Overview and Lessons Learnt from Global FinTech Landscape and Nigerian FinTech Landscape

EFInA FinTech Report
December 2018
Executive Summary

Over $100B\textsuperscript{1} has been invested in FinTechs globally. ~50% of this was in Digital Banking which is 1 of 4 key FinTech segments. They all leverage 4 key emerging technologies: API\textsuperscript{2}, AI\textsuperscript{3}, DLT\textsuperscript{4} & Biometrics.

4 key success factors for international Fintech companies are: product innovation, strategic partnerships, physical:digital mix & lower barriers to service.

Nigerian FinTech ecosystem comprises of 210-250 FinTechs, 3 stakeholders, 4 enablers and funding partners who have invested over $250m since 2014. Most FinTechs leverage API\textsuperscript{2} technology.

Trends: increasing lending & savings players, bank partnerships, telco competition & more innovation. Gaps: funding, regulation, information, strategic partnerships & corporate governance.

4 ways identified to improve FI\textsuperscript{1} through the FinTech space: more involvement from banks, increasing micro-credit access, enacting effective regulation and more innovative yet simple solutions.

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1. As at 2018Q3  
2. Application Programming Interface  
3. Artificial Intelligence  
4. Distributed Ledger Technology  
Source: BCG Analysis
Overview and Lessons Learnt from Global FinTech Landscape

Nigerian FinTech Landscape
Fintech space has funding of over $100b. Funding in 2015 rose due to lending segment, however in 2016 there was a dip as investors were cautious. The market has since recovered in 2018 due to investments in Payments segment.

The global Fintech space broadly falls under 4 Key Segments and 9 Key clusters. The Largest Cluster and segment by investment is Digital Retail Payments, and Digital Banking respectively.

The 4 Key emerging technologies identified as: Application Programming Interface (API), Artificial Intelligence (AI), Distributed Ledger technology, & Biometrics.

The 4 key success factors for international Fintech companies are: Product Innovation, Strategic partnerships, Physical:Digital Mix & Lower barriers to service.

Key takeaways
Fintech market funding of ~$100B is largely centered around Digital banking leveraging four key technologies

**FinTech market segments**

- **Digital Banking**: 48B
- **Corporate & SME payments**: 11B
- **Wealth mgmt.**: 5B
- **Other**: 1B

**Total**: ~100B

**Comments**

- Largest market theme is Digital Banking
- Most important technological segment is Artificial Intelligence
- Most relevant segments for financial inclusion are in market segment Digital Banking and technological segments Distributed Ledgers, APIs and Biometrics

*Note: Scale only indicative showing relations. Numbers represent cumulative funding/ICO funding. Other includes segments such as Technology, Support, Wholesale Trading. Source: BCG FinTech Control Tower*
Global FinTech investments in the half year of 2018 rebound from a 3-years decline

Note: Includes FinTechs founded from 2000-2018 and funded from 2013-2018
Source: BCG Fintech Control Tower

• Big boom in funding in 2015 due to investments in lending segment

• Markets became more cautious and investors questioned room for additional players leading to dip in 2017

• However the market has picked up in 2018 due to funding in Payments segment in APAC giants such as Ant Financial
There are 9 key clusters in FinTech market segments...

<table>
<thead>
<tr>
<th>Segment</th>
<th>Cluster</th>
<th>Cumulative Equity Funding</th>
<th>2017–2018 H1 CAGR</th>
<th>Relevant Technology</th>
<th>Key Drivers</th>
<th>Key Players</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Banking</td>
<td>Digital retail payments</td>
<td>$30B</td>
<td>81%</td>
<td>DLT</td>
<td>New payments categories such as P2P, mobile wallets, cashless society</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Payments infrastructure</td>
<td>$2.1B</td>
<td>31%</td>
<td>DLT</td>
<td>Use of cryptocurrencies to enable next gen. P2P and B2C payments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lending</td>
<td>$25.7B</td>
<td>-53%</td>
<td>DLT</td>
<td>Leveraging digital connectivity and analysis to offer alternative options for credit</td>
<td></td>
</tr>
<tr>
<td>Corporate and SME Payments</td>
<td>SME payments</td>
<td>$0.9B</td>
<td>24%</td>
<td>API/DLT</td>
<td>Tech-enabled solutions for underserved market</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corporate payments</td>
<td>$2.2B</td>
<td>25%</td>
<td>DLT</td>
<td>Digitization of manual processes, cost and operational efficiency</td>
<td></td>
</tr>
<tr>
<td>InsurTech</td>
<td>Life and personal insurance</td>
<td>$0.4B</td>
<td>269%</td>
<td>AI/DLT</td>
<td>Digitization of manual processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Claims and benefit handling</td>
<td>$0.2B</td>
<td>30%</td>
<td>AI/DLT</td>
<td>Digitization of manual processes</td>
<td></td>
</tr>
<tr>
<td>Digital Wealth Mgmt.</td>
<td>Digital investment mgmt.</td>
<td>$3.4B</td>
<td>36%</td>
<td>API</td>
<td>Generational wealth transfer to tech-enabled clients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Retail trading platforms</td>
<td>£2.0B</td>
<td>33%</td>
<td>API</td>
<td>Democratization of capital markets and trading activities</td>
<td></td>
</tr>
</tbody>
</table>

1. Cumulative equity funding 2000–2018 H1 does not include M&A and IPO funding  
2. CAGR displayed is Compound Annual Growth Rate for 2017–2018 H1  
Source: BCG FinTech Control Tower
... with 4 main technologies (DLT, AI, APIs and Biometrics)

Number of firms/ Cumulative equity and funding, 2000-2ICO1 018 H1

Top use cases

Example FinTechs leveraging the tech

1. Includes ICO figures for 2014–2018 H1
Source: BCG FinTech Control Tower
Global case studies reveal distinct key success factors tailored to local context

- ezuza: Partners with local convenience stores for easy funding of e-wallet
- humaniq: Leverages all advanced technology to provide easy access, low cost financial services
- paytm: Offers robust financial service ecosystem for the unbanked
- avante: Credit to unbanked and micro entrepreneurs
- Mobile financial services to the unbanked
- GOJEK: Flexible mobile payment solution

- Micro-loans to unbanked individuals who can not obtain a credit score
- Leverages Telco coverage to provide financial services

See details on next slide

Source: BCG Analysis
Four key success factors identified throughout all case studies

Leverage Strategic Partnerships
- Key Distributor Partners
- Client Access Partners
- Funding Partners

Product/Technology Innovation
- Risk Management ability

Physical: Digital Mix

Lower Barriers To Service
- User Interface

Source: BCG Analysis
Overview and Lessons Learnt from Global FinTech Landscape

Nigerian FinTech Landscape
Key Messages

- The FinTech ecosystem comprises of FinTechs, three stakeholders, four enablers and funding partners. Between 2014 and 2018, equity & grant financing by funding partners grew by 53% to $87M.

- 80% of the FinTech market is made up of Digital Retail Payment (36%), Lending (25%) and Payment Infrastructure (19%) firms.

- API is the dominant technology in the market.

- Current market trends include: increases in lending and savings players, partnerships with banks, competition from Telcos, and improving technological innovation.

- Key gaps exist in: access to funding, appropriate regulation, adequate information, establishing strategic partnerships, corporate governance limitations and intellectual property rights.

- 4 ways identified to improve FI1 through the FinTech space: More involvement from banks, increasing micro-credit access, enacting effective regulation and more innovative yet simple solutions.

1. Financial inclusion
Source: BCG Analysis
In order to serve the consumer, **Nigerian FinTech ecosystem** is shaped by: three stakeholders, three enablers and funders

**FinTech Ecosystem Framework**

- **Investors**
- **Technology**
- **Incubators**

**Stakeholders**
- Government
- Univ. Research
- Telcos
- Banks
- Consumers

**Enablers**
- Incubators
- Technology
- Investors

Source: BCG Analysis
Cumulative FinTech funding has surpassed $250m in Nigeria over the last 5 years

Key drivers of growth

- Financial Inclusion drive with the financial inclusion target set by CBN of 80% by 2020
- Increasing smartphone penetration, with smartphone penetration rate of 20%\(^1\)
- Surge in e-commerce activity in Nigeria
- Government intervention establishing innovation hubs across Nigeria
- Regulatory impact from the introduction of the Payment Services initiative

Total Fintech investments in Nigeria, USDm

1. Statista
   Source: Techpointng, BCG analysis
Cellulant absorbed ~20% of total funding in Nigeria in 2018, while API is the dominant technology among top 8 funded FinTech firms

<table>
<thead>
<tr>
<th>Top 8 funded firms</th>
<th>Cluster</th>
<th>Cumulative eq. funding 1</th>
<th>Investor</th>
<th>Technology</th>
<th>Value Proposition</th>
<th>Competitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cellulant</td>
<td>Payment Infrastructure</td>
<td>$47.5M</td>
<td>Rise Fund, Endeavour</td>
<td>API</td>
<td>Digitizes payments for banked and underbanked</td>
<td></td>
</tr>
<tr>
<td>2 Mines</td>
<td>Lending</td>
<td>$13.0M</td>
<td>Singularity investments</td>
<td>AI</td>
<td>Develops credit rating system for financial institutions</td>
<td></td>
</tr>
<tr>
<td>3 Paga</td>
<td>Digital Retail Payments</td>
<td>$10.0M</td>
<td>Global Innovation Fund</td>
<td>API</td>
<td>Delivers innovative and universal access to financial services</td>
<td></td>
</tr>
<tr>
<td>4 Paystack</td>
<td>Payment Infrastructure</td>
<td>$8.0M</td>
<td>Stripe</td>
<td>API</td>
<td>Provides online payment facilities to merchants via APIs</td>
<td></td>
</tr>
<tr>
<td>5 Lidya</td>
<td>Lending</td>
<td>$6.9M</td>
<td>Omyidar network</td>
<td>AI</td>
<td>Enables SMEs through provision of working capital loans</td>
<td></td>
</tr>
<tr>
<td>6 Piggybank.ng</td>
<td>Saving</td>
<td>$1.1M</td>
<td>Leadpath Nigeria</td>
<td>API</td>
<td>Combines discipline and flexibility for individuals to grow savings</td>
<td></td>
</tr>
<tr>
<td>7 Compare</td>
<td>Insurtech</td>
<td>$0.2M</td>
<td>Connecticut's Global VC</td>
<td>API</td>
<td>Provides core part of insurance value chain on one platform</td>
<td></td>
</tr>
<tr>
<td>8 Nvoicio</td>
<td>Lending</td>
<td>$0.1M</td>
<td>MEST</td>
<td>API</td>
<td>Supports SMEs gain access to working capital loans in order</td>
<td></td>
</tr>
</tbody>
</table>

Q3 2018 cumulative equity funding
Source: Techpoint ng, BCG analysis

Applied for payment service bank license
2 types of funding are leveraged by Nigerian FinTechs

**Funding by equity**
- Dominated by international investors
- Invest large sums of money (~$86.7m in 2018¹)
- Target investments at few early traction and growth stage FinTechs

**Funding by grant**
- Dominated by local investors and state governments
- Invest small sums of money (~$0.2m in 2018¹)
- Target investments at proof of concept and early traction FinTechs

Q3 2018 cumulative equity funding
Source: Techpoint ng, BCG analysis
Nigeria is currently home to 210-250 FinTech companies. ~60% address payments and lending clusters

FinTechs by cluster in Nigeria

- Digital Retail Payments: 36%
- Lending: 25%
- Payment Infrastructure: 19%
- Saving: 8%
- Digital Retail Trading: 8%
- Other: 4%

1. Other includes Insurtech, Corporate & SME

Note: See list of 206 identified companies in appendix
Source: BCG Analysis
API is dominant tech. followed by AI, DLT & Biometrics in terms of funding and number of FinTechs in Nigeria

**Number of firms/ Cumulative equity and funding**  
(Based on applicant funding)

- **APIs**
  - Firms: ~98
  - Cumulative equity: ~$56M

- **Artificial intelligence**
  - Firms: ~38
  - Cumulative equity: ~$28M

- **Distributed ledgers**
  - Firms: ~26
  - Cumulative equity: ~$25M

- **Biometrics**
  - Firms: ~21
  - Cumulative equity: ~$18M

**Example FinTechs leveraging the tech**

- **APIs**
  - Farmspay
  - kobopay
  - Bankly

- **Artificial intelligence**
  - Social Lender
  - OneFi

- **Distributed ledgers**
  - OyaPay
  - Kora

- **Biometrics**
  - Eversend
  - Flutterwave

**Top use cases**

- **APIs**
  - Aggregation of financial functionalities
  - Banking platforms
  - Trading infrastructure

- **Artificial intelligence**
  - Personalization
  - Credit scoring
  - Risk assessment

- **Distributed ledgers**
  - Digital retail payments
  - Investment
  - Trading infrastructure

- **Biometrics**
  - Authentication
  - Identity
  - Security

Note: Based on EFInA FinTech Challenge Grant (RFP) Applications  
Source: BCG Analysis
Three types of accelerators play significant role in Nigerian FinTech ecosystem growing startups via strategic partners

<table>
<thead>
<tr>
<th>Focus</th>
<th>Alumni FinTechs</th>
<th>Strategic partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Independent accelerator, e.g. Micraction</td>
<td>@CowryWise, thankocash, wallet.ng, accounteer, RIBY, BuyCoIns, allpro</td>
<td>PAVE Investments, Singularity Ventures, Y Combinator</td>
</tr>
<tr>
<td>Payments, Lending, Cryptocurrency, Payment infrastructure, Trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Corporate accelerator, e.g. Ecobank Fintech Challenge 2018</td>
<td>wallet.ng, naia, Eversend, Kudi, awamo</td>
<td>AKfrique, FMO, ACCION, Venture Lab, FINCONECTA</td>
</tr>
<tr>
<td>Payments, Lending, Security, Cryptocurrency, Big Data, Trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Entrepreneur hub, e.g. Co-Creation Hub Nigeria</td>
<td>Tenderng, Identity, RIBY, oko Analytic, OCTOORA</td>
<td>Google for Startups, VISA, Facebook, Microsoft</td>
</tr>
<tr>
<td>Smart Infrastructure, Governance, Health and Well-Being, Digital Security, Educating</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: BCG Analysis
Universities need to complement efforts of specialized training centers to close widening skills gap

Specialized training centers

- MEST1 offers a 12-month, full time training program in software development, business & communication
- ALC is designed to train both beginners and intermediate android developers with guided mentorship from experts
- TD4PAI² teaches a curriculum on Embedded Systems, Software App Development and Web Development

Universities

Nigerian universities need to support tech entrepreneurs more to close skills gap. Global best practices show universities:

Organize innovation competitions…
…to incentivize creativity and collaboration e.g. University of Cape Town, in conjunction with MTN, offers entrepreneurs scholarships & funding to

Build or partner incubators…
…to train and mentor students e.g. C4DLab incubator at University of Nairobi, Stellenbosch University's Launch Lab in partnership with Nedbank and Attacq

1. Meltwater Entrepreneurial School of Technology  2. Technology Development for Poverty Alleviation Initiative
Source: Include a source for every chart that you use. Separate sources with a semicolon; BCG-related sources go at the end
Five key trends observed in the Nigerian FinTech market

Surge in lending and savings players
- An increase in number of players offering lending and saving solutions
- Recent entries include Kenyan based digital lenders Tala and Branch

Increasing partnerships with banks
- Banks are becoming more receptive to fintechs and partnering with them
  - For example, FCMB is looking to partner a fintech to develop a payroll systems for SMEs

Competition from telco providers
- Recent regulation by CBN regarding payment/remittance players under payment services bank license
  - Anticipation that major telco providers such as MTN might enter the space creating new competition for smaller fintechs

Technological Innovation
- More innovative solutions are being introduced
  - For example, Opera is planning to launch a lending solution (Okash) that will rely mostly on customer data from its other platforms to find target clientele

Widening skills gap
- Market is losing technical specialists and experts to more mature/developed markets thus widening the existing skills gap

Source: Expert Interviews, Desktop Research, BCG analysis
Currently, Nigerian FinTech ecosystem faces six key limitations

**Appropriate Regulation**
Need for a regulatory framework that allows innovation and flexibility specific to Nigerian context

**Access to Funding**
Limited funding sources available especially for start up FinTechs who have to rely on family and friends for initial funding

**Information Inadequacy**
Lack of established database to leverage and provide supplementary information

**Corporate Governance Limitations**
Excessive focus on innovation with little attention paid to management aspect of running a successful company

**Intellectual Property Rights**
Intellectual property law complications to establish rights and patents

**Strategic Partnerships**
Difficulty in forming strategic partnerships especially by early stage FinTechs

Source: Expert Interviews, Desktop Research, BCG analysis
Some key players in Nigerian FinTech market advocate financial inclusion & focus business on solving core issue

“… we are enabling the banks to reach a larger customer base by opening up our API’s and it allows transactions through social media. We’re also enabling people to get loans, because financial inclusion is not just opening an account, but also serving the underbanked.”

“Financial inclusion is what we are doing … Our company and other fintech’s are looking at how best to actually get people credit. A lot of people are less concerned about bank account or insurance. What they really wants is credit/loan to operate business.”

“By providing alternative banking, alternative lending and alternative credit scoring.”

“IFIS subset of our company is focused on financial inclusion. It has about 16,000 agents providing services in places without banks or ATM machines.”

Source: Stakeholder Interviews, BCG analysis
Going forward, FinTechs could support financial inclusion through 4 main axis in Nigeria

**More involvement from Telcos and Banks**
- Telecommunication companies vast coverage and infrastructure could help fintechs scale rapidly
- Banking robust infrastructure to provide Fintechs much needed foundation for solutions

**Increasing micro-credit access**
- Easy access to affordable credit is a key metric of financial inclusion measurement
- Increasing access to the financial excluded will have a positive effect on the market

**Enacting regulation**
- Push from the regulators to support the Fintech ecosystem through introduction of regulation for payment service banks will allow more fintechs emerge
- Enactment of requisite regulation will bring more stability on the business environment

**More innovative but simple solutions**
- Increasing smartphone penetration, forecasted to be 23% by 2019 allows reach to more users
- Innovation around USSD based Fintech solutions is bound to increase usage and thus grow financial inclusion

Source: BCG analysis
Thank You