and 40% of lower income and underbanked customers trust FinTech and/or agents the same as or more than banks.

V. Customers value accessibility and convenience

- FinTech adoption is largely driven by convenience and access to products/services which address specific unmet needs.
I: FinTech adoption is highest in Lagos and growing in the South, however, adoption in the North remains nascent

Adoption across Nigeria

- **Lagos**: Adoption driven by close proximity to technologies, higher educational levels, better infrastructure and stronger economic power.

- **South**: High digital adoption across customer segments with individuals using USSD, agents and cards at entry level. 38% of mass and youth FinTech users use savings products, 62% of whom are females.

- **North**: Adoption remains low due to lower education levels, income and limited access to financial services.

Adoption across segments

- **BOP**: Fast adoption of FinTech products in mass customers as they become financially inclusive.
- **Mass**: FinTech offer the most products to middle segment customers who are likely to explore multiple products and have higher tech knowledge.
- **Youth**: Adoption decreases with affluent and senior affluent individuals who are more likely to use their banks for financial services.

Source: Customer interview and survey (n=215), Nigeria – 49% females and 51% males
- South Abia, North – Abuja, Kano, Jos, Kaduna, Maiduguri
II: OPay and Quickteller are some of the most widely recognized and used FinTech solutions

Customer awareness on FinTech products is increasing across Nigeria…

| FinTech awareness | Usage | South
col 3 | Usage |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of FinTech users aware of product</td>
<td>Percentage, %</td>
<td>% of FinTech users aware of product</td>
<td>Percentage, %</td>
</tr>
<tr>
<td>OPay</td>
<td>88</td>
<td>47%</td>
<td>53</td>
</tr>
<tr>
<td>Quickteller</td>
<td>78</td>
<td>69%</td>
<td>40</td>
</tr>
<tr>
<td>Paga</td>
<td>63</td>
<td>24%</td>
<td>37</td>
</tr>
<tr>
<td>Piggyvest</td>
<td>49</td>
<td>42%</td>
<td>33</td>
</tr>
</tbody>
</table>

Lagos 1

<table>
<thead>
<tr>
<th>Usage</th>
<th>South 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of FinTech users aware of product</td>
<td>Percentage, %</td>
</tr>
<tr>
<td>OPay</td>
<td>13</td>
</tr>
<tr>
<td>Quickteller</td>
<td>15</td>
</tr>
<tr>
<td>Paga</td>
<td>10</td>
</tr>
<tr>
<td>Piggyvest</td>
<td>7</td>
</tr>
</tbody>
</table>

North 3

<table>
<thead>
<tr>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of FinTech users aware of product</td>
</tr>
<tr>
<td>OPay</td>
</tr>
<tr>
<td>Quickteller</td>
</tr>
<tr>
<td>Paga</td>
</tr>
<tr>
<td>Piggyvest</td>
</tr>
</tbody>
</table>

…OPay is the most recognized in Lagos while Quickteller dominates the North and South

Source: Customer interview and survey (n=215), Nigeria – 49% females and 51% males
II: Players like OPay and Quickteller became relevant to users by addressing critical use cases and adapting their products to local context

OPay and Quickteller successfully penetrated the market with high customer recognition and usage through relevant use cases, customer education and local context adaptation

**Use case**
- OPay focused on offering transportation and food which account for ~50%\(^1\) of spending at discounted prices to capture customers
- Quickteller gained customer across the country through its use case of bill payments such as electricity bill, cable, internet as well as wallet payments for airtime and data top-up

**Customer education**
- OPay invested in customer education by employing 10,000 agents who acted as foot soldiers to educate customers on OPay products
- Quickteller rolled out a vast network of “Paypoint agents” and recruited members of the community (business owners, NYSC members, job seekers etc.) to be agents, educating customers on Quickteller usage and incentivizing individuals to register and enroll new customers onto the platform

**Contextualization**
- OPay tailored its services to local context by providing “Keke” services for transportation and Hausa in Northern Nigeria to cater to customer needs
- Quickteller leveraged partnerships with its billers to push Quickteller payment to their customers e.g. cable providers, electricity companies, educational institutions etc.

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\(^1\) Based on customer survey responses

Source: Customer interview and survey (n=215), web search, team analysis
II: OPay is attempting to embed itself in the lifestyle of mass and youth customers

Tunde the hustler’s interaction with OPay throughout day

- Wakes up
- Takes ORide to town for his daily trade
- Tops up ORide account with N1000 for the week
- Buys airtime using OPay app
- Buys breakfast at local restaurant MamaSam and pays with OPay QR and gets N50 cash back
- Places bets on Bet9ja event for himself through OPay app
- Sends money to his mother for her upkeep and mother picks up money from agent via USSD
- Visits his clients for repairs and clients pay him via USSD
- Needs a short NGN 20,000 loan to buy materials for a contract. Applies and get loan through OKash
- On his way home, requests an ORide, gives driver N3000 to top up his own wallet
- Visits local bar through ORide
- Saves the N3000 in OWealth account as daily savings
II: Other FinTech products are increasingly gaining traction especially among SME owners

Chima the SME owner’s interaction with fintech products

A. Takes Bolt ride hailing service to travel to his mini-market in Yaba

B. Generates customer invoices and applies for N200,000 quick loan on Lidya to purchase inventory

C. Pays supplier via Flutterwave for inventory delivery

D. Generates customer invoices and applies for N200,000 quick loan on Lidya to purchase inventory

E. Deposits money in account via agent to avoid queues at the bank

F. Deposits N50,000 in Piggyvest account – N20,000 savings and N30,000 in agriculture investment

G. Orders food on Jumiafood and pays online with JumiaPay

H. Closes shop and deposits money in business account at local bank branch

I. Takes Uber home

J. Walk-in customers pay for merchandise using Quickteller, Paga, cards on POS or cash
III: FinTech adoption has been driven by referrals, with women playing a critical role in adoption, especially around savings products

FinTech referral in Nigeria

55% of customers
heard about FinTech products through a friend

65% of women
using FinTech in Lagos heard about a FinTech product through their friend

60% of women
using FinTech in the North heard about products through referrals

Products often referred

Customer quotes

I joined because my friend sent me a referral code and when I invited someone else, I got N1000 reward
Piggyvest customer, Lagos

We all entered Quickteller’s customer referral to win NGN 1M. So I registered a lot of people
Quickteller customer, South

My friends share any promo they have with me. It’s part of the sisterhood
Cowrywise customer, Lagos

Source: Customer interview and survey (n=215), Nigeria – 49% females and 51% males
Trust in FinTechs in Nigeria is growing, although customer trust remains higher in banks

Customers trust in FinTechs is growing…

- … particularly amongst lower income segments

Percentage of FinTech users who trust same as or more than banks, %

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust bank more</td>
<td>67</td>
</tr>
<tr>
<td>Same as bank</td>
<td>26</td>
</tr>
<tr>
<td>More than bank</td>
<td>7</td>
</tr>
</tbody>
</table>

51% of youth and mass customers trust FinTech the same as banks

Increased trust is driven by 4 factors, primarily agent relationships

1. **Agents**
   - People trust me because I am a member of the community and they know their money is safe
   - Agent, Lagos

2. **Better experience / accessibility**
   - It’s convenient, fast, reliable, and the occasional bonus N300 after every use
   - OPay user, Lagos

3. **Pricing / transparency**
   - I know how much they charge me unlike banks that will just be deducting charges
   - Paga user, South

4. **Ease of money withdrawal**
   - When we get paid for our goods, we withdraw our money from the wallet unless we have other agric. products to buy
   - Cellulant user, North

Source: Customer interview and survey (n=215), Nigeria – 49% females and 51% males
V: Customers value access and convenience, which has driven increased FinTech usage over the past 6 months

FinTech usage has increased over past 6 months...

... and access is the highest contributor to adoption

Rationale for usage

<table>
<thead>
<tr>
<th>Access and convenience</th>
<th>I can pay all my bills, do my transfers on my phone without going to the branch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Youth, East</td>
</tr>
<tr>
<td>Trust</td>
<td>When I cannot go to the bank, I go to the agent around here and can immediately see the money in my account</td>
</tr>
<tr>
<td></td>
<td>SME owner, East</td>
</tr>
<tr>
<td>Value / service</td>
<td>It gives me the discipline to save and restrict when I can withdraw the cash</td>
</tr>
<tr>
<td></td>
<td>Middle customer, Lagos</td>
</tr>
</tbody>
</table>

Source: Customer interview and survey (n=215), Nigeria – 49% females and 51% males
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Appendix
The FinTech space is expected to continue to grow, particularly across 5 sectors

<table>
<thead>
<tr>
<th>Growing sectors</th>
<th>Why</th>
<th>Early indicators</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online payments</td>
<td>Digital economy is expected to continue to grow with many merchants accepting online payments and other commercial use cases emerging</td>
<td>Online payments have grown at 28% CAGR over last 3 years</td>
<td>Escrow services for e-commerce</td>
</tr>
<tr>
<td>Retail lending</td>
<td>Despite growth, there’s still significant under-penetration of retail lending</td>
<td>Flutterwave is processing over $5bn in transaction volumes after 3 years</td>
<td>Vertical solutions e.g. for health, education</td>
</tr>
<tr>
<td>Wealth management</td>
<td>With payments becoming seamless and information being democratized, consumers have more control over their money and will start to look for higher returns</td>
<td>Paystack processes over 25% of all online payments in Nigeria daily</td>
<td>Non-cash lending (e.g. POS lending)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 out of the top 10 financial apps in the Google Play store in Nigeria are lending apps</td>
<td>P2P lending (e.g. via cooperatives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Online lenders continue to record 80-100% annual growth in credit disbursed</td>
<td>Lending infrastructure (e.g. central credit score)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lending analytics for BOP/mass and non-salaried individuals</td>
</tr>
<tr>
<td>Early bets</td>
<td></td>
<td></td>
<td>Robo-advisory to help people make investment decisions</td>
</tr>
<tr>
<td></td>
<td>In the last 6 months, 6-8 players have entered the wealth management space</td>
<td>Crowd funding platforms have raised $10M+ from retail investors</td>
<td>Alternative investment platforms (e.g. real estate, SME financing)</td>
</tr>
</tbody>
</table>

SOURCE: Expert interviews, Stakeholder interviews, web search, Team analysis
The FinTech space is expected to continue to grow, particularly across 5 sectors (2/2)

<table>
<thead>
<tr>
<th>Why</th>
<th>Early indicators</th>
<th>Opportunities</th>
</tr>
</thead>
</table>
| **Offline payments** | ▪ Cash is still significant in the Nigerian market but CBN push for cashless is **making cash more expensive** (e.g. NIP transactions less than NGN 20k costs less than an ATM withdrawal)  
▪ As **mobile wallets become more mainstream**, people will need use cases to drive more offline transactions | ▪ POS payments are 6X the size and growing faster than online payments at 40% CAGR (vs 28% for online payments)  
▪ Consumers are already **making retail payments using mobile apps and USSD**, but process still has friction for merchants | ▪ Offline payments infrastructure platform (similar to UPI)  
▪ Merchant acquisition  
▪ Merchant service providers (e.g. POS, loyalty) |
| **MSME lending** | ▪ Underserved market that is growing  
▪ Increasing digitization of payments (via both online & offline payments) will make it easier to lend to MSMEs  
▪ National asset registry will make it easier to fund SMEs | ▪ Retail lenders like Carbon are starting to explore the MSME lending space  
▪ SME focused lenders like Lidya and Lendigo are emerging, though still relatively small in size | ▪ Invoice discounting  
▪ Value chain financing  
▪ Credit scoring & lending for SMEs |

1. Unified Payment Infrastructure

SOURCE: Expert interviews, Stakeholder interviews, web search, Team analysis
Based on emerging trends and learnings from other markets, 3 archetypes of FinTechs will continue to exist in Nigeria

<table>
<thead>
<tr>
<th>Description</th>
<th>Indonesia examples</th>
<th>India examples</th>
<th>Nigerian examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ecosystem orchestrators (FinTech 3.0)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large, deeply funded players, operating as a platform/superapp that acts as a gateway for customers to a wide range of services beyond financial services (e.g. transportation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>These type of players could also be ‘TechFin’ technology companies with existing customer bases that offer financial services as an add-on offering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mid-sized niche players (FinTech 2.0)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Longer tail of medium sized businesses who are focused on executing on individual verticals (e.g. payments, savings) or geographies (e.g. Northern Nigeria) or segment (e.g. SMEs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience in other markets suggest, these type of players thrive in their domain of expertise, solve distinctly local problems and are often acquisition targets for the larger players</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B2B enablers (FinTech 1.0)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FinTech focused on enabling banks, telcos, corporates or other FinTech to improve their offering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Could start out as B2B or have pivoted from a B2C model with a great product but limited traction and challenging economics</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Expert interviews, Web search
3 broad elements will determine likely winners but importance will differ by archetype

<table>
<thead>
<tr>
<th>Key elements</th>
<th>Characteristics of successful players</th>
<th>Ecosystem orchestrators</th>
<th>Niche players</th>
<th>B2B enabler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right strategic bet</td>
<td>- Playing in large, relatively untapped market with significant potential to grow</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Scalable business model</td>
<td>- B2C business model with a low cost and scalable distribution model</td>
<td>High</td>
<td>Low</td>
<td>Very high</td>
</tr>
<tr>
<td>Clear value proposition</td>
<td>- Identified a clear set of unmet customer needs where customers have demonstrated willingness to adopt</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Product market fit</td>
<td>- Great user experience (i.e. built and customized for local context e.g. local language, social commerce) with resulting high degree of user adoption</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Execution</td>
<td>- Founding team with strong track record of execution and with the right mix of skills tailored for the sector of focus</td>
<td>Very high</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Deep funding pool</td>
<td>- Access to significant funding pools from foreign or local investors to fund rapid scale and customer acquisition</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

**SOURCE: Expert interviews, Team analysis**
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In the long term (5-10 years), FinTechs can create impact on three broad dimensions – economic impact, development goals, and multiplier effect.

FinTech activity in Nigeria could impact the economy by:
- Expanding the revenue pools by ~18% in additional retail revenues.
- Attracting up to $3bn in foreign direct investment from global investments in FinTech.
- Contributing to the Digital Financial Services GDP uplift of $50bn by 2025 driven by increased productivity, increased capital, and increased labor hours from digitization.
- Enabling increased consumer consumption and MSME growth through innovation on new lending models.

Digital financial inclusion can positively impact the livelihood of Nigerians by:
- Providing financial service products to rural communities and unbanked populations.
- Enabling digital and financial inclusion of women which drives increased spending on education, healthcare and raised quality of human capital in the economy.
- Leveraging technology to increase coverage extension through pay-per-use and lower cost solutions in education, healthcare, agriculture, etc.

Increased FinTech activity could indirectly impact the economy by:
- Unlocking new business models beyond financial services (e.g., logistics).
- Fueling the growth of e-commerce.
- Increasing job creation and STEM talent pipeline.

Source: MGI Digital Finance for all 2016, Literature review, team analysis.
FinTechs could add up to ~$3bn through investments into the economy and ~$1bn in additional revenues to the financial services industry in the long term.

FinTech have accounted for ~10% of direct investment into Nigeria from 2017-2019 and can contribute pre-COVID-19 estimates of up to $3bn². 

... with potential impact to increase retail banking revenues by ~$1bn by 2025.

Payments have the potential to financial survives revenues $1bn driven by FinTech activities.

While forward funding projections depend on the complex interplay between economic activity, investor sentiment and evolution of the COVID crisis, we expect to see a downward trend in Nigeria, similar to global trends.

1. Payments, Savings, Lending (excludes wealth management)
2. Sum of $3bn includes projected figures on chart for years 2020, 2023 and 2025 and figures for 2021: $422mn, 2022: $470mn and 2024: $583mn

FinTech activity has the potential to grow financial services revenue pools

<table>
<thead>
<tr>
<th>Corporate</th>
<th>Payments</th>
<th>Lending</th>
<th>Accounts</th>
<th>Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Expansion of product offerings</td>
<td>+ Increased payment volumes due to value chain digitization</td>
<td>+ Increased lending through automation of lending processes</td>
<td>+ Increased revenue pool from online payments</td>
<td>+ Increased investment by SMEs</td>
</tr>
<tr>
<td>- Reduced margins e.g. by offering interest on current accounts</td>
<td>+ Digitization of cash collections</td>
<td>+ Increased revenue due to higher interest rates</td>
<td>+ Increased inclusion into the formal credit system</td>
<td>+ Increased access and adoption of products</td>
</tr>
<tr>
<td>- New customers by creating increased access to accounts for BOP</td>
<td>+ Value add services e.g. expense tracking, advisory etc.</td>
<td>+ Increased inclusion into the formal credit system</td>
<td>+ Cannibalization of traditional savings accounts</td>
<td>- Reduced premium margins</td>
</tr>
<tr>
<td>- Reduced margins on accounts for conventional customers</td>
<td>- Reduced margins on payment fees</td>
<td>- Cannibalization of traditional bank offerings</td>
<td>- Offshoring of value from foreign investments</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Team Analysis
FinTech are contributing to the digital financial services opportunity in GDP and job creation across 3 levers

**A** Financial Inclusion
$50bn in GDP by including an additional 46mn people into the formal financial system in the next 5-10 years

**B** Gender Inclusion
34% increase in Africa’s GDP in a scenario where men and women play identical roles in the labour market

**C** Digital Economy
Creation of 3mn new jobs by enabling the $115bn digital economy

FinTech penetration will boost human capital development

- Increased talent development in tech education e.g. computer science, coding, programming etc.
- Foster female adoption of DFS to increase welfare and family productivity as women spend more on food, education and healthcare
- Provide access to healthcare and health services to individuals including micro-insurance
- Increased access to financing for agriculture

Drive financial inclusion for the ~40% financially excluded population

Education

Gender inclusion

Public health

Agriculture

Social Impact

Source: MGI Digital Finance for all 2016, Literature review, team analysis
Nigeria still faces a significant financial inclusion challenge

Almost 40% of Nigerians are financially excluded...

Size of banked and unbanked population in Nigeria

Millions of people

<table>
<thead>
<tr>
<th>Financially excluded</th>
<th>Formal other</th>
<th>Informal only</th>
<th>Banked</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.4</td>
<td>40.1</td>
<td>9.4</td>
<td>10.0</td>
</tr>
<tr>
<td>99.6</td>
<td>36.6</td>
<td>14.6</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Share of services used by banked population

<table>
<thead>
<tr>
<th>Services</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remittances</td>
<td>24.2</td>
<td>22.4</td>
</tr>
<tr>
<td>Savings with a bank</td>
<td>27.7</td>
<td>21.0</td>
</tr>
<tr>
<td>Payments</td>
<td>12.1</td>
<td>15.5</td>
</tr>
<tr>
<td>Income receipt</td>
<td>8.4</td>
<td>9.7</td>
</tr>
<tr>
<td>Loans</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Banking agents</td>
<td>2.6</td>
<td>3.3</td>
</tr>
</tbody>
</table>

SOURCE: EfinA Access to Finance 2018 Report
## There are 4 key levers through which FinTech are driving financial inclusion (1/2)

<table>
<thead>
<tr>
<th>Key Levers</th>
<th>Description</th>
<th>FinTech Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Financial products and services within easy reach of all segments of the population</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ FinTech have increased access through new savings and lending models:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Access to Savings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Over 1 million customers saving on platforms like Piggyvest &amp; Cowrywise with 60%-70% being first time savers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Access to Lending</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Over 3 million customers with increased access to lending through FinTech such as Carbon and Migo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Over N50 billion loans disbursed annually through FinTech such as Carbon and Migo</td>
</tr>
<tr>
<td>Pricing</td>
<td>Financial affordability and ability of products to accommodate various income/economic groups</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ FinTech have increased product affordability through reduced charges and cheaper transfer fees:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ FinTech tend to be 50%-80% cheaper than traditional players in transfers, bill payments and airtime purchase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ FinTech are offering 2-3X the interest rates on savings compared to traditional players</td>
</tr>
</tbody>
</table>

SOURCE: Company Websites, Press Search

Nigeria FinTech Landscape – Impact Assessment
There are 4 key levers through which FinTech are driving financial inclusion (2/2)

<table>
<thead>
<tr>
<th>Key Levers</th>
<th>Description</th>
<th>FinTech Impact</th>
</tr>
</thead>
</table>
| Product design/innovation | Design of financial products that cater to the needs of various segments of the population across culture, religion, gender, geography etc | ▪ FinTech have led innovation in 3 out of 5 product areas, spurring imitation from traditional players:  
  - Savings & Wealth Management:  
    ▪ Disciplined savings models through FinTech like Cowrywise  
    ▪ Digitization of Cooperative savings through FinTech like Riby  
    ▪ Digitization of Esusu models through FinTech like Bankly  
  - Lending:  
    ▪ Aggregation of smartphone data points to disburse documentation and collateral free loans e.g. through Carbon  
  - Payments:  
    ▪ Online IVRs in various languages e.g. through Softcom  
    ▪ Migration of customers to wallets via lifestyle use cases e.g. OPay  
| Education (perception)   | Education of consumers on the needs and benefits of financial products and services | ▪ A few FinTech are making modest efforts at consumer education, with significant room for improvement:  
  - Lending:  
    ▪ Free credit reports (e.g. on Carbon) educating consumers on credit health  
  - Savings:  
    ▪ Educating consumers on maintaining financial health e.g. Piggyvest’s WAEC score enlightens users on their saving habits and how they can improve |
Female participation in FinTech remains low in Nigeria and adoption in concentrated in payments and wallet offerings

Despite a low number of female-founded\(^1\) companies in Nigeria, 48% of FinTech have women in senior management positions

**Female founders**

22% of top 50 FinTech\(^2\) have female co-founders

**Women in senior management\(^3\)**

48% out of top 50 FinTech have women in senior management position

**FinTech funding >$1 mn**

Only 2 companies with female co-founders\(^4\) have raised $1 mn+ in 2018-2019

---

FinTech adoption is lower for women\(^5\) in Nigeria relative to men and concentrated in low sophisticated products

Female adoption of FinTech\(^6\) for mass and youth, %

<table>
<thead>
<tr>
<th>Product</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts/wallets</td>
<td>35%</td>
</tr>
<tr>
<td>Payments</td>
<td>59%</td>
</tr>
<tr>
<td>Savings</td>
<td>4 (4%)</td>
</tr>
<tr>
<td>Lending</td>
<td>2%</td>
</tr>
</tbody>
</table>

Rationale for low adoption

Only 1\(^7\) out of the top 30 FinTech in Nigeria has designed a product specifically for women

Companies do not create products to solve specific women’s needs

---

1. Based on interviews with various stakeholder and team analysis on top 50 FinTech
2. Determined based on Weetracker and Britter Bridges reported FinTech, team analysis
3. Senior management includes partners and executive positions
4. Publicly announced funding of FinTech in Nigeria
5. Based on 215 customer interviews across Nigeria
6. Use at least one FinTech product
7. Carbon

SOURCE: Customer survey, company websites
Fintech solutions could create a multiplier effect on the economy across several sectors

Twelve distinct ecosystems have been identified

In Nigeria, FinTech impact is already observed on a few

- **Travel & Hospitality**
  - New online business models leveraging digital payment solutions (e.g. WAKAnow, Hotels.ng)

- **Healthcare**
  - Offer businesses and individuals to spread costs of insurance premiums over regular installments (e.g. Reliance HMO)

- **Housing**
  - Provide financing for annual fees for e.g. school, memberships or commercial services (e.g. Fibre)

- **Education**
  - Create environment that generates more interest in STEM, thus increasing talent pool of computer scientists, developers etc.
FinTech have enabled the rapid growth of e-commerce, travel, mobility and agriculture over the last 3 years (1/2)

<table>
<thead>
<tr>
<th>How Nigerian FinTech have enabled growth</th>
<th>Example of impact</th>
<th>Global Examples</th>
</tr>
</thead>
</table>
| ▪ Facilitated easy access to accepting online payments by e-commerce merchants e.g. Flutterwave and Paystack | ▪ Paystack & Flutterwave have:  
  - Cut down time to setup online payments from ~3 months to 15mins | ▪ Stripe, US:  
  - Enables online payment processing for internet businesses |
| ▪ Provides insight on business performance e.g. Paystack | ▪ Lidya & Lendigo have issued over 5 thousand loans to small e-commerce merchants | ▪ Kabbage, US:  
  - Offers quick, flexible lending/funding solutions for businesses |
| ▪ Enables growth of e-commerce businesses through working capital financing e.g. Lidya | ▪ Growth in online air travel booking penetration from 0% to 13% over 12 years enabled by digital payment solutions | ▪ Monzo, UK:  
  - Allows for online and card payments in any country at no charges |

<table>
<thead>
<tr>
<th>E-commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Create solutions to enable sale of airline tickets &amp; hotel bookings online e.g. Quickteller</td>
</tr>
<tr>
<td>▪ Enable local and international airlines receive payment from online customers e.g. Flutterwave</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Travel &amp; Hospitality</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Growth in online air travel booking penetration from 0% to 13% over 12 years enabled by digital payment solutions</td>
</tr>
<tr>
<td>▪ Enabled growth of online travel merchants e.g. Wakanow, Travelstartng</td>
</tr>
</tbody>
</table>

SOURCE: Company Websites, Press Search
FinTech have enabled the rapid growth of e-commerce, travel, mobility and agriculture over the last 3 years (2/2)

<table>
<thead>
<tr>
<th>Mobility</th>
<th>How Nigerian FinTech have enabled growth</th>
<th>Impact</th>
<th>Global Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Enabled operations of global ride hailing services e.g. Uber and Bolt</td>
<td>▪ Created digital marketplaces to facilitate trade in agro-comodities and manage payments e.g. Agrikore</td>
<td>▪ ~$30 million in loans disbursed to farmers by crowd-sourcing platforms</td>
<td>▪ Farmdrive, Kenya:</td>
</tr>
<tr>
<td>and Flutterwave’s digital payment solutions</td>
<td>▪ Increased transparency and efficiency in agro-subsidy programs e.g. Cellulant’s fertilizer subsidy</td>
<td>▪ Over 12 million farmers were reached by the fertilizer subsidy wallet</td>
<td>– Enables access to loans for farmers by creating credit scores</td>
</tr>
<tr>
<td>▪ Enabled penetration of bike-hailing services through digital payments</td>
<td></td>
<td></td>
<td>▪ Farmecco, Australia:</td>
</tr>
<tr>
<td>and agent services egg ORide through OPay</td>
<td></td>
<td></td>
<td>– Captures financial elements of farmers business and generates live reports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>that help monitor costs and revenues</td>
</tr>
</tbody>
</table>

| Agriculture                                                              |                                                                                                          |                                                                         |                                                                              |
| ▪ Facilitated increased funding to the agriculture space through crowdfunding e.g. Farmcrowdy and Thrive Agric | ▪ ▪>9,000 ride hailing drivers in Nigeria enabled through payment solutions                              | ▪ ▪Gojek                                                                  |
| ▪ Created digital marketplaces to facilitate trade in agro-comodities and |                                                                                                          | ▪ ▪  – Enables ride hailing through mobile wallet                          | ▪ ▪   – Enables access to loans for farmers by creating credit scores          |
|   manage payments e.g. Agrikore by Cellulant                              |                                                                                                          | ▪ ▪  – Over 2 million driver jobs created in Indonesia                     |                                                                              |
| ▪ Increased transparency and efficiency in agro-subsidy programs e.g.    |                                                                                                          |                                                                         |                                                                              |
|   Cellulant’s fertilizer subsidy wallets                                 |                                                                                                          |                                                                         |                                                                              |

SOURCE: Company Websites, Press Search
However, significant opportunity still exist to enable solutions within education and health which will cut across all segments, and can help empower the BoP.

<table>
<thead>
<tr>
<th>Education</th>
<th>Global examples of impact</th>
<th>Early progress made in Nigeria</th>
<th>Additional opportunities for impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ SoFi, US:</td>
<td>▪ Provides end to end financing and payments solutions for schools and parents e.g. Schoolable</td>
<td>▪ Providing end to end financing and payments solutions for schools and parents e.g. Schoolable</td>
<td>▪ Student financing (short &amp; long term loans) e.g. income sharing agreements</td>
</tr>
<tr>
<td>▪ Enables students refinance existing loans</td>
<td>▪ Enables students refinance existing loans</td>
<td></td>
<td>▪ End to end payment platform for universities</td>
</tr>
<tr>
<td>▪ 18 billion in refinanced student loans</td>
<td>▪ 18 billion in refinanced student loans</td>
<td></td>
<td>▪ Digital learning platforms with online payments</td>
</tr>
<tr>
<td>▪ 300,000+ SoFi members have refinanced loans</td>
<td>▪ 300,000+ SoFi members have refinanced loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Flywire:</td>
<td>▪ Enablement of new payment models for low cost school administration with fees in monthly micrOPayments e.g. Bridge Academy</td>
<td>▪ Additional opportunities for impact</td>
<td></td>
</tr>
<tr>
<td>▪ Provides tailored end to end global payments solutions for schools</td>
<td>▪ SoFi, US:</td>
<td>▪ Early progress made in Nigeria</td>
<td></td>
</tr>
<tr>
<td>▪ $10 billion in total transaction volume</td>
<td>▪ Enables students refinance existing loans</td>
<td>▪ Affordable health insurance for mass &amp; rural dwellers leveraging mobile</td>
<td></td>
</tr>
<tr>
<td>▪ BIMA</td>
<td>▪ Enables students refinance existing loans</td>
<td>▪ Vendor managed inventory</td>
<td></td>
</tr>
<tr>
<td>▪ Provides affordable mobile health and insurance services to underserved individuals</td>
<td>▪ 26 million customers in 15 countries</td>
<td>▪ End to end payment platform for hospitals</td>
<td></td>
</tr>
<tr>
<td>▪ Microensure</td>
<td>▪ Enables students refinance existing loans</td>
<td>▪ Payor-Provider payment &amp; management platforms</td>
<td></td>
</tr>
<tr>
<td>▪ Affordable insurance to undeserved groups by bundling with airtime and micro loans</td>
<td>▪ &gt;40 million customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ mPharma</td>
<td>▪ Financing inventory of drugs at pharmacies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Financing inventory of drugs at pharmacies</td>
<td>▪ 400k patients in 5 African countries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There are 5 key imperatives for stakeholders in order to capture the potential opportunity in the Nigerian FinTech ecosystem

### Innovative Regulatory Environment
- Foster regulations that support innovation
  - Establish regulatory sandbox that allows FinTech test ideas in a controlled environment
  - Set up helpdesk to help FinTechs navigate regulations
  - Set up innovation office/team to update regulations based on sandbox outcomes
  - Targeted efforts towards solving industry wide issues (e.g. “99 paint points Hackathon”)
  - Provide access to standardized APIs
- Key stakeholders
  - CBN, NIBSS, SEC, NAICOM, PENCOM, NCC etc.

### Digital ID
- Create pull for digital identity e.g. BVN, NIN, Voters ID etc.
  - Encourage digital ID registration as a prerequisite for receiving donor benefit (e.g. cash transfers, health, food programs etc.)
  - Expand access to infrastructure required for enrollment
  - Accelerate the harmonization of various digital ID systems (NIN, BVN, Voters ID etc.) into centralized system
- Key stakeholders
  - Development organizations/Foundations
  - Credit Bureaus, Commercial Banks, Lenders, NIBSS

### Credit Infrastructure
- Develop central credit infrastructure
  - Enforce reporting compliance to Credit Bureau for all Lenders
  - Task central body to provide data for alternative credit scoring (e.g. payment transaction data) to stimulate MSME lending
- Key stakeholders
  - Federal, State and Local Governments

### Digital Infrastructure
- Accelerate the deployment of digital infrastructure
  - Cost effective digital access to all customers (e.g. explore the modalities of inclusive pricing for USSD)
  - Drive down cost of smart feature phones by developing partnerships to assemble low cost phones in free-trade zones
  - Drive down cost of data by promoting transparency of regulatory fees around Right of Way (RoW) permits and reduce build-out cost by encouraging infrastructure sharing
- Key stakeholders
  - Credit Bureaus, Commercial Banks, Lenders, NIBSS

### Talent Pipeline
- Grow the talent pipeline
  - Scale up developer training programs through standard curriculum and delivery partnerships with Universities or independent training centers situated close to University campuses
  - Develop apprenticeship programs at scale by partnering with various stakeholders to absorb talent for internships from trained pool
  - Build central talent database of trained developers and promote widely to connect demand with qualified supply
- Key stakeholders
  - Development organizations/Foundations, Federal, State and Local Governments, Industry players, Investors

1. Global Standing Instruction will allow lenders to collect default loan repayments from an individual’s or company’s from any bank across the country
2. Some states have started reviewing the RoW charges in the wake of COVID 19
1: A regulatory sandbox allows innovative firms to test ideas quickly and cost effectively within a safe environment

<table>
<thead>
<tr>
<th>Definition</th>
<th>Key Elements of a Regulatory Sandbox</th>
</tr>
</thead>
<tbody>
<tr>
<td>A regulatory sandbox is a controlled environment in which innovative businesses can test their ideas under the guidance/supervision of a regulator</td>
<td><strong>Waivers</strong></td>
</tr>
<tr>
<td></td>
<td>Relaxation of specific legal and regulatory requirements specific to the test</td>
</tr>
<tr>
<td></td>
<td><strong>Guidance</strong></td>
</tr>
<tr>
<td></td>
<td>Tailored guidance for firms to support implementation of the test</td>
</tr>
<tr>
<td></td>
<td><strong>Limited authorization</strong></td>
</tr>
<tr>
<td></td>
<td>Requirements of authorization from regulatory body to get into sandbox and conduct regulated activities</td>
</tr>
</tbody>
</table>
1: Countries have created different variations of a regulatory sandbox

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Pros</th>
<th>Cons</th>
<th>Case countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sandbox environment</td>
<td>A regulatory sandbox is a framework set up by a financial sector regulator to allow small scale, live testing of innovations by payment players in a controlled environment</td>
<td>Allows players <strong>test financial services and business models with actual customers</strong></td>
<td>Complex to set up and costly to run</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Pros</strong></td>
<td><strong>Cons</strong></td>
<td><strong>Case countries</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>May be an important tool for developing evidence-based policy</td>
<td>Regulatory questions raised in connection with sandbox tests can be effectively resolved without a live testing environment</td>
<td>Neither necessary nor sufficient for promoting financial inclusion</td>
</tr>
<tr>
<td>2</td>
<td>Innovation office</td>
<td>Innovation offices engage with, and provide regulatory clarification to, financial services providers that seek to offer innovative products and services</td>
<td>Implementation is <strong>cheaper</strong> than sandboxes</td>
<td>Does not allow players to test ideas with actual customers</td>
</tr>
<tr>
<td>3</td>
<td>Sandbox + Innovation office</td>
<td>Implementation of both sandbox and innovation office, to drive innovation</td>
<td>Combines benefits of both innovation office and sandbox</td>
<td>May be expensive to implement</td>
</tr>
</tbody>
</table>

**SOURCE:** UNSGSA Early Lessons on Regulatory Innovations to Enable Inclusive FinTech report
1: To reach full potential, the Nigerian sandbox needs to incorporate these key elements

<table>
<thead>
<tr>
<th>Type</th>
<th>Key Components</th>
<th>Description</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Sandbox</td>
<td>Waiver</td>
<td>Relaxation of legal and regulatory requirements specific to tests</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Regulator Collaborations</td>
<td>CBN collaboration with other regulators e.g. NAICOM, PENCOM</td>
<td>Medium</td>
</tr>
<tr>
<td>Innovation Sandbox</td>
<td>API standardization</td>
<td>Basic standard for APIs in sandbox to ensure ease of connection for FinTech (could be achieved through NIBSS)</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>API Access</td>
<td>Enable access to relevant APIs for firms who are part of the sandbox</td>
<td>High</td>
</tr>
<tr>
<td>Innovation Office</td>
<td>Helpdesk</td>
<td>Play ‘midwife’ role in assisting and guiding FinTech who wish to test ideas</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Regulatory review</td>
<td>Clear process for updating regulations based on sandbox outcomes</td>
<td>High</td>
</tr>
</tbody>
</table>

**SOURCE:** Expert Interviews, Team Analysis
1: The investment required to foster innovation could be significant, but can be achieved if CBN works in collaboration with other stakeholders

**FinTech**
- Regular interfacing with the CBN and other regulators in order to ensure FinTech interests are considered

**CBN**
- **Waivers**: Review/Case officers to highlight potential regulatory waivers
- **Innovation Helpdesk**: Team dedicated to guiding firms through design and implementation of testing
- **Updated guidelines**: Team and clear process in charge of monitoring and updating regulations based on sandbox outcomes
- **Collaboration**: Extend invitation to other stakeholders

**NIBSS**
- Provide access to standardized APIs through standard platform to enable access to data from financial services and other industry players
- Define minimum standard for FinTech to commit and manage overall security of sandbox

**Banks, Telcos, Government Agencies, Data Providers**
- Sharing of useful data
- Provide APIs based on mutually beneficial commercial arrangements

**Development Partners**
- Fund regulatory sandbox support:
  - Innovation helpdesk that guides FinTech on requirements and helps with clarity
- Sponsor ‘hackathons’ to encourage FinTech to solve industry and development problems through innovative ideas

**Other Regulators**
- E.g. NAICOM collaboration in order for Insurtechs to test ideas and for regulations to be updated as necessary
2: Mandating digital ID as a pre-requisite for accessing social benefits has the potential to create significant pull for the digital ID which could accelerate the update of financial services by all

**Objectives**

Create pull for digital ID by driving donor fund disbursement to individuals with digital IDs

Ensure infrastructure for the creation of digital ID is available for consumers

<table>
<thead>
<tr>
<th>Key components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make digital ID compulsory for accessing social benefits</td>
</tr>
<tr>
<td>▪ Mandate that donor funds and benefits will be tied to ownership of digital ID</td>
</tr>
<tr>
<td>‑ Examples of benefits include cash transfer programs, agricultural subsidy programs for fertilizers, healthcare benefits vaccines, malaria treatments, HIV, pre/post natal care, food programs at schools, local communities etc.</td>
</tr>
<tr>
<td>Use the service delivery centres as enrolment points</td>
</tr>
<tr>
<td>▪ Leverage service delivery points such as health centers, microlending agencies, educational centers etc. as enrollment centers for digital ID</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donors</td>
</tr>
<tr>
<td>▪ Various ministries and partners</td>
</tr>
<tr>
<td>▪ Hospitals and health centres</td>
</tr>
<tr>
<td>▪ Food and agriculture programs</td>
</tr>
<tr>
<td>▪ Educational institutions</td>
</tr>
<tr>
<td>Partner agencies</td>
</tr>
<tr>
<td>Examples include Gates Foundation, DFID, USAID etc.</td>
</tr>
</tbody>
</table>

SOURCE: Expert interviews, Stakeholder interviews, team analysis
2: Donor could drive digital adoption by setting digital ID as a pre-requisite for accessing funds and benefits

How the digital ID drive will work

- All donors agree to disburse funds and benefits to individuals with digital ID
- New agreement shared with partners and communicated nationwide through various channels
- Digital ID registration devices deployed at service delivery centers and staff education on registration process
- Welfare recipients registered at service delivery point before fund/benefit disbursement
- Digital ID used as tracker subsequent fund disbursement

Driving digital ID adoption

Benefit to digital ID

- Increased digital ID adoption especially with unbanked population
- Increased transparency in donor fund/benefit disbursements
- Increased financial inclusion

SOURCE: Expert interviews, Stakeholder interviews, team analysis
3: To boost retail lending, a shared infrastructure player e.g. NIBSS should develop a central credit infrastructure comprising credit scoring and collections infrastructure.

**Central credit scoring system**

Create a alternative credit scoring system that leverages combination of transaction and other customer data (bills, airtime purchases to provide lending products to individuals as SMEs.

NIBSS transaction data could be the starting point for the credit scoring and could be augmented subsequently by data from credit bureaus, telcos etc. (through a commercial arrangement).

**Collections infrastructure incorporating (GSI)**

Develop central loan collection infrastructure that enables customers easily set direct debits on their account for loan repayment.

Incorporate GSI¹ to allow lenders recover delinquent loans from customers accounts across banks.

---

¹ Global Standing Instruction

SOURCE: Expert interviews, Stakeholder interviews, team analysis
3: The central credit scoring infrastructure will leverage transaction and customer data to develop credit reports for customers

**Examples**

**What’s the need today?**

Today, banks and financial institutions rely on multiple sources to evaluate the creditworthiness of customers and businesses, which is a costly process.

- **Credit bureaus** which currently has limited scale
- **Private and public employers** for employment and income verification

**How the central credit scoring could work**

1. **NIBSS uses customer data from transaction volumes to build credit score for customers**
   - Utilize innovative software to generate credit scores from customers using customer data from NIBSS central switch

2. **Customer consent (partner institution side)**
   - Customer applies for a loan with financial institution / banks
   - I agree to share my information with third party service providers, to secure additional information that will be useful for evaluating my creditworthiness

3. **NIBSS shares customer’s credit rating with partner institution**
   - Information on the customer run through database and credit report sent to partner (fee is charged for every pull)

**SOURCE:** Expert interviews, Stakeholder interviews, team analysis
3: To build lender confidence, NIBSS could develop a collection infrastructure that incorporates digital direct debit mandates and the GSI

**Operationalize credit collection infrastructure in Nigeria**

**How the collection infrastructure could work**

- Customer request for credit facility through FinTech or financial institution
- Upon loan approval, customer sets up direct debit through central loan collection infrastructure (NIBSS) for loan repayment
- Customer provides consent to NIBSS to collect default payment from other bank accounts linked to his/her BVN through GSI\(^1\) system
- NIBSS collects loan repayments from customer’s primary account
- In the event of loan defaults, lenders recover delinquent loans from other bank accounts through GSI

**Benefit to overall credit infrastructure**

- Create visibility in consumer lending across Nigeria
- Increase appetite for consumer lending from financial institutions
- Reduce risk of loan defaults with increased visibility

---

1. **Global Standing Instruction**

**SOURCE:** Expert interviews, Stakeholder interviews, team analysis
4: The telecoms industry should make concerted efforts to improve broadband coverage, affordability while driving device penetration

<table>
<thead>
<tr>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive digital coverage across Nigeria by improving broadband infrastructure and access, reducing cost of data and increasing smartphone penetration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improve broadband coverage</strong></td>
</tr>
<tr>
<td>▪ Designate USSD as critical infrastructure to provide cost effective access to all customers</td>
</tr>
<tr>
<td>▪ Encourage fiber optic infrastructure sharing from various market players – telcos, internet service providers etc.</td>
</tr>
<tr>
<td><strong>Reduce the cost of data</strong></td>
</tr>
<tr>
<td>▶ Drive down cost of data by promoting pricing transparency and encourage infrastructure sharing</td>
</tr>
<tr>
<td><strong>Drive down price of smart feature phones</strong></td>
</tr>
<tr>
<td>▶ Drive down cost of smart feature phones by developing partnerships to assemble low cost phones in free-trade zones in Nigeria</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NCC</strong></td>
</tr>
<tr>
<td>▪ Encourage sharing of infrastructure among telcos and internet service providers</td>
</tr>
<tr>
<td>▪ Accelerate broadband coverage across country</td>
</tr>
<tr>
<td><strong>Telcos</strong></td>
</tr>
<tr>
<td>▪ Collaborate to share broadband infrastructure</td>
</tr>
<tr>
<td><strong>Ministry of Finance</strong></td>
</tr>
<tr>
<td>▪ Enable duty-free import of smart feature phone components and assembly in free-trade zones in Nigeria</td>
</tr>
<tr>
<td><strong>Local and State Gov’t</strong></td>
</tr>
</tbody>
</table>

SOURCE: Expert interviews, Stakeholder interviews, team analysis
5: To ensure a sustainable tech talent pipeline, we need to scale up digital training programs and drive apprenticeship

A
Scale training programs
- Fund existing training programs
- Set up partnerships with universities
- Leverage digital training

Key stakeholders
- Donors
- Training Institutes
- Universities

B
Drive apprenticeship by positioning Nigeria as an outsourcing hub
- Set up technology centers/hubs
- Share success stories
- Partnerships with big techs

Key stakeholders
- Donors
- Big Techs
- Universities
5: Development partners could support the training of tech talent by scaling up existing programs, partnering with universities and leveraging digital training

<table>
<thead>
<tr>
<th>Ways to Scale</th>
<th>Description</th>
<th>Example Partners</th>
</tr>
</thead>
</table>
| Fund existing training programs | ▪ Expand capacity of existing programs through funding  
  – Create revolving fund to sponsor students to institutes  
  – Direct funds to potential talent in underserved areas e.g. the North | ![Decagon](image), ![NESA by MAKERS](image) |
| Set up partnerships between universities and programs | ▪ Locate training centers on university campuses with existing programs (e.g. private universities)  
  ▪ Support curriculum revamp  
  ▪ Create industry/academic exchange programmes between industry experts and university lecturers | ![Covenant University](image), ![Babcock University](image) |
| Scale up existing digital training | ▪ Create conducive digital infrastructure to foster digital training programs:  
  – Partnership with Telcos to create zero rate data  
  – Set up free hubs for those with limited access to digital resources | ![Andela](image), ![Lambda](image) |
5: Nigeria can be positioned as an outsourcing hub for talent to gain access to real life problems across the globe

FinTech are unable to absorb all/most local tech talent…

1  ▪ Limited Bandwidth:
  - FinTech are still growing and have limited capacity to take on interns for training

2  ▪ Limited Resources:
  - Potential to build a pipeline that is significantly more than what FinTech can absorb

..however, there is growing global demand for talent …

1 million
open IT jobs

$3.8 trillion
global IT spending

5
major big tech\(^1\) hubs across Africa

….creating an opportunity for Nigeria to be an outsourcing hub to drive apprenticeship…

<table>
<thead>
<tr>
<th>Set up outsourcing hubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnerships with private players to develop hubs with necessary infrastructure e.g. quality broadband, electricity etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partnerships with global outsourcing companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potentially create special trade zone for tech outsourcing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tell success stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive rapid uptake by partnering with global tech outsourcing firms like Tech Mahindra to set up shop in Nigeria</td>
</tr>
</tbody>
</table>

| ▪ Create awareness of Nigeria’s outsourcing hub to create more demand |

1. Google, IBM (2), Microsoft (2)

SOURCE: Smithsonian Science Education Center, 2018, Gartner
5: There is an opportunity for development partners to play a coordination role to ensure a sustainable tech talent pipeline

- **Universities**
  - Foster dialogue between universities and industry to facilitate knowledge sharing
  - Sponsor mentorship programs at universities

- **Development Partners**
  - **Funding:**
    - Provide funding for existing programs, new digital programs/initiatives
  - **Coordination:**
    - Liaising with various stakeholders e.g. universities, governments, communities to harmonize efforts

- **State Governments**
  - Liaise with state governments to provide spaces for tech zones to be established
  - Interface to get buy in of global outsourcing players

- **Training Institutes**
  - Create funding to expand capacity
  - Direct funding to underserved areas

- **Telcos**
  - Liaise with players to provide adequate digital infrastructure for programs

- **Developer Communities**
  - Encourage mentorship programs within the communities
  - Facilitate fellowships at universities
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▪ Enablers
▪ Additional recommendations
▪ Recommendations for EFInA
The report was developed using a combination of primary and secondary research.

**Interviewees are across 4 stakeholders types**

| Interviews | FinTech | ▪ 10 FinTech players in lending, payments, savings, infrastructure etc. |
| Stakeholders & Influencers | ▪ SANEF, Mastercard Foundation, Gates, DFID |
| ▪ 4 Industry experts |
| ▪ 2 commercial banks |
| Regulators | ▪ CBN, NAICOM, FCPCC |
| Investors | ▪ 4 VCs |

**Research**

| Global | ▪ Completed research on global FinTech landscape |
| Nigeria | ▪ Interviews and surveys with customers across the country |

**Analysis**

| Banking pools | ▪ Analysis of revenues and FinTech growth using McKinsey’s global banking pools |
| Funding analysis | ▪ Inflow of investment funds in Nigeria – local vs foreign capital |
List of interviews and contributors

**FinTech**
- Paystack
- Interswitch
- OPay
- Carbon
- Chaka
- Cellulant
- Indicina
- Cowrywise
- Piggyvest
- Decagon

**Banks**
- Access Bank
- First Bank

**Regulators**
- CBN
- NAICOM
- FCCPC
- SANEF
- FIS

**VCs**
- Greycroft
- Ventures Platform

**Others**
- UK FCA
- Open Banking
- Nigeria
Singapore MAS has recently launched their version of a regulatory sandbox in mid-2019

The MAS regulatory sandbox

The MAS regulatory sandbox provides a conducive environment for the experimentation of innovative technology where the consequences of a failure can be contained and the overall safety and soundness of the financial system maintained.

**Proposed sandbox criteria**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The solution is technologically innovative</td>
<td></td>
</tr>
<tr>
<td>The solution addresses a problem, or brings benefits to consumers and/or industry</td>
<td></td>
</tr>
<tr>
<td>The boundary conditions have been clearly defined</td>
<td></td>
</tr>
<tr>
<td>The sandbox test scenarios and outcomes have been clearly defined</td>
<td></td>
</tr>
<tr>
<td>Major foreseeable risks arising from the solution have been assessed and mitigated</td>
<td></td>
</tr>
<tr>
<td>The exit strategy has been defined in event of solution discontinuation</td>
<td></td>
</tr>
<tr>
<td>Financial industry sandbox</td>
<td></td>
</tr>
</tbody>
</table>

**Objective**

Encourage FinTech experimentation such that innovations can be tested in the market and have a wider chance for adoption.

**How it works?**

Enable FinTech innovation/experimentation in production environment under specific conditions and duration.

Relax specific legal and regulatory requirements by MAS for the duration of the sandbox.

**Criteria**

Proposed financial service includes new or emerging technology or uses existing technology in an innovative way.

Proposed financial service addresses a problem or bring benefits to consumers or the industry.

SOURCE: MAS, press search
Singapore MAS invited FinTech from around the world to solve 100 industry problem statements

Teams were invited to submit their ideas and proposals

20 teams shortlisted to join 10 week hackcelerator

Present ideas and solutions on demo day

Awards, guidance and mentorship provided as well as connections to Singapore FinTech ecosystem
The Hong Kong Monetary Authority has launched a number of initiatives to transition into what they call a New Era of Smart Banking

- FPS supports the use of mobile phone numbers or email addresses for payments in HKD or RMB, anytime and anywhere
- Both banks and Stored Value Facilities (SVF) can participate
- Aim to create a common QR code standard, which would promote the wider use of mobile retail payments and greater convenience to customers and merchants.

- New task force within the HKMA to minimise regulatory frictions in customers’ digital experience
- Topics include remote on-boarding, online finance and online wealth management.

- Development of an Open API policy framework which will:
  - Improve banking sector competitiveness
  - Encourage FS companies to provide innovative services that improve customer experience
  - Keep up with worldwide innovation

- The HKMA has allowed the entrance of digital banks into the Hong Kong economy
- Together with banking industry will review and amend the Guide to Authorization of Virtual Banks issued in 2000

- The HKMA will aim to build international bridges in order to further develop FinTech
- Initiatives include:
  - Cooperating with the city of Shenzhen on FinTech and digital banking topics
  - A joint effort with Singapore to develop a trade finance solution using DLT

- FPS supports the use of mobile phone numbers or email addresses for payments in HKD or RMB, anytime and anywhere
- Both banks and Stored Value Facilities (SVF) can participate
- Aim to create a common QR code standard, which would promote the wider use of mobile retail payments and greater convenience to customers and merchants.

- FSS 2.0 will have three new features:
  - A FinTech Supervisory Chatroom to provide speedy feedback to banks and tech firms
  - Tech firms have direct access to the sandbox by seeking feedback from the Chatroom without necessarily going through a bank;
  - The sandboxes of the HKMA, the SFC and the Insurance Authority will be linked for a single point of entry.

- The HKMA has allowed the entrance of digital banks into the Hong Kong economy
- Together with banking industry will review and amend the Guide to Authorization of Virtual Banks issued in 2000

- Already partnering with high-tech companies to offer internships for Hong Kong students
- Conducting research and publishing whitepapers on FinTech and technology with the potential to help banking, such as DLT

SOURCE: Hong Kong Monetary Authority
Open Banking/ PSD2 is now a reality in various countries, leading to diverse product offerings from all types of industry players.

Present in 36 markets & products that account for ~90% of global revenue pools

Stage of adoption

Stage 1
Industry consultation, draft regulation

Stage 2
Transpose to national law

Stage 3
Grant licenses

Yolt enables users combine their current accounts, credit cards and pensions in one view, reaching 500k customers in ~1 year since launch

Revolut app enables users to track their Revolut transactions connect external bank accounts to the app

Raisin’s open banking partnership with Santander means that Santander customers can authorize the sharing of their data with Raisin leading to the registration process for Santander customers to access Raisin’s products through the “Santander Connect” button will be easy and simple.

SOURCE: McKinsey, press search
Dubai’s DFSA and Singapore’s MAS entered into an agreement to foster innovation in financial services of both markets

Context

The Dubai Financial Services Authority (DFSA) and the Monetary Authority of Singapore (MAS) entered into an agreement that provides a framework for cooperation between the innovation teams of each authority, allowing referrals of innovative businesses between the two authorities.

Objectives

Deliver new and enhance financial services to manage risks better, reduce costs and increase efficiency

Encourage innovation in the financial services sectors and FinTech ecosystems of both markets

How it works

The sharing of information on financial services innovation in both markets

Jointly working on the innovation projects on the application of key technological trends such as APIs, Block chain, Big data and distributed ledgers

SOURCE: MAS, press search
The Global Financial Innovation network provides an avenue for innovative firms to interact with regulators, helping them navigate various jurisdictions as they look to expand and test ideas

**Context**

The Global Financial Innovation Network (GFIN) was formally launched in January 2019 by an international group of financial regulators and related organisations, including the FCA. It built on the FCA’s earlier proposal to create a global sandbox.

**Objectives**

To act as a network of regulators collaborate that can share experiences of innovation in various markets, including emerging technologies and business models, and to provide accessible regulatory contact information for firms.

To provide a forum for joint RegTech work and collaborative knowledge, sharing lessons learned

To provide firms with an environment in which they can test cross border solutions

**How it works**

A pilot for firms wishing to test innovative products, services or business models across more than one jurisdiction

Creation of a new framework for co-operation between various financial services regulators on innovation related topics, sharing different experiences and approaches.

SOURCE: GFIN, UK FCA
The UK has increased funding to FinTech by creating a seed investment scheme that incentivizes local investors...

The UK offers great benefits to investors who invest in small and early stage startups...

- The Seed Enterprise Investment Scheme (SEIS) offers great tax efficient benefits to investors in return for investment in small and early stage startup businesses in the UK.

- The scheme was designed to boost economic growth in the UK by promoting new enterprise and entrepreneurship.

- Investors can place a maximum of £100,000 in a single tax year, which can be spread over a number of companies.

- The company must be no more than two years old.

- Investors can receive up to 50% tax relief in the tax year the investment is made, regardless of their marginal rate.

... contributing to increased FinTech investment in the UK and London leading overall FinTech investment in Europe with $2.11bn investment.

VC-backed investment in UK FinTech
USD billion

SOURCE: SEIS Website, Pitchbook, Crunchbase, Press Search
India has created a technology stack which various technology infrastructure that creates an enabling environment for financial services

<table>
<thead>
<tr>
<th>The India Stack</th>
<th>India Stack provides 4 distinct technology layers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Presenceless layer</strong></td>
<td><strong>Paperless layer</strong></td>
</tr>
<tr>
<td>Where a universal biometric digital identity allows people to participate in any service from anywhere in the country</td>
<td>Where digital records move with an individual’s digital identity, eliminating the need for massive amount of paper collection and storage</td>
</tr>
<tr>
<td>The Aadhaar which is a 12 digit unique identification number i.e. biometric digital identity that allows Indians to participate in services from anywhere in the country</td>
<td>UIDAI launched eKYC which allows businesses to perform Know Your Customer verification process digitally using Biometric or Mobile OTP</td>
</tr>
<tr>
<td><strong>Cashless layer</strong></td>
<td><strong>Consent layer</strong></td>
</tr>
<tr>
<td>Where a single interface to all the country’s bank accounts and wallets to democratize payments</td>
<td>Which allows data to move freely and securely to democratize the market for data</td>
</tr>
<tr>
<td>NPCI launches Unified Payments Interface, the most advanced public payments system in the world to revolutionize digital payments in India</td>
<td>All technology is built on a set of APIs which allows for safe sharing of data</td>
</tr>
</tbody>
</table>
IBM India runs a Career Education Program in partnership with universities to develop tech talent

Context
IBM collaborates with universities in India and South Asia to offer degree programs that are jointly developed, marketed and certified to make sure the students have the best from both worlds, both from an Industry and Academic standpoint.

How it works
IBM works with universities/colleges and also with authorized career education partners. They set up software capability labs and certificate/degree programs with these universities/colleges.

Benefits
Creation of an innovative curriculum jointly developed with IBM on industry specializations, based on the skills requirements of different industries.
A chance for students to learn from the Industry Faculty of IBM who teach using live cases.
Students get professional certifications from IBM.
Improve the career prospects with the best companies.

SOURCE: Company Website
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BIMA company profile

**Company Description**

- Offers affordable life, personal accident and hospitalization insurance products for underbanked customers
- Agents sell the insurance and health service products to low income customers personally and provide education for them about the benefits of being insured and financially secure
- Customers only need a mobile phone to use the service: after an easy registration with the help of an agent, they can select, pay and renew the selected policies via the tool
- In the case of an accident or illness, clients have to collect the necessary documents and claim their compensation by calling the Bima hotline
- Additionally Bima offers a mobile health service, where customers can ask for doctors’ advice via phone whenever they or their family member get sick
- Bima partners with microfinance institutions and mobile operators enabling them to enter the insurance market and manages everything for them from product design to distribution to claims’ administration

**Source:** McKinsey Panorama

**What makes them distinctive**

- Enables quick and seamless integration into partners’ existing IT infrastructure providing flexibility in incorporating new products and business models
- Pays valid claims within 72 hours
- The team of 3,500 trained agents develops high product awareness and customer engagement with educating underbanked customers who have limited knowledge on insurances

**Revenue model**

- Commission

**Details**

- Bima’s life insurance is sold in 3, 6 or 12 months packages, costing $1.4, $2.8 or $5.6
- Charges $3.85 for a one-year health hotline subscription (unlimited doctor consultation)

**Business model**

**Similar solutions**
### BIMA Impact

**As of December 2016 Bima has:**

- Reached **24 million** customers and 50% of them are active users
- Payed out **$3 million** in claims
- Has **~500,000** new customers monthly
- Operated in **15** countries in **3** continents
- Employs **3,500** agents

### Qualitative achievements

- Winner of Mastercard Foundation Global Award for "Clients at the Centre' 2015
- Winner of Mondato Asia's Digital Finance and Social Impact award 2015
- Nominated as "The Insurance Company or Initiative of 2015" by African Business Awards

**SOURCE:** McKinsey Panorama
NUBANK company profile

Company Description

- Nubank consists of a bank account, physical MasterCard and a mobile PFM application with various built-in features;
  - Allows users to create budgets and limits, track their transactions, balances, and invoices in real-time with automatic categorization
  - Users can filter for their past purchases and also customize transactions by adding personalized pictures or tags
- Nubank offers reward points after every purchase through the Nubank card, where the points become credit in the customer’s bill, so the reward points can be redeemed to decrease or erase the price of some purchase (e.g. Netflix, Uber, Amazon, iFood, Evino, MaxMilhas, music streaming services and any transaction in hotels and airlines)
- As part of their credit services, customers can apply for personal loans to finance their invoices
- Nubank uses risk assessment based on 1,000-3,000 variables to decide which application to accept
- AccessBio, a new facial biometrics feature that prevents identity fraud, was released in 2018

What makes them distinctive

- Real-time categorization for holistic financial overview which supports well informed decision making
- Lower overheads allow Nubank to charge one of the lowest interest rates in Brazil
- Geolocation empowers users to connect specific transactions to real-life locations
- Nubank Rewards program is based on customer loyalty

Business model

- Commission
- Freemium
- Commission
- Mobile app

Details

- Has a fixed rate of R$ 6.50 per service
- Uses foreign exchange with a value of the PTAX dollar sale plus a margin of 4% when people buy from abroad
- Interest rates for loans start at 7.75% per month

Revenue model

- Commission

Similar solutions

- Moven
- N26
- Revolut
- WeBank
- Fidor Bank

SOURCE: McKinsey Panorama
NUBANK Impact

Quantitative achievements

- Generated **USD 170.5 mn** total revenue in 2017
- Valued at **USD 4 bn** (as of October 2018)
- Customers have saved up to **USD 78.14 mn** in maintenance and transfer fees

Qualitative achievements

- Became the first Latin American company to win the Marketers That Matter Award joining Google, Netflix, GoPro, and Visa on the list of winners
- Backed by DST Global, Sequoia Capital, Goldman Sachs, Founders Fund, Tiger Global Management, Kaszek Ventures, Tencent
- Headquarter is located in Sao Paulo, Brazil but it also operates an engineering office in Berlin, Germany

SOURCE: McKinsey Panorama

- Serves **5 mn** credit card holders,
  and it has **2.5 mn** customers
  with a digital account with 10,000 testing the new debit card services
- Over **16 mn** people requested the Free-of-charge credit card so far (as of March 2019)
### Company Description

- Enables businesses worldwide to **process payments** online, mobile and POS with customers paying in their local currencies.
- **Adyen** offers secure **online payment** options:
  - Hosted Payment Pages allows handling payments on Adyen’s servers via a single technical and administrative connection.
  - Easy Encryption Solution enables online payments on businesses’ own payment pages while data is encrypted in the shoppers’ browser.
- **POS terminals**, with real-time data and analytics, and simple integration to all sales channels through APIs.
- **MarketPay** solution for global, high-volume marketplaces, with easy sub-merchant onboarding, split payments and fast payouts.
- **Global Acquiring Network** provides an integrated approach that helps to maximize authorization rates and offers competitive pricing.
- Built-in automated **risk management and fraud detection system**, and cross-channel consumer insights.

### Revenue Model

- **Commission**
- **Details**
  - Pricing consist of two components:
    - Processing fee: fixed fee - maximum €0.10 ($0.11) - per transaction
    - Payment method commission: fixed or variant amount; for Visa and MasterCard billed using Interchange++ pricing model.
- Charges for extra services.

### What makes them distinctive

- Has a European banking license so they are able to settle funds faster without relying on external banks.
- Provides easy integration and implementation for businesses.
- Full PCI Level 1 Compliance to ensure high-level security.
- Reporting functionality supports strategic decisions.

### Similar Solutions

- **stripe**
- **Paysafe**
- **Intuit**
- **Swipely**
- **iZettle**
- **EFinA**
Several leading companies use Adyen’s platform including Uber, Spotify, Groupon, Evernote, eBay, TransferWise, LinkedIn, Booking.com, Mango, KLM, etc.

- Monitored by Trustwave, ASV, Dutch Central Bank and QSA for the Payment Card Industry Security Standards Council
- Partnership with payments processor Cellulant to expand into Africa and reach 220 mn new clients
- Obtained European Banking License in July 2017
- Ranked #16 on 2018 CNBC Disruptor 50 list
- The solution is fully PSD2 compliant

SOURCE: McKinsey Panorama

Quantitative achievements
- €159 bn in processed volume in 2018
- €1.6 bn gross and €349 mn net revenue in 2018
- Listed on Euronext with a market cap of €22 bn
- Accepts 150+ Transaction currencies and 250+ payment methods
- 20 Offices around the world

Qualitative achievements
**Paytm company profile**

**Company Description**

- Paytm started by offering mobile recharge and utility bill payments and expanded to offer a full marketplace to consumers, available on web or mobile.
- It is also one of the largest online payment gateways in India for various companies within e-commerce, food and travel industries.
- For retail customers it offers a digital wallet and credit card services:
  - Paytm’s digital wallet is enabling to easily pay to merchants who are only paid when the customer received the ordered item in satisfactory condition, and also offers instant P2P money transfer.
  - Paytm First Card is a VISA credit card offering cashback on purchases (in partnership with Citibank).
- Paytm offers for merchants:
  - Different ways to collect payments including gateways (web or mobile), QR code based and subscription payment solutions.
  - Paytm Smart Retail offers hardware and software solutions for in-store POS systems, incl. portable or full-service POS terminals, and marketing, reporting, loyalty, inventory management services.
  - Employee payment solutions like tax-free meal allowance and cash disbursements.
- Also launched a mobile-first digital bank for individuals, Paytm Payments Bank, providing current and savings accounts, debit card, mobile wallet, cashback and access to cash at more than 200,000 ATMs across India.

**What makes them distinctive**

- Reduces user drop offs from merchant sites, wallet can have 50% conversion in some online sites.
- Simple and convenient: with a single click, the user sees his available wallet balance & saved cards too and does the payment. SMEs can set up their operations to receive payments through Paytm within minutes.
- Sellers have pricing options and can access rich customer insights based on analytics.

**Revenue model**

- Commission

**Details**

- Merchants pay a share of the transaction value as a fee for Paytm for every transaction on the platform.
- Fees vary between product categories.
- Paytm Payments Bank accounts have no fee on online transactions, no minimum balance, free virtual debit card and charge 1% per domestic money transfers.
- Paytm Smart Retail POS system costs ₹999/month ($143) and loyalty and CRM add-on costs ₹999/month ($143).
- Paytm First Card has an annual fee of ₹500. There is no fee if the user spends more than ₹50,000 in a year.

**Business model**

- Different ways to collect payments including gateways (web or mobile), QR code based and subscription payment solutions.

**Similar solutions**

- PayPal
- Vanilla
- OneCard
- MobilePay
- MobileKwik
- Razorpay
- Grameen Koota
- Bpay
- MicroEnsure
- BOUGHT2PAY
Paytm Impact

**Quantitative achievements**

- Over 7 million online merchants sell through Paytm and 850,000 Offline merchants accept it.
- Around 260 million people across India have Paytm mobile wallet accounts who make 5 million transactions daily.
- 40 million Savings customers and other 60 million customers are expected to join the next year (as of March 2019).
- As of August 2018, Paytm is valued at $10 bn.

**Qualitative achievements**

- Expanded to Canada and has 100,000 Canadian customers as of February 2018.
- Service approved by the Reserve Bank of India.
- The company claims they are the most trusted consumer payments brand in India.
- Its partners include Airtel, Vodafone, TataSky and BSNL.

*Source: McKinsey Panorama*
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- Global examples on FinTech ecosystem enablers
- Profiles of Global FinTech players
- Demographic group profiles and pain points
- Use cases for FinTechs in Nigeria
- Profiles of key FinTech players in Nigeria
- Impact of FinTech
- Enablers
- Additional recommendations
- Recommendations for EFInA
Ahmed – BOP segment
36 years, Married, 3 children

- Subsistence farmer living in Jos, Nigeria
- Cultivates different crops throughout the year – including tomatoes, onions, potatoes, maize and yam for personal consumption and commercial sales
- Primary school education, can read and write basic English and Hausa

Income $<N200K p.a.

Tech knowledge Low

Devices 

Lifestyle overview
- Inherited 2 acres of land from parents, and uses it for farming activities
- Lives in a mud house, with thatched roof
- Wife sells firewood, and uses grinding machine in the market to support family
- Spends most of his 'non-farming' time listening to the radio – enjoys listening to the governor, talking about agriculture. He also enjoys visiting his relatives

Financial goals
- Farm expansion to increase yield using farm inputs such as chemicals, equipment and seeds
- Improve the quality of his house – change roofing sheets, from thatch to zinc
- Send his children to good affordable schools

Current banking
- Uses solely cash for his personal and business transactions
- Has no bank accounts – uses brother's account occasionally, when he needs to send or receive money

Needs
- Education on financial literacy
- Access to credit facilities for his farm

SOURCE: Customer interviews (n=215), team analysis
Deep dive – Ahmed’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounts</strong></td>
<td>There are no banks in the village. All the banks are in the city, which is far from here”</td>
</tr>
<tr>
<td>▪ Long travel distance to and from the bank</td>
<td>My brother always complains about the charges he gets from his bank – he doesn’t understand what they mean</td>
</tr>
<tr>
<td>▪ Low financial literacy, so unaware of financial services options available to him at the bank</td>
<td></td>
</tr>
<tr>
<td>▪ Poor understanding of charges, such as the ATM maintenance charge, and other hidden charges</td>
<td></td>
</tr>
<tr>
<td>▪ Issues are resolved at a slow pace</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Customer interviews (n=215), team analysis
Emeka – Informal mass
42 years, Married, 3 children

- Small scale business owner in the informal trading sector (e.g., sells fabrics and second-hand clothes in markets in Lagos)
- Religious leader in local church
- Looking to make ‘enough’ money to support his family
- Has been operating his kiosk for 20 years

Income: <N 1M p.a.

Tech knowledge: Low

Devices: ✔️

Lifestyle overview
- Trader in Yaba market, Lagos, and lives in a rented two apartment in Akoka, Lagos
- Runs a makeshift shop where he sells secondhand clothes to customers at the market
- Goes for family and religious meetings, frequently in his hometown

Financial goals
- Earn enough money to provide basic necessities for his family, such as food and clothing
- Send his children to good affordable schools

Current banking
- Has a single GTB Bank savings account, that he uses for personal and business transactions
- Makes use of USSD and mobile banking for his business transactions
- Uses a trusted agent close to his house, to send money to his relatives in his hometown

Needs
- Access to credit facilities for:
  - his clothing business expansion, and
  - payment of children’s school fees

SOURCE: Customer interviews (n=215), team analysis
# Deep dive – Emeka’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounts</strong></td>
<td>I don’t understand what all these charges mean, and why I have to pay them</td>
</tr>
<tr>
<td>- Lack of clarity of bank charges including ATM maintenance charge, account charges</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>- Poor security of:</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>- Bank’s mobile app, making it accessible to thieves</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>- Customer’s information, making them prone to scammers</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td><strong>Savings</strong></td>
<td>The bank staff are so rude. If I have my way, I won’t go to the branches again</td>
</tr>
<tr>
<td>- No targeted savings platforms for children tuition, rent</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>- Low interest rates, causing low returns on savings</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td><strong>Loans</strong></td>
<td>Last year, my phone got stolen, and money was transferred from my bank account</td>
</tr>
<tr>
<td>- High collateral requirement for loans</td>
<td>&quot;&quot;</td>
</tr>
<tr>
<td>- High payback interest rates</td>
<td>&quot;&quot;</td>
</tr>
</tbody>
</table>

*SOURCE: Customer interviews (n=215), team analysis*
Nasir – Formal mass
37 year old, married with 2 children

- Administrator at local secondary school in Sabo, Lagos
- Worked in various clerical position for 10 years following his undergraduate education
- Medium knowledge of technology

**Income**
N 1M p.a.

**Tech knowledge**
Medium

**Devices**

---

**Lifestyle overview**
- Works as an office clerk in Sabo, Lagos
- Resides in a rented two bedroom apartment in Ikeja
- Supports family dependents, especially parents

**Financial goals**
- Improve savings culture

**Current banking**
- Uses a single First Bank savings account, for his savings
- Uses cards and mobile banking for bill payments, and other personal transactions
- Uses a trusted agent close to his house, to send money to his parents and other relatives in his hometown

**Needs**
- Education on various savings platforms, to:
  - improve disciplined savings

SOURCE: Customer interviews (n=215), team analysis
# Deep dive – Nasir’s pain points from the financial sector

<table>
<thead>
<tr>
<th>WIP</th>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts</td>
<td>▪ Poor customer experience on mobile banking apps</td>
<td>&quot;Their customer service was so bad, I would have opened a new bank account (in another bank), if I had the time&quot;</td>
</tr>
<tr>
<td></td>
<td>▪ Long queues at bank and long wait time on call centers</td>
<td>&quot;I don’t use my app anymore, because it has refused to work&quot;</td>
</tr>
<tr>
<td></td>
<td>▪ Slow issue resolution time frame</td>
<td></td>
</tr>
<tr>
<td>Savings</td>
<td>▪ Lack of financial discipline to save studiously every month</td>
<td>&quot;I would like to be saving more but sometimes the responsibilities are too much and before you know it, most of the money is gone&quot;</td>
</tr>
<tr>
<td>Loans</td>
<td>▪ High collateral requirement for loans</td>
<td>&quot;I had friends that borrowed from banks, and paid with an arm and a leg, when it was time to pay back&quot;</td>
</tr>
<tr>
<td></td>
<td>▪ High payback interest rates</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Customer interviews (n=215), team analysis
Anita – Middle
32 years, Married, 1 child

- Sales manager at FMCG company based in Lagos
- Lives in Lekki phase 2 in rented a 2 bedroom apartment
- Lives in dual income household where her husband contributes to 80% of domestic expenses
- Focused on savings, with occasional investment

Lifestyle overview
- Sales manager at snacking company in Lekki, Lagos
- Runs a side business as a cosmetics sales agent on Instagram
- Resides in a rented two bedroom apartment in Lekki phase 2
- Anita enjoys spending time with her family

Financial goals
- Improve savings culture
- Send her child to good private schools
- Expand Instagram business and open boutique in Lekki

Current banking
- Has two accounts with Zenith and Access Banks – the Access account is her savings account, while Zenith is a joint account with her husband
- Uses mobile banking to pay for monthly bills and shop online

Needs
- Education on good savings and investment platforms, that offer good interest rates
- Access to credit facilities, to enable her:
  - Grow her side business
  - Purchase a good car

Income <N 5M p.a.

Tech knowledge High

Devices 📱💻📱
# Deep dive – Anita’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounts</strong></td>
<td><strong>I don’t trust the charges I get from the bank. I think most of them are suspicious</strong></td>
</tr>
<tr>
<td>▪ Lack of transparency on bank charges</td>
<td><strong>My RM has never told me about the different products the bank offers so I just use other platforms</strong></td>
</tr>
<tr>
<td>▪ Limited interaction with RM to determine next best product/service to use</td>
<td></td>
</tr>
<tr>
<td><strong>Savings</strong></td>
<td><strong>I use my savings account card for my daily transactions so it does not even feel like a savings account</strong></td>
</tr>
<tr>
<td>▪ Low returns on savings</td>
<td></td>
</tr>
<tr>
<td>▪ Savings account usage similar to current account</td>
<td></td>
</tr>
<tr>
<td><strong>Loans</strong></td>
<td><strong>Loan application is very stressful. They ask for too many documents and the high interest rates are too high</strong></td>
</tr>
<tr>
<td>▪ High interest rate on loans</td>
<td></td>
</tr>
<tr>
<td>▪ Long application process for credit facilities</td>
<td></td>
</tr>
</tbody>
</table>

*SOURCE: Customer interviews (n=215), team analysis*
Wande – Youth
23 years, Single

- Early graduate of University of Ibadan
- Currently completing her NYSC in Calabar
- Has a moderate knowledge of technology
- Limited disposable income

Income <N 1M p.a.

Tech knowledge Medium-High

Devices 🖥📱✅

Lifestyle overview
- Teaching at local primary school in Calabar and lives with fellow NYSC colleagues in dormitories
- Has a side business selling hair products through Whatsapp and Instagram
- Hunts for/ enjoys bonuses, discounted promos, and other freebies

Financial goals
- Develop savings discipline and culture
- Manage and track monthly financial transactions

Current banking
- Has an Access Bank account that she opened during her admission process, for personal transactions
- Also, makes use of USSD and mobile banking for her personal transactions

Needs
- Financial services education on benefits of CASA

SOURCE: Customer interviews (n=215), team analysis
# Deep dive – Julie’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounts</strong></td>
<td>I don’t know why I am charged for SMS, when the transaction detail gets sent to my email</td>
</tr>
<tr>
<td>▪ SMS, intra-bank transfer charges, and also hidden charges</td>
<td>We need to be educated on what ATM maintenance charge means, and why we have to pay it</td>
</tr>
<tr>
<td>▪ Lack of clarity on bank fees and charges e.g. card maintenance fee,</td>
<td></td>
</tr>
<tr>
<td>▪ Slow and unreliable issue resolution</td>
<td></td>
</tr>
<tr>
<td>▪ Daily transaction limit – alternatives/ exemptions for emergencies</td>
<td></td>
</tr>
<tr>
<td><strong>Savings</strong></td>
<td>There are no available platforms savings goals,</td>
</tr>
<tr>
<td>▪ Lack of targeted savings options, for both long term and short term plans</td>
<td>and the interest rates are low</td>
</tr>
<tr>
<td>▪ Low interest rates on savings products</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Customer interviews (n=215), team analysis
Fatima – Affluent
30 years, Married, 1 child

- Middle manager at Oil and gas company in Lagos
- Lives in Lekki phase 1 in a 4 bedroom condo she purchased with her husband
- High level of knowledge in technology – tech savvy

Income >N5M p.a.

Tech knowledge

- Devices

Lifestyle overview
- Young professional, working in the banking sector
- Possesses a significant amount of disposable income, and is more investment oriented
- Lives in Victoria Island – a highbrow residential area in Lagos
- Fatima loves exploring art, with her friends on the weekend

Financial goals
- Diversify investment portfolio (local and international)
- Enroll her child in a private school and save for international college education
- Take family vacation abroad at least once a year

Current banking
- Has multiple accounts with Zenith, GTB, Access and Stanbic Bank
- Her salaried account in with Access account and she uses the other two for savings/ personal transactions
- Predominantly uses cards and mobile banking for 90% of payments including bills
- Uses a variety of FinTech products for savings and investments

Needs
- Access to investment options that match her risk profile within and outside Nigeria that
- Access to banking services abroad including foreign mortgages in the UK or US
- Insurance for various aspects of Fatima’s life including life insurance

SOURCE: Customer interviews (n=215), team analysis
## Deep dive – Fatima’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounts</strong></td>
<td></td>
</tr>
</tbody>
</table>
| ▪ Stressful online shopping and bill payment process             | "I want my online shopping to be seamless. I don’t want to stare at my screen waiting for an OTP."
| ▪ Occasional card failure, in some parts of the world            | "The customers should be able to adjust their daily transaction limit, like I do with my Bank Of America account. Services should suit the customers."
| ▪ Daily transaction limit – should be set by customers           |                                                                        |
| **Savings**                                                     |                                                                        |
| ▪ Stress of paperwork documentation during loan application, and mortgages | "I want to be able to apply for loans, without filling out a lot of paperwork."
| ▪ High payback interest on loans                                |                                                                        |
| **Wealth management**                                           |                                                                        |
| ▪ Limited access to investment options – domestic and international | "I want the news of investment options, both within and outside the country." |

SOURCE: Customer interviews (n=215), team analysis
### Bisi – SME owner

45 years, Married, 4 children

- Mini-market owner in downtown Abia
- Interested in business expansion opportunities
- Works in medium cities, and resides in decent areas of these cities

#### Income

- ~N 12M p.a.

#### Tech knowledge

- Medium

#### Devices

<p>| | |</p>
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<tr>
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</thead>
<tbody>
<tr>
<td>Tablet</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>Laptop</td>
<td></td>
</tr>
</tbody>
</table>

#### Lifestyle overview

- Owns a mini market where she sell food supplies and household items
- Lives in a 3 bedroom family compound with her husband, children and 2 cousins
- Anita loves spending time with family

#### Financial goals

- Expand business to fully-fledged supermarket
- Pay for eldest child’s university education
- Send younger children to good boarding schools
- Uses mobile banking to buy airtime/ data, transfer money and shop online

#### Current banking

- Has two bank accounts – GTB and Access Bank, that she uses for personal and banking transactions, respectively

#### Needs

- Access to credit facilities for business expansion
- Education on various insurance options, as cover for her business
- High interest yielding savings account

**SOURCE:** Customer interviews (n=215), team analysis
# Deep dive – Bisi’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
</table>
| **Accounts**                                                               |  - Inability to access forex with bank  
  - Difficulty with cross border payment with foreign suppliers  
  - Daily transaction limits which inhibit bulk buying  
  - I always exceed the limit on my daily transactions. I don’t know if there’s is a way it can be adjusted  
  - I can’t send money directly to my suppliers so we now have to find other ways to get them their money through Western Union or sometimes through our informal networks |
| **Savings**                                                                |  - Low returns on savings, due to low interest rates  
  - Lower savings rates, so minimal loyalty to banks for savings  
  - The interest rates on my savings is so low. I’ll switch if I see a bank that can give me a higher rate |
| **Loans**                                                                  |  - Tedious loan application process with requirements for collaterals  
  - High interest rates for repayments  
  - I have heard of bad tales from those that took bank loans – from the stress of meeting the requirements, to the pains of paying high interest on the loans, and because of this, I don’t think I will ever take a bank loan |

SOURCE: Customer interviews (n=215), team analysis
Chijioke – Affluent Senior
62 years, Married, 4 children

- Retired CFO of leading accounting firm
- Lives in Ikoyi with wife and gets occasional visits from grandchildren
- Has medium level knowledge of technology
- Financial services product usage driven primarily by convenience

Lifestyle overview
- Wife runs a tailoring shop where she caters to high-end clientele in Lagos and Abuja
- Serves on the board of multiple organizations in Nigeria
- Travels bi-annually to visit children abroad

Financial goals
- **Financial security** for his children
- Send his children to good universities in the country
- Manage and diversify investments locally and abroad

Current banking
- Has multiple bank accounts in Nigeria and abroad. In Nigeria, he has a First Bank account which he uses to pay for his children’s expenses in the UK
- Uses cards for most of his financial transactions and online banking for managing foreign accounts

Needs
- Private banking services that allow him to invest and manage investments abroad including mortgage and property management
- Access to premium credit cards and bespoke services for foreign transactions and travels

Income
> N 20M p.a.

Tech knowledge
- Medium

Devices

SOURCE: Customer interviews (n=215), team analysis
# Deep dive – Chijioke’s pain points from the financial sector

<table>
<thead>
<tr>
<th>Pain points</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounts</strong></td>
<td></td>
</tr>
<tr>
<td>▪ International money transfer between banks challenging with transaction size limits and tedious paper work</td>
<td>“There should be a form of control on accounts, but this control should be set by the customers.”</td>
</tr>
<tr>
<td>▪ Inconvenience caused by non-functional bank app</td>
<td>“I have to go to their office, even after giving them a call, before my issues are resolved.”</td>
</tr>
<tr>
<td>▪ Lack of proactivity from RMs to determine next best product</td>
<td></td>
</tr>
<tr>
<td>▪ Slow response to complaints made through remote channels like phone</td>
<td></td>
</tr>
<tr>
<td><strong>Wealth management</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Absence of management guidance for his investment</td>
<td>“I will like to be able to view all my accounts on one platform.”</td>
</tr>
<tr>
<td>▪ Limited information on investment diversification from bank Limited visibility into investment performance – no single dashboard to track finances and expenses</td>
<td>“I want to have an RM that can present various investment options to me, not me calling them all the time.”</td>
</tr>
</tbody>
</table>

SOURCE: Customer interviews (n=215), team analysis
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Use cases and impact of fintech in Lagos

Profile of Lagos

- Lagos is the commercial, financial and maritime nerve centre of the nation with an energetic start up and tech community.
- State with the highest Internally Generated Revenue in the nation.
- 88% of the population own a digital asset.
- Presence of young professionals with economic power.
- Strong presence of recreation activities.

Use of fintech in Lagos

<table>
<thead>
<tr>
<th>Use</th>
<th>Description</th>
<th>Players</th>
</tr>
</thead>
</table>
| Cash in cash out | • Send and receive money: for example, people are able to send money to family and friends in rural areas through an agent.  
                      • E-wallet service enabling deposit and withdrawals through an app or agent.  
                      | paga, Kudi, GTBank, e-wallets, mobile.                                        |
| Payments         | • Payment of goods and services using USSD and other digital channels to pay for food delivery, Uber, Taxify, airtime and bills.  
                      • Use of app to transfer funds locally and internationally.               | paystack, Flutterwave, OPay, Flutterwave.   |
| Lending          | • Access to credit facilities for individuals.  
                      • Less stringent and faster application process.                         | carbon, migoto, renmoney.                  |
| Saving           | • Budgeting tools and flexible savings products on a single platform mostly used by millennials. | piggyvest, cowrywise.                      |
| Investing        | • Access to local and global stock markets as well as flexible micro investment options on a single platform mostly used by millennials. | edel, ockata, piggyvest.                  |
| Business Services| • APIs, invoicing and payouts for merchants, startups and MSMEs.              | paystack, Flutterwave.                      |

Impact

- Increased financial inclusion.
- Growth of e-commerce.
- Democratisation of investment.
- Increased efficiency and access to loans for MSMEs.

Source: Lagos Business School Digital Financial Service Lab, Team Analysis.

1. Profile of Lagos relative to other regions in Nigeria.
Use cases and impact of fintech in South-West Nigeria

Use of fintech in the South West

<table>
<thead>
<tr>
<th>Use</th>
<th>Description</th>
<th>Players</th>
</tr>
</thead>
</table>
| Cash in cash out     | • Send and receive money: students are able to receive money sent from family through an agent  
                     | • E-wallet service enabling deposit and withdrawals through an app or agent   | paga, OPay, GTBank                           |
| Payments             | • Facilitating P2P transfers between suppliers and farmers                   | OPay, Quickteller                           |
|                      | • Payment for goods, transportation, airtime and bills                     |                                              |
| Access to financing  | • Use of e-wallet to disburse government subsidies to farmers               | cellulant, farmcrowdy, thrive               |
|                      | • Crowdfunding platforms pool funds from investors to fund small scale farmers and provide insurance coverage |                                              |
| Saving               | • Budgeting tools and savings products on a single platform mostly used by women and young people | piggyvest, cowrywise                        |
| Investing            | • Access to local and global stock markets as well as unconventional investment opportunities on a single platform mostly used by millennials | paga, OPay                                 |

Profile of South-West Nigeria

- Economic activities include agriculture and tourism
- The South West is the academic hub of the nation
- 88% of the population own a digital asset
- Presence of young professionals with economic power
- Only about 11% of the unbanked population in Nigeria is in the South West

Impact

- Increased financial inclusion
- Job creation
- Increased access to finance and input for farmers

1. Profile of South-West relative to other regions in Nigeria
2. Excluding Lagos State

Source: Lagos Business School Digital Financial Service Lab; Team analysis
Use cases and impact of fintech in South-East Nigeria

Profile of South East Nigeria¹
- Diverse commercial activity – known for trading and automobile assembly
- Home to one of the most advanced informal apprenticeship and entrepreneurial programs in the world
- Home to N130 bn shoe industry
- Home to Nnewi, the city with the highest number of billionaires in Nigeria
- 87% of the population own a digital asset

Use of fintech in the South-East

<table>
<thead>
<tr>
<th>Use</th>
<th>Description</th>
<th>Players</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash in cash out</td>
<td>Traders are able to deposit funds into and withdraw funds from their account through an agent</td>
<td>Pagé, OPay, GTBank</td>
</tr>
<tr>
<td>Payments</td>
<td>Payment to suppliers and traders using USSD and other digital channels</td>
<td>OPay, Kudi Quickteller</td>
</tr>
<tr>
<td>Access to financing</td>
<td>Access to credit facilities with less stringent requirements in order to lend against turnover for trade</td>
<td>Carbon, Migo, Tenmoney</td>
</tr>
<tr>
<td>Saving</td>
<td>Budgeting tools and savings products on a single platform primarily used by women and young people</td>
<td>Piggyvest, Cowrywise</td>
</tr>
<tr>
<td>Business Services</td>
<td>APIs and invoicing for merchants</td>
<td>Flutterwave</td>
</tr>
</tbody>
</table>

Impact
- Increased financial inclusion
- Democratisation of savings
- Increased efficiency and access to finance for MSMEs

¹. Profile of South East Nigeria relative to other regions in Nigeria
Source: Lagos Business School Digital Financial Service Lab; Forbes Africa; businessamlive.com; Team analysis
Use cases and impact of fintech in South-South Nigeria

Profile of South-South Nigeria

- Crude oil production is the primary economic activity
  - Other economic activities include farming, fishing and mining
  - Export hub of Nigeria
- 86% of the population own a digital asset
- Presence of young professionals with economic power in cities such as Port Harcourt
- Presence of recreation activities

Cash in cash out
- People in remote areas are able to deposit and withdraw funds from their account through an agent

Payments
- Payment using USSD and other digital channels, for example, for goods, transportation, airtime and bills

Access to financing
- Access to credit facilities for individuals, such as miners and artisans
- Less stringent requirements and easy access

Savings
- Budgeting tools and savings products on a single platform predominantly used by women and young people

Investing
- Access to local and global stock markets as well as unconventional investment opportunities on a single platform mostly used by millennials

Business Services
- APIs and invoicing for merchants

Impact

Increased financial inclusion

Democratisation of savings and investment

Increased efficiency and access to loans for MSMEs

Source: Lagos Business School Digital Financial Service Lab, Team Analysis, National Bureau of Statistics

1. Profile of South-South Nigeria relative to other regions in Nigeria
## Use cases and impact of fintech in Northern Nigeria

### Use of fintech in the North

<table>
<thead>
<tr>
<th>Use</th>
<th>Description</th>
<th>Players</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash in cash out</strong></td>
<td>People in remote areas are able to deposit and withdraw funds from their account through an agent</td>
<td>paga, OPay, GTBank</td>
</tr>
<tr>
<td><strong>Payments</strong></td>
<td>Facilitating P2P transfers to pay for equipment, raw materials and agriculture produce</td>
<td>paga, OPay, Kudi, Quickmessenger</td>
</tr>
<tr>
<td><strong>Access to financing</strong></td>
<td>Access to credit facilities with less stringent requirements for individuals; Use of e-wallet to disburse government subsidies to farmers; Crowdfunding platforms pool funds from investors to fund small scale farmers and provide insurance coverage</td>
<td>cellulant, farmcrwdy, thrive, piggyvest, cowrywise</td>
</tr>
<tr>
<td><strong>Saving</strong></td>
<td>Budgeting tools and savings products on a single platform primarily used by women</td>
<td></td>
</tr>
</tbody>
</table>

### Profile of Northern Nigeria

- Agriculture is the primary economic activity; most farmers are subsistence farmers
- Low economic activity and high poverty levels due to insecurity and insurgency
- Lowest primary school enrolment, attendance and completion rates in the country
- Lowest digital penetration in the nation
- Home to 70% of Nigeria’s unbanked population

### Impact

- Increased financial inclusion
- Increased access to finance and input for farmers
- Empowerment of women

---

1. Profile of Northern Nigeria relative to other regions in Nigeria
2. Excluding major cities such as Abuja, Kano and Kaduna

Source: Lagos Business School Digital Financial Service Lab, Multiple Indicator Cluster Survey Nigeria 2016-2017, Team Analysis
OPay company profile

**Company Description**
- OPay is a one-stop mobile-based platform for payment, transportation, food & grocery delivery, and other important services in your everyday life.
- Established in 2018 as a part of Opera
- In 2019, OPay raised $120 million in a Series B round led mainly by Chinese investors

**Value proposition**
- Run heavily-subsidized promotions to edge out other players in Nigeria’s competitive bike-hailing space

**What makes them distinctive**
- First mover advantage of formalizing ‘okada’
- Financial inclusion
- Asset finance – e.g. mobile phone to Oride employees

**Product offering**
- Transportation – okada and marwa
- Wallet – payment, money transfer
- Food delivery – order food from local restaurants near you

**Customer segment**
- Mass customers
- Youth
- SME

**Technology leveraged**
- API
- Big Data/ Advanced Analytics

**Distribution model**
- B2C, P2P

**Channels**
- Mobile
- Agents
- APIs

**Competitors**
- Available via web version
- iOS and Android

SOURCE: OPay website, press articles
OPay achievements

Quantitative achievements

- **~$170M** raised over 2 funding rounds
- **1M+ app downloads** from active users of OPay across the country
- **~2000 ORide drivers** currently operating across the country
- **150,000+ agents** currently signed up on the OPay platform
- **$10M** worth of transaction, carried out per day on the OPay platform

Qualitative achievements

OPay has been able to:

- Drive financial inclusion and support the informal sector with ample opportunity for growth
- Use discounts to attract new users and is now a serious competitor to older startups
- Significantly affect the digital finance in Nigeria, which could lead to Nigeria surpassing Kenya as Africa’s digital payments leader

SOURCE: OPay website; press articles
OPay user experience: Wallet usage

Ride hailing

OPay wallet allows users to do transactions, transfers, food order and ride hailing on a single app.

Discounted cost for OPay payment, to incentivize customers to use the wallets for payment.

Various products/services offered on the OPay platform.

Options showing various payment methods.

Top-up button for your wallet.
Flutterwave company profile

Company Description
- Digital payment infrastructure for Africa allowing convenient and secure payments via any channel
- Allows businesses to make and accept payments anywhere in Africa

Value proposition
- Drives growth for banks and businesses across Africa through digital payment technology

What makes them distinctive
- Single platform that lets merchants sell to customers globally—online, in-person, anywhere in the world

Product and solution offerings
- Virtual card – create and manage virtual cards for online and offline payments
- Moneywave – disburse funds via an API to bank accounts
- Barter – expense management, cards, bills and travel
- Thrivesend – consumer funds transfer in Nigeria
- Invoice – create professional invoices and track payments
- Payment links – create and send payment links to customers without website

Technology leveraged
- API
- Big Data/ Advanced Analytics
- Cloud

Payment channels
- Debit and Credit Cards
- Bank Account
- Mobile Money
- POS
- M-Pesa
- Visa QR
- Bank Transfer
- USSD

Channels
- Cards (routed through the Mastercard payment gateway)
- Bank accounts and mobile money accounts

Competitors

SOURCE: Flutterwave website; press articles
Flutterwave achievements

Quantitative achievements

- $55.4M raised in 10 rounds of funding
- $2.5 bn in payments processed across 100M transactions
- 50 partners in Africa
- 350 currencies in 30 African countries
- 1200+ Developers building on Flutterwave

Qualitative achievements

- Flutterwave is now integrated with Alipay so this gives all Flutterwave merchants access to over 1 billion Alipay users
- Enable payments across the continent, reducing cost of cross border payments

SOURCE: Flutterwave website; press articles
Paga company profile

Company Description

- Paga is a mobile payment company, that enables people to digitally send and receive money, thus creating simple financial access for everyone.
- The company was established in 2009 to leverage the ubiquity of mobile phones to bring financial access to all Africans

Value proposition

- Delivers innovative and universal access to financial services with the goal of reducing the financial excluded population

What makes them distinctive

- Paga leveraged ubiquity of mobile phones to create a cashless payment and money transfer solution for the large unbanked population

Product offering

- Wallet – payment, money transfer
- Merchant services – allows businesses to collect payment from customers
- Remittances – International money transfer into Nigeria
- Mass customers
- Youth
- SME
- Middle

Customer segment

- API
- Big Data/ Advanced Analytics

Technology leveraged

- C2B, P2P

Distribution model

- Available via web version IOS and Android

Channels

- Mobile
- Agents
- USSD

Competitors

- Bankly
- Interswitch
- Kudi

SOURCE: Paga website; press articles
Paga achievements

Quantitative achievements

- **~$32M** raised over 3 rounds
- **~15M** active customers across the country
- **24,000+ agents** currently signed up on the Paga platform
- **$4.6B** worth of transaction and **72M transaction**

Qualitative achievements

Paga has been able to:

- Drive financial inclusion by partnering with the government to form the Shared Agent Network Facility (SANEF) in Nigeria
- Form strategic partnerships with international companies to offer additional services that drives financial inclusion

SOURCE: Paga Website website; press articles, global innovation fund
Paystack company profile

Company Description
- Paystack is a leading online payments provider in Nigeria with a focus on SMEs.
- Paystack began operations in 2015, and operates with a team of 72 between Lagos and San Francisco.

Value proposition
- Easiest channel for Nigerian and African SME merchants to receive electronic payments via any channel.

What makes them distinctive
- Paystack ensures that payment for merchant is fast, seamless and easy, with a 24 hour settlement promise.

Product offering
- Payment and subscription
- Accounting integration
- Payouts and invoicing
- Plugins and libraries
- Paystack dashboards

Customer segment
- Entrepreneurs
- Corporates
- SME
- International companies

Technology leveraged
- API
- Big Data/ Advanced Analytics
- Content management systems
- Data science

Distribution model
- C2B, B2G

Channels
- Bank accounts
- Mobile Money
- Cards (routed through the Mastercard payment gateway)

Competitors

SOURCE: Paystack website; press articles
Paystack achievements

Quantitative achievements

- **~$9.4M** raised over 3 rounds
- **$27.5M** worth of transaction processed monthly
- **25,000+ merchants** currently signed up on the Paystack platform
- **~2.9M** payments collected monthly

Qualitative achievements

Paystack has been able to:
- Drive financial inclusion by allowing businesses without complete registration also receive online payments
- Promote trust in the financial system by including automated fraud monitoring systems on their platforms

1. As at October 2019

SOURCE: Paystack Website, website, press articles
Cellulant company profile

Welcome to OneTap Payments service. Please select a service:
1. AIRTIME
2. Prepaid Electricity
3. DSTV
4. TELONE

Company Description
- Cellulant is a company that provides a digital payment platform to consumers, retailers, merchants, banks, mobile network operators, and governments.
- Established in 2014, it offers consumer payments, payment collection, digital banking, digital financial empowerment, and other services.

Value proposition
- Cellulant is building a financial inclusion ecosystem leveraging niche markets around government subsidies.

What makes them distinctive
- Cellulant has been able to merge fintech and agriculture services on one platform.

Product offering
- AgriKore – connects stakeholders and service providers to farmers and the unbanked
- Tingg – cashless payment solution that enables easy, convenient payments to merchants

Customer segment
- Retailers
- Mass consumers
- Merchants
- Government

Technology leveraged
- API

Distribution model
- C2B, G2C

Channels
- Mobile
- Agents
- USSD
- Available via web version IOS and Android

Competitors
- Interswitch
- Kora
- Paystack

SOURCE: Cellulant website; press articles
Cellulant achievements

Quantitative achievements

- ~$54.5M raised over 2 rounds
- Presence in 12 Sub Saharan Countries
- 4M+ farmers benefit every year from subsidy program
- $1B worth of agro input processed yearly

Qualitative achievements

Cellulant has been able to:

- Drive economic growth in Nigeria, by providing job opportunities within the agriculture sector for Nigerian youths
- Drive financial inclusion through its growth Enhancement Support (GES) Scheme. The Nigerian government was able to register 14.5 million farmers through the scheme

SOURCE: Cellulant Website website; press articles
## Carbon company profile

### Company Description
- Carbon is a digital financial services platform that specializes in consumer lending.
- Carbon empowers individuals by providing them access to credit, simple payments solutions, high-yield investment opportunities and easy-to-use tools for personal financial management.

### Value proposition
- Carbon is simplifying consumer lending by using a specialized platform that enables quick access to financial products.

### Product offering
- **Loans** - up to N1M, no collateral, no guarantor
- **Payments** - easy payments to 500+ billers
- **Investments** - up to 15.5% interest with N50k – N10M investment

### Technology leveraged
- API
- Analytics and Business Intelligence
- Content management systems

### Customer segment
- Individuals
- Corporates
- SME

### Distribution model
- C2B, B2C

### Channels
- Web
- Mobile Applications

### Competitors
- ZEDVANCE
- Lydia
- AELLA CREDIT

SOURCE: Carbon website; press articles
Carbon achievements

Quantitative achievements

- ~$10.8M raised in total funding
- $35.6Mn Loan amount disbursed
- ~480k+ number of loans disbursed
- $8.45Mn Bill payments value
- ~547k+ bill payments volume

SOURCE: Carbon Website website; press articles

Qualitative achievements

Carbon has been able to:

- Drive financial inclusion by simplifying the credit process to make loans available for the retail segment in only 5 minutes
- Partner with credit bureaus to make credit checks accessible for everyone
PiggyVest company profile

**Company Description**
- PiggyVest is the first online “Savings & Investment” app in West Africa. It first launched as in January 2016 as a savings-only platform.
- In 2019, PiggyVest then began to offer direct investments opportunities to users in addition to savings.

**Value proposition**
- PiggyVest is on a mission to give everyone the power to better manage & grow their own finances

**What makes them distinctive**
- Making investments easy for customers by providing opportunity to invest tiny & affordable chunks and still enjoy the same return rates in amazing opportunities.

**Product offering**
- Savings at attractive interest rates
- Investment opportunities
- Health insurance

**Customer segment**
- Individuals
- Corporates
- SME
- Youths

**Technology leveraged**
- API
- Google Analytics
- Google Tag manager
- G Suite

**Channels**
- Web
- Mobile Applications

**Competitors**

SOURCE: Piggyvest website; press articles
PiggyVest achievements

Quantitative achievements

- ~$1.2M funding raised over 2 rounds
- ~2.8M securely saved every month
- 350,000+ Users currently signed up on the PiggVest platform
- 100,000+ downloads of mobile application on play store

Qualitative achievements

PiggVest has been able to:

- Increase savings rate in the country by providing innovative ways for people to save
- Partner with health insurers to provide affordable health insurance to young Nigerians

SOURCE: Piggyvest Website; website; press articles
# Renmoney company profile

## Company Description
- Renmoney is a consumer finance organization that started in 2012 with an expertise in the provision of simple money solutions.
- Renmoney provides loans that are flexible and spread over 12 months, without requiring collateral or guarantors.

## Value proposition
- Renmoney has a focus on the unmet consumer financial needs of the ordinary Nigerian consumer, with more emphasis on its unsecured loan product.

## What makes them distinctive
- They leverage both traditional, digital and alternate media platforms to consistently address the unmet demand of customer finance in Nigeria.

## Product offering
- Loans: Borrow up to N6m
- Investment opportunities with yields of up to 13% p.a
- Target savings

## Customer segment
- Individuals
- Corporates
- SME
- Youths

## Technology leveraged
- API
- Cloud technology

## Channels
- Web
- Branch Network
- Agents
- Contact centers

## Competitors
- mkobo
- Lidya
- ONEFi

SOURCE: Renmoney website; press articles
RenMoney achievements

Quantitative achievements

- ~$470M raised in fixed deposit inflows
- ~$140M disbursed as loans to customers
- 200,000+ Loans provided to individuals and small business in Nigeria
- 140,000+ downloads customers on renmoney platform

Qualitative achievements

Renmoney has been able to:

- Increase financial inclusion by providing easily accessible consumer finance lending to the financial excluded Nigerians

SOURCE: Renmoney Website website; press articles
# Migo company profile

**Company Description**

- Migo is a cloud-based platform that enables companies to offer credit to their customers, augmenting traditional bank and payment card infrastructure.
- Companies integrate Migo in their apps and Migo underwrites customers to provide them with a digital account and credit line.

**Value proposition**

- Low interest rate loans to consumers with a swift application process and flexible tenure with no documentation required
- Migo is reinventing the way people access and use credit

**Product offering**

- Direct consumer loans
- Indirect loans; loans to companies customers
- Credit scoring

**Customer segment**

- Individuals
- Corporates
- SME

**Technology leveraged**

- API
- Cloud technology
- Machine learning

**Channels**

- Web
- Mobile application

**What makes them distinctive**

- Migo is reinventing the way people access and use credit

**Competitors**

- RenMoney
- carbon
- ONEFi

SOURCE: Migo website; press articles
Migo achievements

Quantitative achievements

- ~$20M funding raised in one round
- ~$100M disbursed as loans to customers
- 3M + Loans provided to individuals and small business in Nigeria
- 1M+ customers have been offered loans on the migo platform

SOURCE: Migo website; press articles

Qualitative achievements

Migo has been able to:

- Drive commerce around the world by injecting liquidity into the last-mile retail sector
Interswitch company profile

Company Description
- Interswitch is an Africa-focused integrated digital payments and commerce company that facilitates the electronic circulation of money.
- The company started operations in 2002 as a transaction switching and electronic payments processing company that builds and manages payment infrastructure.

Value proposition
- Interswitch helps customers reduce costs, increase revenues, tighten security, expand product offerings, and improve service levels on technology.
- First mover advantage of disrupting the traditional cash-based payments value chain in Nigeria by introducing electronic payments processing and switching services.

Product offering
- Payment and subscription
- Revenue collection
- Fraud management system

Customer segment
- Individuals
- Corporates
- SME

Technology leveraged
- API
- Big Data/ Advanced Analytics
- Content management systems
- Data science

Distribution model
- C2B, B2C,

Channels
- Bank accounts
- Mobile Money
- Cards
- Agent network

Competitors
- paga
- Paystack
- Flutterwave

SOURCE: Interswitch website; press articles
Interswitch achievements

Quantitative achievements

- ~$1Bn company valuation
- Operates in 23 African countries
- 20,000+ agents currently signed up on the interswitch platform
- $4.6Bn worth of transactions monthly processed across 42M transactions

Qualitative achievements

Interswitch has been able to:

- Drive financial inclusion by investing in agent networks to bridge the gap between the banked and unbanked
- Increase access to financial services by providing agent network in 29 out of 36 states in Nigeria

SOURCE: Interswitch website; press articles
Contents

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▪ Approach & methodology
▪ Global examples on FinTech ecosystem enablers
▪ Profiles of Global FinTech players
▪ Demographic group profiles and pain points
▪ Use cases for FinTechs in Nigeria
▪ Profiles of key FinTech players in Nigeria
▪ Impact of FinTech
▪ Enablers
▪ Additional recommendations
▪ Recommendations for EFInA
FinTechs have made significant progress on pricing, access and innovation but there are still gaps on education and on accounts and insurance.
FinTechs tend to be up to 50%-80% cheaper than banks on transaction fees and offer 2-3X traditional interest rate on savings

<table>
<thead>
<tr>
<th>Product</th>
<th>Traditional Players</th>
<th>FinTech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments</td>
<td>N10-N50 transfer fees</td>
<td>N10 transfer fees</td>
</tr>
<tr>
<td></td>
<td>Bill payments at N100</td>
<td>Bill payments at N0</td>
</tr>
<tr>
<td></td>
<td>No charge for Airtime</td>
<td>Cashback upon airtime recharge</td>
</tr>
<tr>
<td>Savings</td>
<td>4%-5% interest rate p.a.</td>
<td>10%-15% interest rate p.a.</td>
</tr>
<tr>
<td>Accounts</td>
<td>N50 quarterly card maintenance fee on savings accounts</td>
<td>No card maintenance fee</td>
</tr>
</tbody>
</table>

There are still opportunities for FinTech to improve pricing particularly in lending:

- Current lending APRs range between 50% to 360% vs 16% to 30% for traditional players largely driven by FinTech high cost of funds & risk profile of the underserved
- Lack of any Islamic finance product excludes a segment of the population operating on Islamic principles

SOURCE: Company Website, Press Search
FinTechs have innovated in different product areas across pricing, product and delivery models

<table>
<thead>
<tr>
<th>Innovation Area</th>
<th>Description</th>
<th>Product Areas</th>
<th>Examples</th>
<th>Players</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>Development of new products or changes to existing products that cater to the needs of the financially excluded</td>
<td>Payments</td>
<td>▪ Platforms that offer key use cases for customer across transport, food etc.</td>
<td>paga</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Easy to use stored value wallets</td>
<td>eyowo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Transactions in languages people understand e.g. OPay in Hausa and Eyowo in Yoruba</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lending</td>
<td>▪ Instant, unsecured loans requiring minimal documentation or collateral</td>
<td>carbon</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Automated discipline savings products for middle class youth</td>
<td>branch</td>
</tr>
<tr>
<td>Wealth Management</td>
<td></td>
<td></td>
<td>▪ Access to trade in global stock markets</td>
<td></td>
</tr>
<tr>
<td>Pricing</td>
<td>Development of pricing strategies that allows most income groups to use available products</td>
<td>Insurance</td>
<td>▪ Cheaper insurance fees in monthly payments</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lending</td>
<td>▪ Cashback on early loan repayments</td>
<td>carbon</td>
</tr>
<tr>
<td>Delivery Models</td>
<td>Development of new ways to deliver already existing products in a way that reached previously excluded groups</td>
<td>Lending</td>
<td>▪ Leveraging smartphone distribution to aggregate data points in order to assess risk</td>
<td>carbon</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Digitization of cooperative savings</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Savings</td>
<td>▪ Cash digitization by agents</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Company Website, Press Search
Low female participation in FinTech is driven by under-representation in finance and tech and lack of diversity in VC industry

There are 5 key drivers to increase female participation in FinTech

1. **Increase STEM pipeline**
   - Educating and encouraging young women to pursue careers in STEM by breaking down social barriers and stereotypes.
   - Initiatives include scholarships, conferences to raise awareness, STEM funds/grants, Workplace sponsorship.

2. **Introduce regulatory policies to drive gender diversity**
   - Increasing diversity through regulatory policies (government or self-imposed) will enable companies make conscious decisions to drive gender equality in the workplace.

3. **Increase funding for female driven FinTech**
   - Create more female focused VC funds to drive adoption.
   - Allocate more donor funds/grants to female-run FinTech to drive adoption.

4. **Drive sponsorship and mentorship among women in FinTech**
   - Organize conferences and structured networking events to connect women in FinTech with successful players in the industry.

5. **Increase role modeling and share success stories**
   - Develop online series, webinars etc. where women in FinTech share success stories with up and coming entrepreneurs.
   - Develop partnerships with women enabled businesses to foster collaboration and role modeling.

**Examples**

- **Tech Women mentorship program** for women in collaboration with the U.S. Department of State’s Bureau of Educational and Cultural Affairs.
- **Mastercard Girls4tech program**
- **Exxon Mobil’s Women interest network**
- **Edufun Technik STEM Hub** etc.

- **CBN mandated commercial banks** to appoint 30% women to their boards.

- **The Female Founders Fund**, a ~$30m fund focuses on investing in early stage female led startups.
- **Janngo Capital** – is a female-led venture capital fund focused on African women founders.
- **Alitheia Capital** – launched a gender fund targeting female entrepreneurs.
- **Women in FinTech Global initiative** promotes collaboration between female FinTech leaders and create an unrivalled environment for mentorship.
- **Africa Women in FinTech** conference aims to connect female African entrepreneurs across the continent to foster collaboration and innovation.
- **Innovate finance’s Talent and Skills program** spotlights the in tech industry and inspires young women to pursue careers in FinTech.
- **She Leads Africa** connects women entrepreneurs with market leaders to drive innovation in women-owned businesses.

**SOURCE:** Company websites, team analysis

Impact of FinTech – gender inclusion
Case Study: Pafupi Savings in Malawi developed a savings product designed specifically to meet women’s needs

Malawian women had a huge unmet need with savings

Context
- ~6M out of 7.5M population in Malawi were unbanked in 2014
- Only 27% of rural communities had access to bank accounts
- However, women were the household financial managers and savers, prioritizing how earned money is allocated
- Women began to set-up informal savings club in rural communities to drive saving
- NBS partnered with MicroLead program and Women’s World Banking to understand the needs of rural Malawian women and design a savings account

Impact to date
Reached target rural women, 76% of whom were previously unbanked

NBS created Pafupi Saving accounts with 5 key elements based on women’s needs

Bring bank to local community
- Agents visited rural communities and with mobile phones, opened savings accounts in under 10 minutes

Offer convenience and security
- Recruiting local shopkeepers as fixed bank agents in the community removed cost of transportation to bank and provide security of savings

Help women save regardless of income
- Enabled women to make small deposits and withdrawals at local NBS bank agent and ATM
- No monthly charges and interest accrued on balances

Educate new savers
- Financial education messages tailored to local context, group education sessions conducted financial planning, goal setting etc.

Empower women
- Savings account is first point of access to formal economy for many women
- Savings profile financial security and possibility for access to loans and other bank offerings

Impact of FinTech – gender inclusion

SOURCE: UNCDF MicroLead Partner Case Study Series - Pafupi savings: Expanding Financial Inclusion to Rural Women

>200k
Pafupi accounts by Dec 2018

Strengthened financial education and empowered women with increased financial stability
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Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (1/9)

<table>
<thead>
<tr>
<th>Progress</th>
<th>Current gaps</th>
<th>Opportunities</th>
</tr>
</thead>
</table>
| ▪ Shift to electronic payments through e.g. cashless policy has enabled the growth in areas like online payments as merchants shift to electronic channels | ▪ Frequent policy changes /misalignment  
  ▪ Frequent change in policies & guidelines by regulators  
  ▪ Limited synergies between policies e.g. cashless policy vs additional levies on electronic payments  
  ▪ Delayed implementation of proposed guidelines e.g. proposed tiered PSP licensing is still a circular  
  ▪ Constraining licensing & regulatory regime  
  ▪ A number of restrictive policies e.g. cap on agent banking pricing, limits on USSD transactions  
  ▪ Multiple and sometimes expensive licensing required to carry out several activities e.g. PTSPs  
  ▪ No process/framework in place to update outdated regulations | ▪ CBN to ensure implementation of regulatory sandbox that allows FinTech to develop and test solutions within an enabling environment and support scale through these components:  
  ▪ Setting out specific sandbox criteria  
  ▪ Using a cohort based model for companies to test  
  ▪ Relaxation of specific regulatory requirements  
  ▪ Tailored authorization process of companies that wish to test innovations  
  ▪ Guidance/Case officer for FinTech to support design & implementation of test  
  ▪ Extended sandbox services to other areas such as Insurance  
  ▪ Monitor and update regulations that foster competition, innovation and protection based on sandbox outcomes |

**Regulator - Policies**

- Licensing of Payment Service Providers (PSPs) to operate properly under regulatory guidelines - PSP licensing enabled many players with limited capital to enter the payment processing space
- National Financial Inclusion Strategy (NFIS) has led to the push and growth in agency banking

**SOURCE:** Expert Interviews, Press Search
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (2/9)

**Progress**

- **Regulator - Policies**

**Current gaps**

- Limited regulatory framework for other FinTech areas such as insurance & wealth management
  - Restrictive guidelines in sectors such as Insurance has limited innovation
  - Sectors like wealth management remain unregulated e.g. crowdfunding and digital asset management
  - Unclear implementation guidelines for existing frameworks like micro-pension

- Limited effectiveness and visibility on consumer protection guidelines

**Opportunities**

- Develop innovation friendly guidelines
  - FinTech body/association that interfaces with relevant bodies/stakeholders e.g. NAICOM on behalf of FinTech to ensure guidelines are updated as necessary and per sandbox test period outcomes
  - Review agent banking prices to reflect various market realities/outcomes

- Implementation effective and visible consumer protection guidelines
  - Creation of targeted campaigns that raise awareness of relevant consumer protection policies e.g. visible warning list on investments etc. on the CBN/CPC website and resource bank that provides materials for sharing within personal networks
  - Creation of a financial ombudsman service by CBN that enables easy resolution of financial complaints for customers

**SOURCE:** Expert Interviews, Press Search
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (3/9)

<table>
<thead>
<tr>
<th>Progress</th>
<th>Current gaps</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Regulator-Market Structure &amp; Competition</td>
<td>Limited Sharing of useful Customer Data between FinTech and other ecosystem players e.g. banks, telcos</td>
<td>Data Sharing Framework</td>
</tr>
<tr>
<td>▪ Opening up of critical payment APIs such as NIP and the Mastercard Payment Gateway enabled many payment players like Flutterwave &amp; Paystack to build innovative payment solutions</td>
<td>▪ No standardization of APIs across players</td>
<td>▪ Support for API standardization by relevant stakeholders e.g. CBN, NIBSS</td>
</tr>
<tr>
<td>▪ This payment solutions in turn enabled lending &amp; savings players to easily serve their customers through instant payouts and collections</td>
<td>▪ Difficulty in integrating with players’ APIs seamlessly due to various API standards</td>
<td>▪ Regulation that enables customer ownership of data sharing authorization e.g. through open banking</td>
</tr>
<tr>
<td></td>
<td>▪ No incentives for players to share useful customer data with FinTech</td>
<td>Market opportunity for data aggregator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Opportunity for market player to be data aggregator in which FinTech could plug into to get relevant customer data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ This helps to reduce cost and time to market for FinTech</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opportunity for banks, telcos &amp; FinTech to differentiate based on open APIs and data sharing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Banks, Telcos &amp; FinTech can make their platforms more valuable to customers by allowing customers share their data with other platforms who can build value add services leveraging the data e.g. financial wellness advisory etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ease of obtaining licenses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Unbundling expensive licenses into smaller parts that are more affordable for FinTech e.g. licenses around digital banking, lending, asset management, insurance etc.</td>
</tr>
</tbody>
</table>

SOURCE: Expert Interviews, Press Search
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (4/9)

<table>
<thead>
<tr>
<th>Current gaps</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Lack of widely used Digital ID</strong></td>
<td><strong>Creation of reliable widely used Digital ID</strong></td>
</tr>
<tr>
<td>While there are many different identity systems, there is under penetration of a reliable digital ID e.g. only 40 million accounts are currently linked with BVN (most reliable ID system)</td>
<td>• NIMC to incentivise those in underserved areas to get digital IDs by providing rewards for enrolment or making it a condition for certain services e.g. registering a mobile sim</td>
</tr>
<tr>
<td>There are many different identity systems with various data collection standards making reliability an issue</td>
<td>• Adopt common standards of capturing data across all identity systems e.g. BVN, NIN etc. to ensure reliability in using any of the IDs</td>
</tr>
<tr>
<td><strong>Broadband coverage</strong></td>
<td><strong>Fasttrack broadband coverage &amp; quality</strong></td>
</tr>
<tr>
<td>Limited data affordability. E.g. Data prices of some providers have remained the same for about 3 years</td>
<td>• Allow for shared fibre infrastructure between Telcos and network providers</td>
</tr>
<tr>
<td>Cost to serve of Network providers is high due to cost of laying Fibre cables etc.</td>
<td>• Explore concessions of specific geographies to different providers</td>
</tr>
<tr>
<td>Suboptimal coverage and where there is coverage, quality is often poor</td>
<td>• Provide incentives for Telcos to expand to rural areas</td>
</tr>
<tr>
<td><strong>Inadequate Credit Data Infrastructure</strong></td>
<td>• Reduce cost to serve in undeserved areas for Telcos</td>
</tr>
<tr>
<td>Lack of central credit data repository</td>
<td><strong>Standardization of credit infrastructure through:</strong></td>
</tr>
<tr>
<td>Lack of national asset register to enable asset finance</td>
<td>• Creation of central credit data repository by CBN. E.g. central credit register by the Bank of Ireland</td>
</tr>
<tr>
<td>NIBSS Global Standing Instruction (GSI) still in progress</td>
<td>• Creation of national asset register</td>
</tr>
<tr>
<td></td>
<td>• Implementation of proposed GSI</td>
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</tbody>
</table>

**Progress**

- Mobile phone penetration of 87% of the population i.e. 170 million mobile subscribers leading to democratization of access
- BVN policy created a digital identity that enabled FinTech properly identify users and signup users remotely
- NIP by NIBSS enables online real time payments - significant reach as NIP accounts for 70% of ~ 120 million monthly transactions processed by NIBSS
- Flutterwave, a B2B FinTech was the first company to offer instant settlement to merchants once NIBSS allowed for this

**SOURCE:** Expert Interviews, Press Search
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (5/9)

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</table>
| Regulator Infrastructure | Device Infrastructure  - As at Q3 2018, there were ~53 million smartphone connections, representing a penetration of 36% which is still low  
Shared agent infrastructure is still in infancy  - Not yet been implemented and will only allow for interoperable account opening | Improve device penetration :  - Possible collaboration between major stakeholders e.g. telcos, big tech, FinTech to bulk order low price point phones to further drop prices  
- Enable device financing  
- Enabling secondary market i.e. used phones  
- Reducing taxes and tariffs on phones  
SANEF to fast track implementation of shared agent infrastructure |
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (6/9)

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</table>
| ▪ Google Launchpad Accelerator Programme - Currently in its 4th class, with 4 out of 6 Nigerian startups in its 4th cohort, being FinTech | ▪ Lack of formal avenues for FinTech to exchange information:  
  ▪ No formal avenues for FinTech to navigate regulatory framework of other jurisdictions  
  ▪ No formal cross border avenues to share crucial learnings between local and international FinTech which are necessary for i) FinTech to scale and ii) create impact along certain dimensions e.g. Financial inclusion locally | ▪ CBN to foster collaboration with other regulators and ecosystems e.g the Global Financial Innovation Council in order to:  
  ▪ Encourage skill building and development of local FinTech through teachings via workshops, online courses etc.  
  ▪ Drive knowledge sharing through sharing of experiences and approaches  
  ▪ Expand capacity by combining resources to work on joint projects  
  ▪ Reduce costs and improve efficiency for Nigerian FinTech |
| ▪ Y combinator- 13 out of 28 African startups in the Y combinator program over the last 10 years, have been Nigerian  
  7 out of the 10 African startups in 2017 were Nigerian with >50% being FinTech | ▪ Lack of formal avenues for regulator alliances:  
  ▪ No formal channels for regulators to learn from each other and apply key learnings to local market | ▪ CBN to play potential lead role in regulator innovation network of for e.g. African countries innovation network  
  ▪ To share key learnings from the Nigerian FinTech landscape with other countries  
  ▪ To encourage skill building |
| ▪ Strategic investments between Asian and US investors and Nigerian FinTech | | ▪ Coordination of Exchange Programmes:  
  ▪ Founders, entrepreneurs, managers, developers exchange programmes etc. where they can share experiences & build skills  
  ▪ Particularly programmes with other countries e.g. India, Indonesia that have navigated Financial Inclusion in order to learn and apply key insights |

1. Monetary Authority of Singapore  
2. Dubai Financial Services Authority

SOURCE: Expert Interviews, Press Search
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (7/9)

**Progress**
- Increased inflow of foreign capital in Nigeria, with over $400mn invested in FinTech players over the last 3 years focused on early and growth stage players
- Large ticket investments in 2019 include Interswitch ($200mn), OPay ($170mn) and Palm Pay ($40mn)

**Current gaps**

- **Limited local participation**
  - Limited number of tech focused VCs
  - LPs are mostly foreign (most Nigerian investors have not fully embraced tech investing)
  - Lack of education about the VC asset class

- **Underdeveloped early stage investment ecosystem**
  - Only few angel networks exist
  - Many incubators/accelerators have slowed down

- **Capability Gaps**
  - Many founders have limited work experience
  - A result of this is governance, controls and reporting tend to be suboptimal
  - Support industries like tech law have not taken off

**Opportunities**

- **Introducing incentives** that encourage local investment
  - E.g. Tax benefits/relief on certain amounts invested

- **Education** (e.g. through success stories) on what it takes to invest in FinTech:
  - On the risk/return in this asset class compared to others

- **Fostering** provision of essential services to FinTech through for example:
  - Sponsored capability building workshops on reporting etc.
  - Subsidized legal and other professional services

**SOURCE:** Expert Interviews, Press Search
Despite the progress made in the Nigerian FinTech ecosystem, there are still gaps that stakeholders need to make concerted efforts to address (8/9)

**Progress**

- Private developer institution trainings e.g. Andela, Decagon - The Andela Learning community has supported over 23,500 learners, produced over 12,000 graduates across 17 countries in Africa including Nigeria
- The Lambda school Africa Pilot provides a chance to be hired by a participating company e.g. PayStack, Cowrywise after the programme
- HNG has run 5 batches of internships with a total of 15,000 interns trained since the first batch

**Current gaps**

- Inadequate academic and industry resources to develop sustainable tech talent pipeline:
  - Limited number of internship programmes within FinTech to develop a sustainable talent pipeline
  - Sub standard university curriculum
  - Limited private institutions training. Only a few such as Andela, Decagon

**Opportunities**

**Education**

- **Redesign** tech computer science and other tech related curriculum in universities with focus on relevance for Nigeria’s ecosystem
- Explore **potential partnerships between universities and Tech institutions/training schools to lecture students**
- Development partners to encourage tech visiting scholars at key universities
- Encourage strategic location of Tech/FinTech companies around key universities to create tech talent hub e.g. Bangalore
- Design **alternative degrees** e.g. Associate degrees which are shorter in duration and allows students to start learning on the job faster

**Develop more Industry wide Internship & Apprenticeship programmes**

- **Scale up internship** programmes such as the Lambda school program to involve more FinTech
- Create **Apprenticeships** for capable school leavers who can start to learn on the job quickly

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</tr>
</thead>
</table>
| Talent   | Brain Drain:  
- Due to more attractive opportunities for Tech talent outside of Nigeria | Foster ties between Tech Alumni & Universities  
- Universities to host Tech focused Alumni Events  
- Develop engaging university tech experience for students before they become alumni  
- Connecting students interested in tech and alumni founders/leaders in the tech space for career mentoring with the opportunity for alumni to hire students  
Developer Communities e.g. Devcenter  
- Scale developer communities and use as channel to develop talent pipeline by creating mentoring opportunities and frequent meetups  
- Create smaller niche groups within communities to create specialized tech talent  
Tech training as a market opportunity for CSR by Telcos, Banks etc. |
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- Profiles of Global FinTech players
- Demographic group profiles and pain points
- Use cases for FinTechs in Nigeria
- Profiles of key FinTech players in Nigeria
- Impact of FinTech
- Enablers
- Additional recommendations
- Recommendations for EFInA
There are opportunities to serve the BOP with tailored financial product that could drive increased DFS adoption

<table>
<thead>
<tr>
<th>Micro Insurance</th>
<th>Micro savings</th>
<th>Micro loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Offer insurance products (health, agricultural products etc.) to BOP customers with <strong>flexible premium options</strong> for regular micro installment (N200 – N1000) per month paid daily, weekly/bi-weekly</td>
<td>▪ Develop <strong>unique and tailored value</strong> proposition for savings products</td>
<td>▪ Provide microlending products to customers with little to no prior banking history</td>
</tr>
<tr>
<td></td>
<td>▪ Pay interest based on tiered model – increase interest as wallet balance grows (ranging from 2% - 5%)</td>
<td>▪ Use alternative data sources (e.g. transaction data, community guarantee etc.) to <strong>develop credit scoring in order to assess credit-worthiness</strong> and assign limits</td>
</tr>
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<td></td>
<td></td>
<td>▪ Limit loans to <strong>30-60 days</strong> to reduce chances of default</td>
</tr>
</tbody>
</table>

**Emerging market examples**

- Milliman
- NHIF
- BIMA
- GOXI
- Pafupi Savings
- CEBUANA LHULLIER MICRO INSURANCE
- M-Shwari
- kiva
- NOKash
- Musoni

Source: company website, literature review,
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### There are 3 key areas across which EFInA can support the growth of the ecosystem

<table>
<thead>
<tr>
<th>Areas</th>
<th>Description</th>
<th>Partner Stakeholders</th>
</tr>
</thead>
</table>
| **Sponsor Regulatory Sandbox and innovation office** | - Champion the regulatory sandbox and innovation office:  
  - Sponsor/Fund operations and resourcing of the team  
  - Connect team to global expertise (e.g. through linkages with other regulatory bodies; exchange programs; etc)  
  - Work with stakeholders to encourage sharing of quality APIs  
  - Sponsor annual “99 pain points” hackathon to channel fintech innovation to areas that matter | - Central Bank of Nigeria  
- NIBSS  
- NAICOM  
- FinTechs |
| **Mobilize funding in targeted areas**       | - Co-invest with investors or experienced entrepreneurs in commercially viable ventures in targeted areas (e.g. Female founded businesses; micro-financial services products; regional based businesses; etc)  
- Contribute and mobilize other funding for innovation hackathon (99 pain points) | - Investors  
- Donors/Foundations |
| **Lead advocacy for Financial inclusion**    | - Promote financial inclusion through targeted research, strategic industry forums and opportunity identification for Donors/Foundations  
- Create awareness on priorities (e.g. consumer protection, gender inclusion, etc) by launching a “Fintech” consumer guide/rating  
- Establish a Fintech directory to build data on FinTech ecosystem and promote enhanced self-reporting | - Federal competition and consumer protection commission  
- Donors/Foundations  
- FinTechs |