DIGITAL BANKING & FINANCIAL INCLUSION

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Agenda

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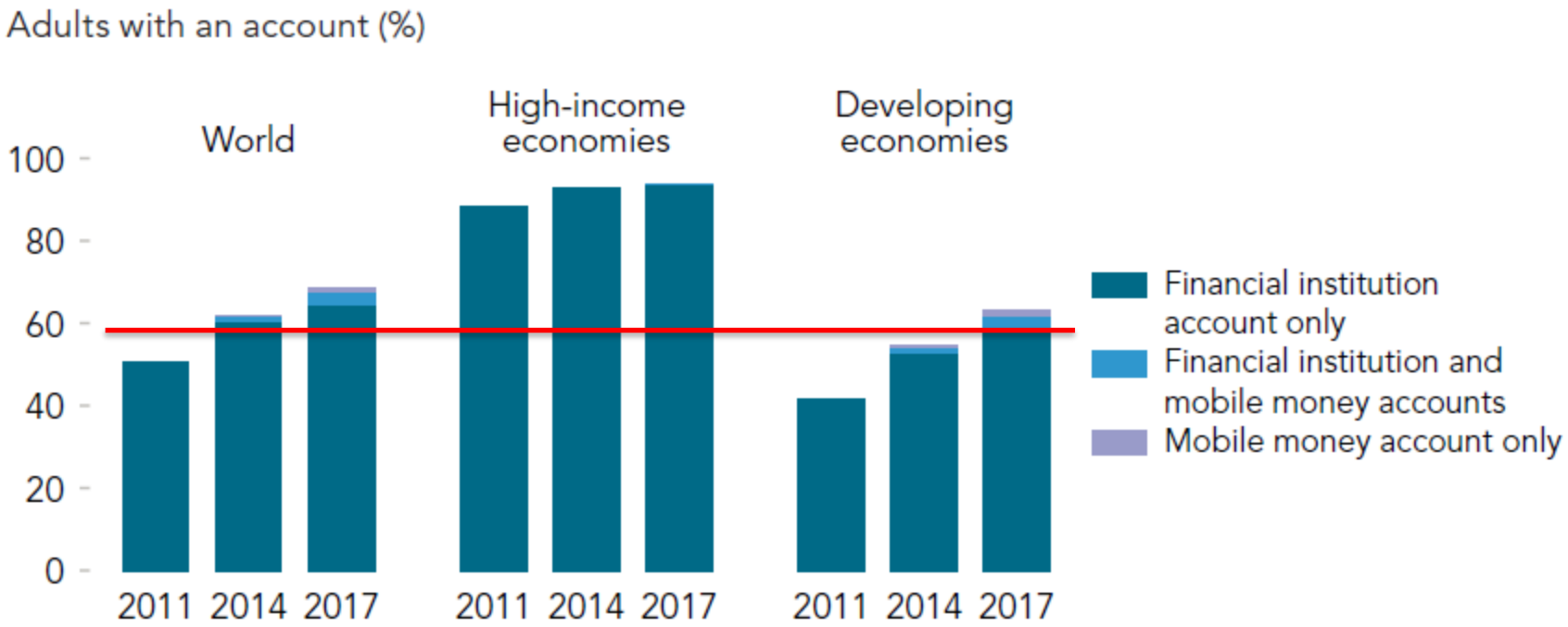
Why Digital Banking & Financial Inclusion?

Financial institution (bank) accounts have fueled the growth in account ownership since 2011, but EMDEs still lag behind



Source: Global Findex database.
Note: No data are available for the share of adults with a mobile money account for 2011.

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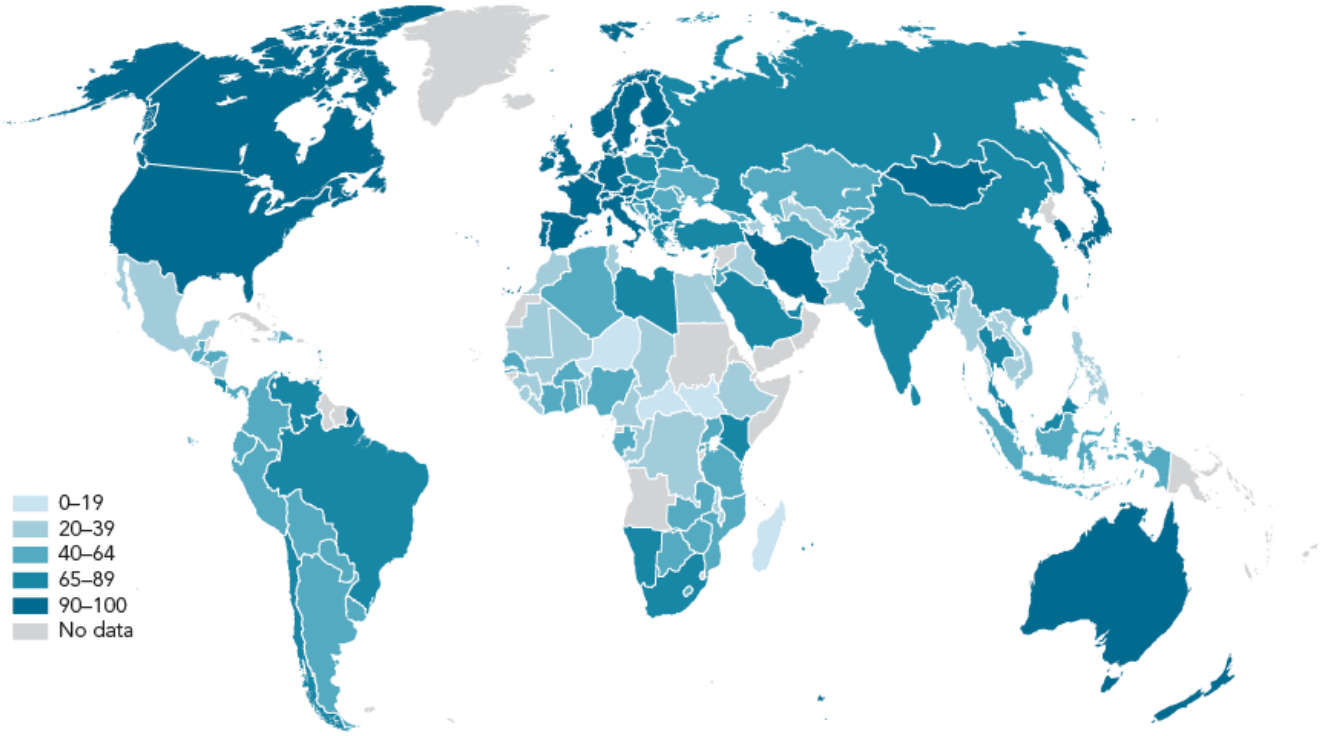
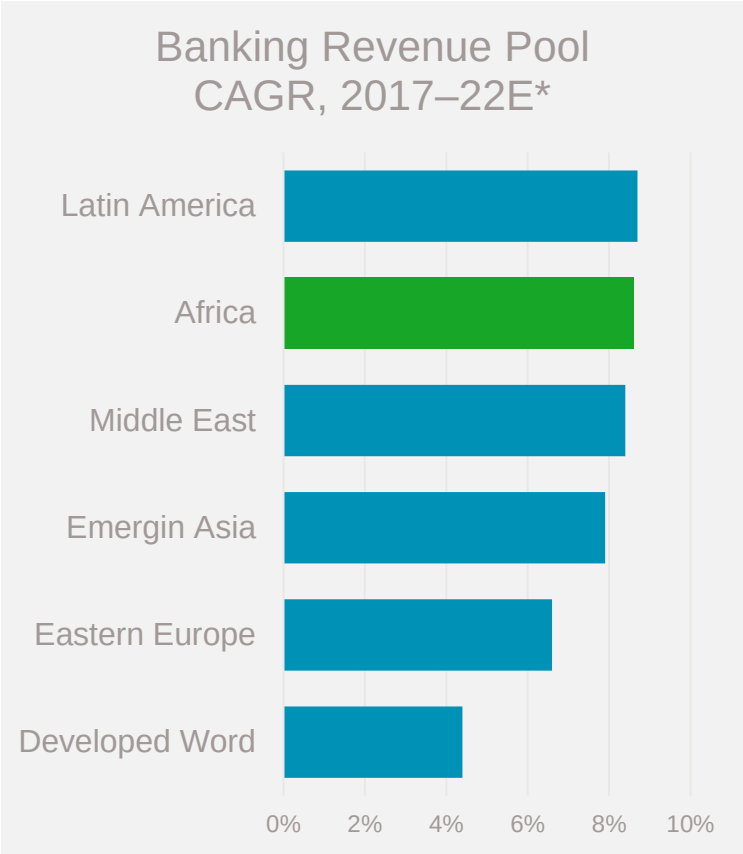
Particularly in Africa

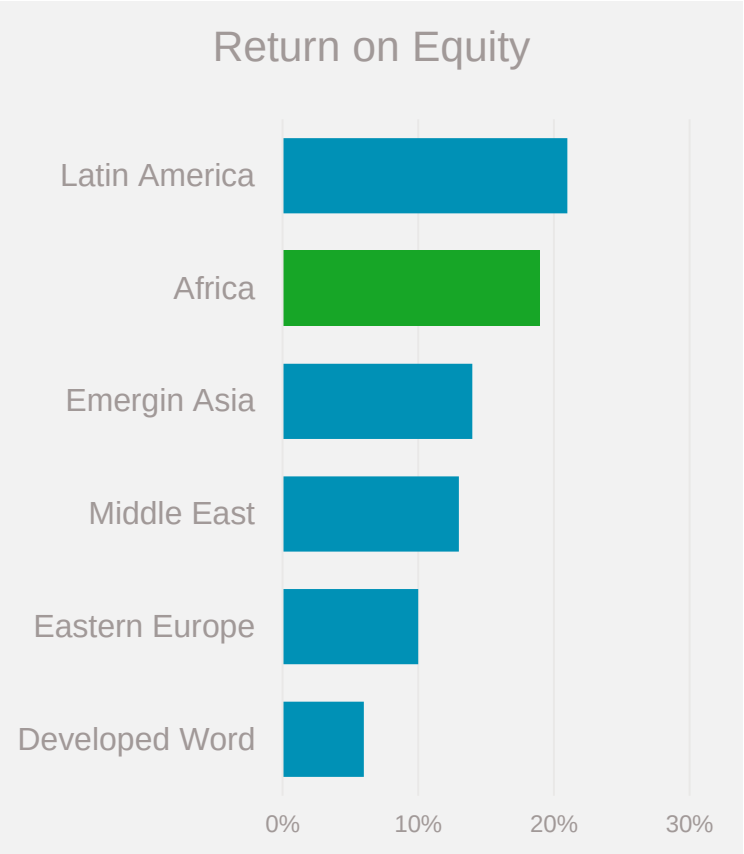
Today, 69 percent of adults around the world have an account
Adults with an account (%), 2017



Source: Global Findex database.

Africa's banking market is 2nd fastest growing & 2nd most profitable

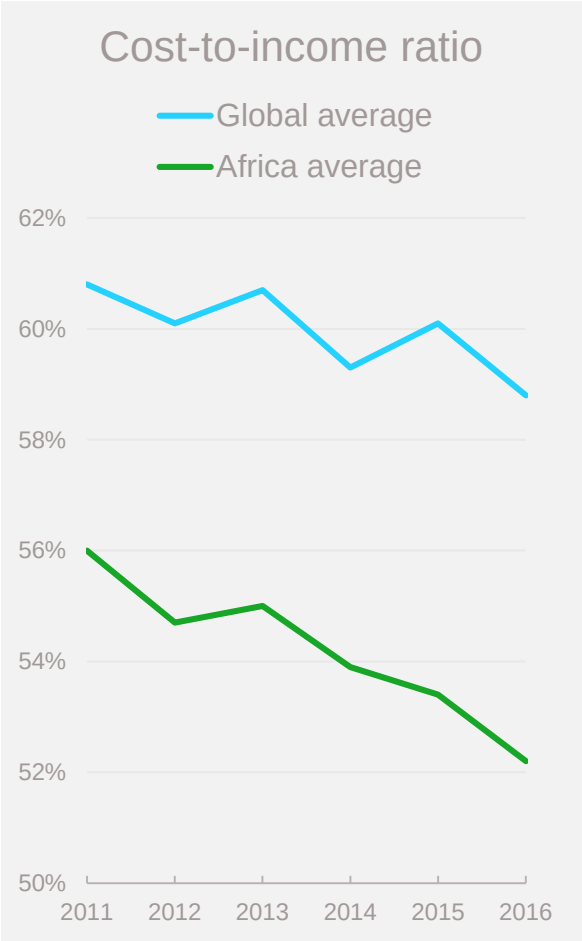


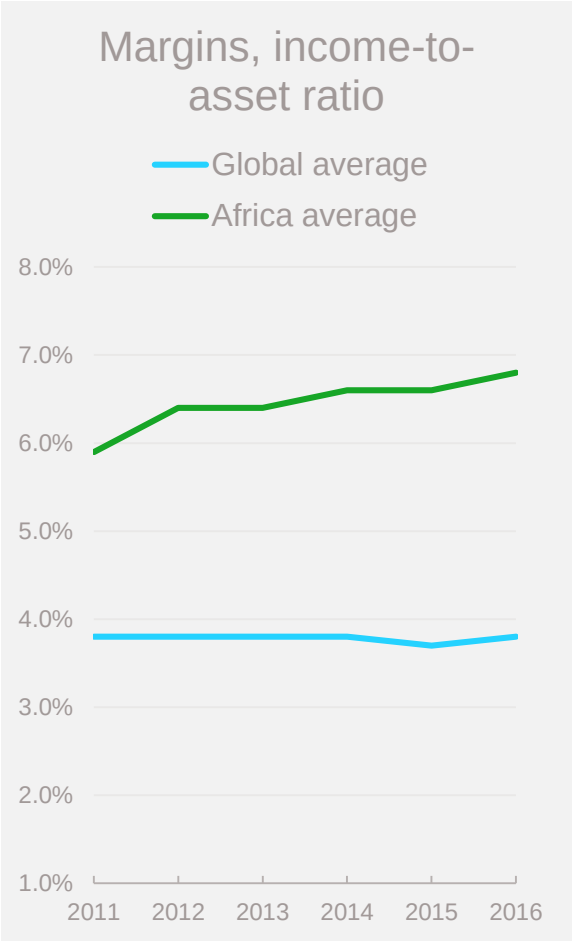


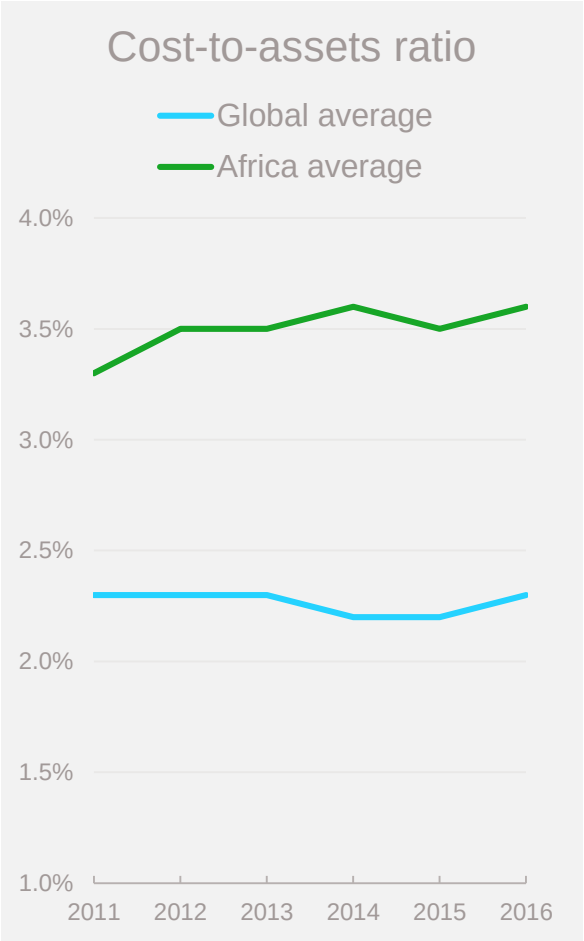
*Client-driven revenues before risk cost; constant 2017 exchange rates;
Source: McKinsey Global Banking Pools

It is also among the least efficient

The decline in Africa's cost-to-income ratio is due to rising margins rather than improvements in cost-to-assets

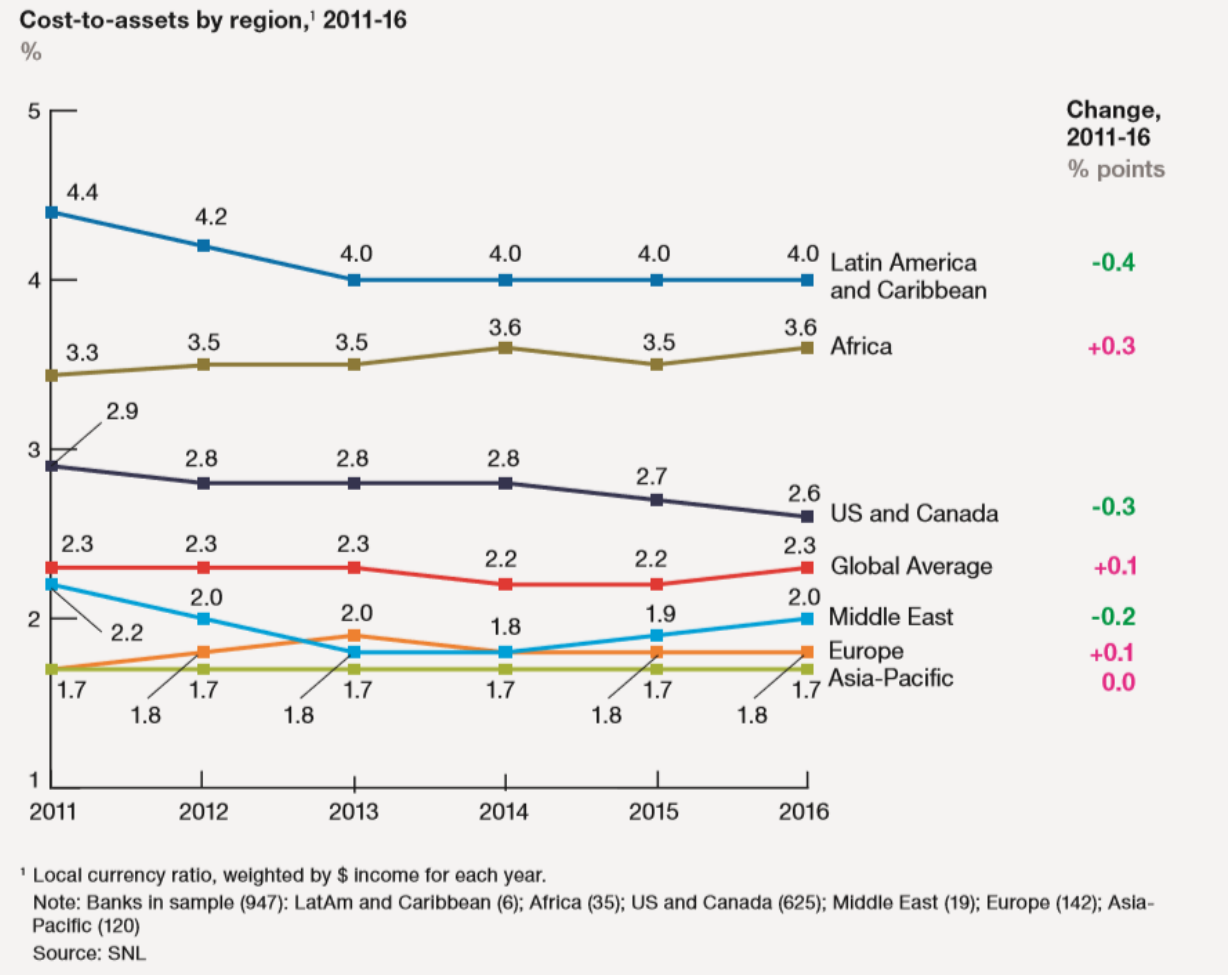






Sources: SNL; McKinsey analysis

In fact, African banks have the second-highest cost-to-asset ratio in the world



[1] Local currency ratio, weighted by $ income for each year.
Note: Banks in sample (947): LatAm and Caribbean (6); Africa (35); US and Canada (625); Middle East (19); Europe (142); Asia-Pacific (120)
Source: SNL

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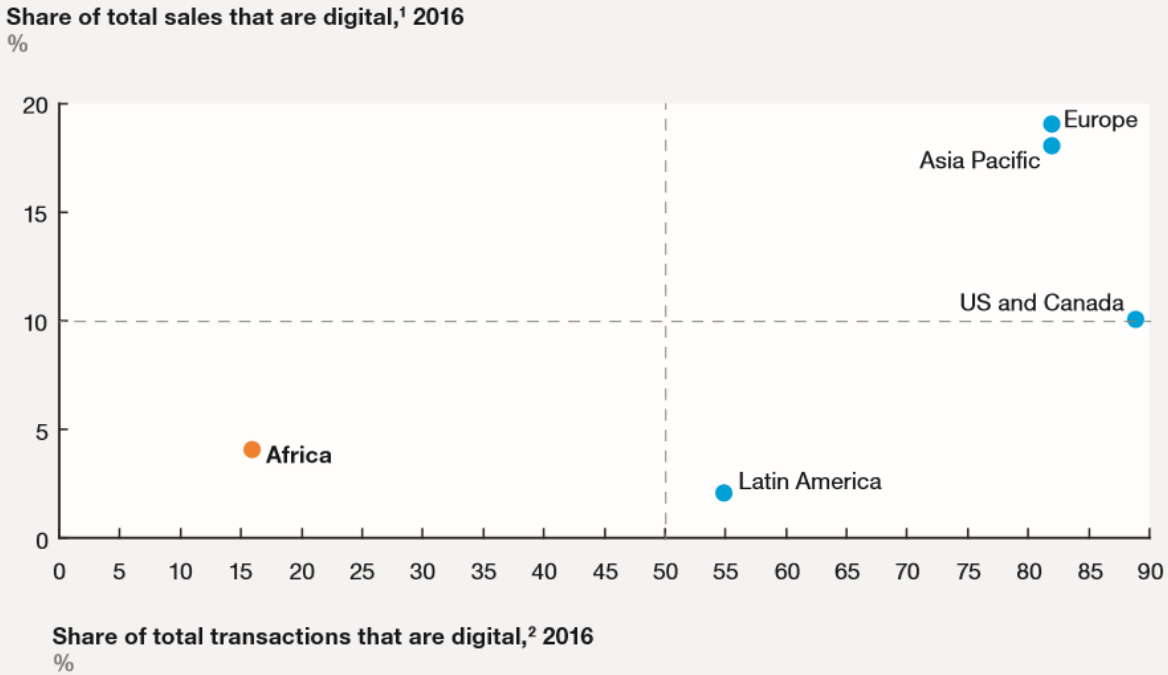
This is due to reliance on manual processes, poor frontline productivity and excessive head-office / back-office costs.



[1] Core products include current accounts, deposit accounts, credit cards, unsecured personal loans, non-life insurance, and mortgages.

[2] Financial transactions include all customer-initiated third-party payments and inter-account transfers, including set up of standing orders and direct debits. Actual subsequent automated transactions are excluded.

Source: Finalta; SNL

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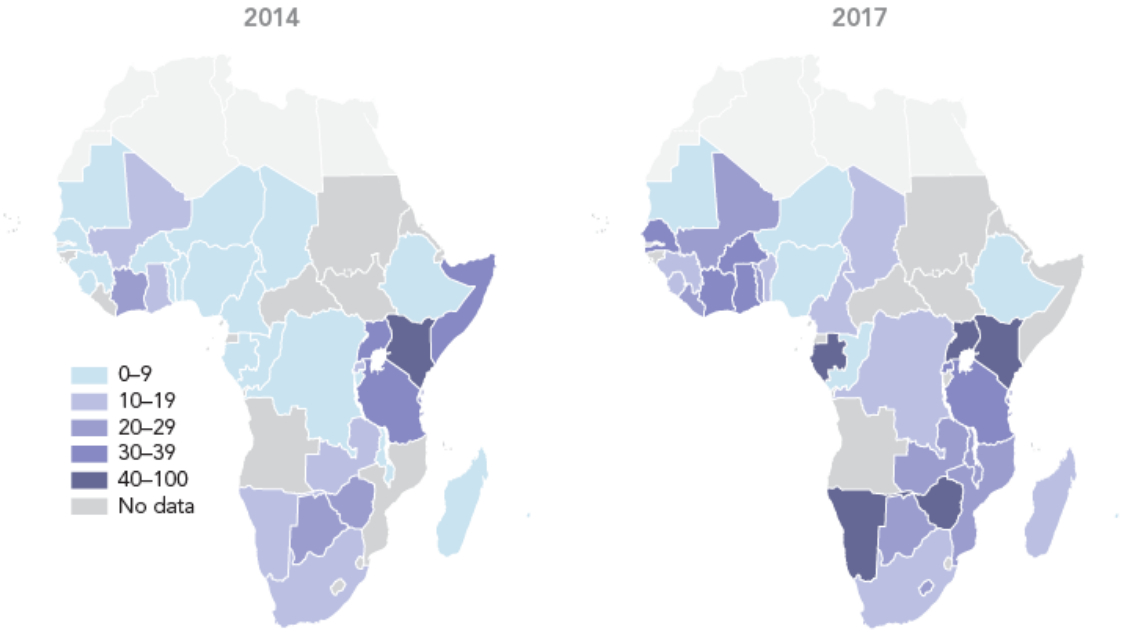
It’s no wonder mobile money is dominating financial inclusion progress on the continent

Mobile money accounts have spread more widely in Sub-Saharan Africa since 2014
Adults with a mobile money account (%)



Source: Global Findex database.
Note: Data are displayed only for economies in Sub-Saharan Africa.

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But digital technology is changing the fundamentals of financial services around the world

- **Digital interfaces** are changing customer engagement

- **Digital production systems** (e.g. cloud computing) **and distribution channels** (apps, marketplaces) are radically reducing barriers to entry

- **Data-driven business models** are changing central aspects of strategy with **"AI" and semi-autonomous systems** opening up new capabilities etc.

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Banking itself is changing as a result

Source: CB Insights; CGAP

Many are guessing its future shape & form.

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“Can digitization make banking more relevant to excluded and underserved customer segments in Africa and elsewhere?”

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Some data suggests it can

$200 billion is the estimated incremental annual revenue generated by banks if they used technology to better serve the financially excluded

(Source: EY, 2018)

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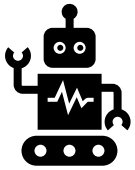
This is due to…

Limited physical infrastructure (branches) reduces fixed costs.

Flexible, scalable, cloud-based IT systems reduce operational costs.

Partnerships and open systems are less costly and time consuming, while offering new capabilities.



Pre-approving credit products using technology removes the cost associated with manual individual credit assessment, also allowing providers to serve more clients.

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Therefore, we have developed a hypothesis:

Digitization of banking leads to operational improvements and efficiency gains…

…that position digital banks to better serve excluded and underserved customers…

…with some business models being better positioned (and willing) to do so.

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What is Digital Banking?

There are many different types of digital ‘bank’, so we started very broad, using only a limited set of filtering criteria

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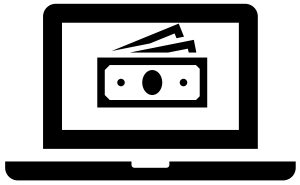
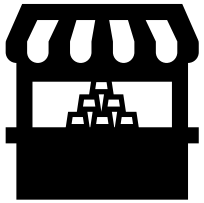
To develop a basic taxonomy

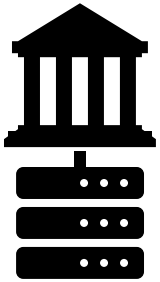


Fully digital retail bank

Limited purpose bank



Marketplace bank



Banking-as-a-Service

Fully digital retail bank

- **Value proposition:** full-service banking for retail customers / MSMEs using a traditional business model, but a modern operational model and better customer experience.
- **Target market:** focus is on retail or SME mass market customers.
- **Business logic:** Natively digital solution enables efficient, advanced and nimble products and processes that (a) add value to customers and (b) allow rapid iteration and extensive automation for the provider. Having no / few branches and low staff size greatly reduces operational cost and enables rapid scaling.
- **Revenue:** primarily from traditional sources e.g. interest rate spread, fees and charges.
- **Regulation**: typically regulated and licensed as a conventional bank, but sometimes able to operate under a different license and/or rely on regulated partners.

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Types of fully digital retail bank

Digital Brand

- Greenfield banks launched as an offshoot from a parent incumbent bank, typically targeting middle income customers.
- Launched either in the same market as one that a parent bank operates or as a means of entering a new country or a new part of the market.

Digitized Incumbents

- Incumbent banks that pursue a total digital transformation to reduce their operating costs and drive up revenue.
- This will likely involve an attempt to segment ‘digital’ and ‘traditional’ customers, with an attempt to flip customers from the latter to the former.

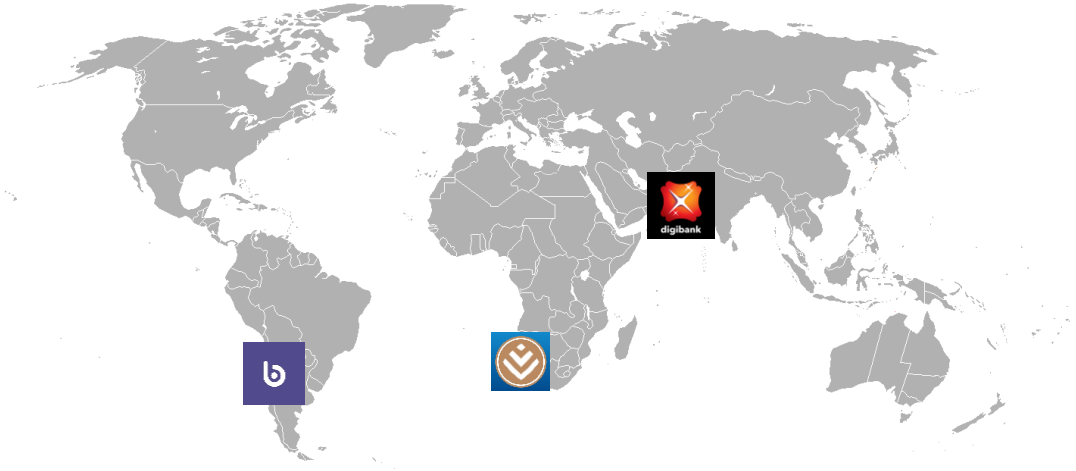
Digitally Native Challengers

- New provider, that is not majority owned by a parent bank, that offers a full suite of banking products and services to their customers.
- Operating at a low cost base through not having to deal with legacy IT systems and branch infrastructure.

Example of a fully digital retail bank

TymeBank (South Africa)

- Remittance player that launched its banking proposition in February 2019, now has over 100,000 banking customers.
- Partnered with supermarket chain, building kiosks that can issue cards in vast majority of their 750 stores. The kiosks cost 1-2% of the cost of running a brick-n-mortar branch.
- Low-cost and generous incremental savings rates highly attractive for low-income people in SA's expensive banking environment.
- Tyme will soon complement its existing product line by offering credit through an unsecured personal loan product and credit cards.



Banking-as-a-service bank

- **Value proposition:** technology companies that provide elements of the banking value chain as an end-to-end B2B (or B2B2C) service.
- **Target segment**: typically serves fintechs, fully digital retail banks, digital consumer companies, enabling them to focus on their core value proposition and go-to-market faster.
- **Business logic:** customers can deploy a banking solution instantly without the time or cost required for their own license, with the BaaS provider responsible for risk, compliance, reporting, etc requirements.
- **Revenue:** either (a) pay-per-use fees on API calls, (b) monthly subscriptions for white-label solutions and (c) product level revenue share.
- **Regulation**: typically hold full banking license and offer FSPs to offer banking services by using their technology as well as riding off their license.

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Types of banking-as-a-service

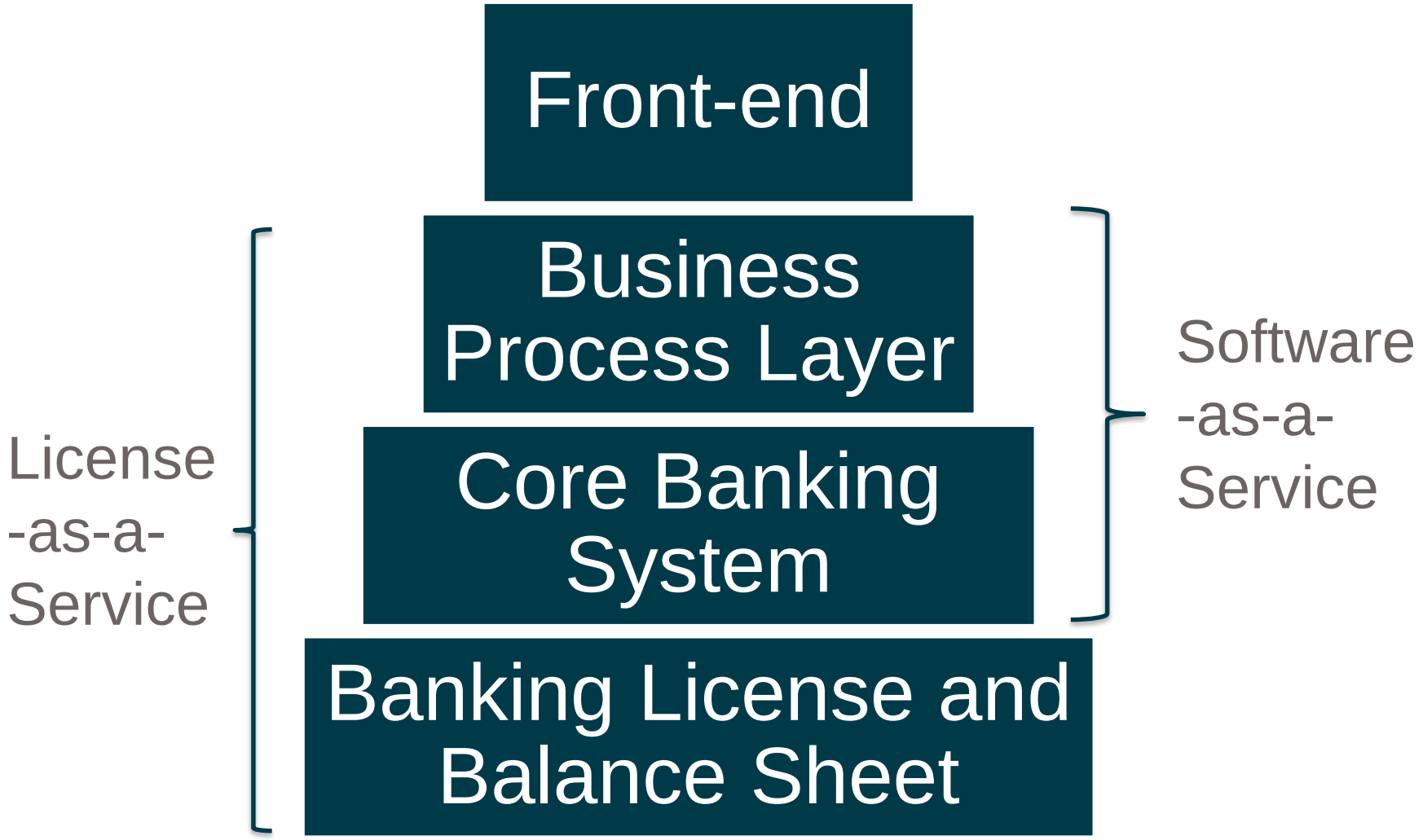
Software-as-a-Service

- Technology companies, without a banking license, that partner with FSPs to provide technological solutions, either via APIs or locally, that fulfill back end components of the banking value chain for their partner.
- Software is sold on a subscription basis.

License-as-a-Service

- Licensed firm that acts as a white-labelled infrastructure provider to FSPs for front end (and often back end) solutions, typically via APIs.
- Involves Fintech's leveraging the firm's banking license to offer provision account and other financial products and services on a B2B2C model.

Banking-as-a-Service and the layers of Banking



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Example of Banking-as-a-service

Fidor Solutions (Global)

- Started as an extension of Fidor Bank in Germany and holds a full EU banking license.
- Offers a comprehensive and modular digital banking solution including the relevant regulatory permissions.
- Offer includes current account, cards, omnichannel front-end, customer service, credit risk scoring, Open Banking APIs, and marketplace pre-populated by fintech partners.
- Fidor powers e.g. O2 Banking (Germany), Banxy (the first digital retail bank in Algeria).

Limited purpose bank

- **Value proposition**: mono-line FSPs that offer one of the following specialized banking products or services:
  - i) a niche product to a mass market segment
  - ii) a standard product to a niche segment that would not be able to access or use the product type otherwise
  - iii) PFM / aggregation as an over-the-top layer, embedded into the banking value chain
- **Target market**: products and services offered are primarily B2C and customers are largely digital natives.
- **Business logic**: are able to monetize a demand in the market that full retail banks either ignore or are unable to fulfill.
- **Revenue:** primarily from either i) commission from referring customer to other FSPs or ii) from originating the product or service themselves and charging the consumer fees and charges directly.
- **Regulation**: Not licensed as a bank but may hold an e-money, payments or other non-banking license.

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Types of limited purpose banks

Personal Financial Management Tools

- Synthesizes an individuals financial information from a range of financial services accounts to provide holistic analysis of their financial circumstances.
- Typically these tools would either nudge or automatically act to help customers to meet their financial goals. This becomes monetized through commission from referring customers to partners that offer products to help the customer achieve their goals.

Niche Product Provider

- Focus on offering a single niche financial product or service to the mass market.
- The product or service is not widely incorporated in the offerings of full retail banks.

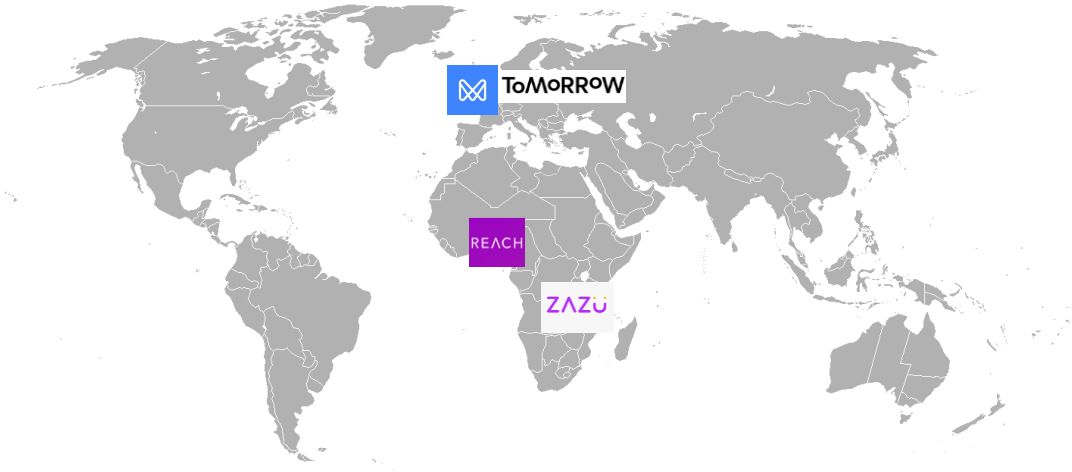
Niche Segment Provider

- Focus on offering a standard product or service, that is typically incorporated into the offerings of retail banks.
- However, the product or service is operationalized in a way that is tailored to meet the needs of a niche segment of the market that would not otherwise have access to, or the ability to use, the product or service type.

Examples of a limited purpose bank

PiggyVest (Nigeria)

- PiggyVest is a Nigerian online savings platform that allows users to automatically save small amount of money periodically (withdrawals restricted to set withdrawal days).
- PiggyVest have over 200,000 registered customers with savings over 1bn Naira (2.78mn USD).
- Interest paid daily, and customers can set specific targets / common group goals.
- PiggyVest earn commission from placing their customers money in investment funds managed by ALLCO Capital.
- PiggyVest recently announced a partnership with Avon healthcare to provide health insurance to customers, they can pay these on a monthly basis.



Marketplace bank

- **Value proposition**: provides aggregation and operates as an intermediary between retail / MSMEs customers and third party FSPs supplying products and services, this provides consumers with choice.
- **Target market:** both B2B and B2C, depending on the specific model.
- **Business logic**: May also offer their own products, or serve only as a broker between customers and third party FSPs. Model ranges from integrating a single FSP per product type to integrating dozens or hundreds of FSPs. May be curated in the selection of FSPs and/or in the recommendation of FSPs to individual users.
- **Revenue:** is mainly B2B from FSP partners either as (a) revenue share / PAYG (e.g. per API call) or (b) commission on referrals. May be combined with a tiered subscription model.
- **Regulation**: may or may not hold a banking license.

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Types of marketplace banks

B2B Marketplace

- Involves a third party platform commercializing the provision of seamless connection between a range of different financial services providers, via APIs.
- This could support credit assessment, payments, data aggregation and a range of other services.

Limited B2C Marketplace

- Platform that allows retail customers to take out a range of financial services products offered by an approved partner of the marketplace bank via an API.
- Provider typically acquires customers through their own product or service but retains the customer through offering a full suite of products in a marketplace that fulfill all of the customers financial needs.
- Providers range from having specific partner providers on the platform offering distinct products, through to a more competitive marketplace with multiple partners per product type. Customers are able to takeout partner products whilst remaining within the platform via APIs.

Open B2C Marketplace

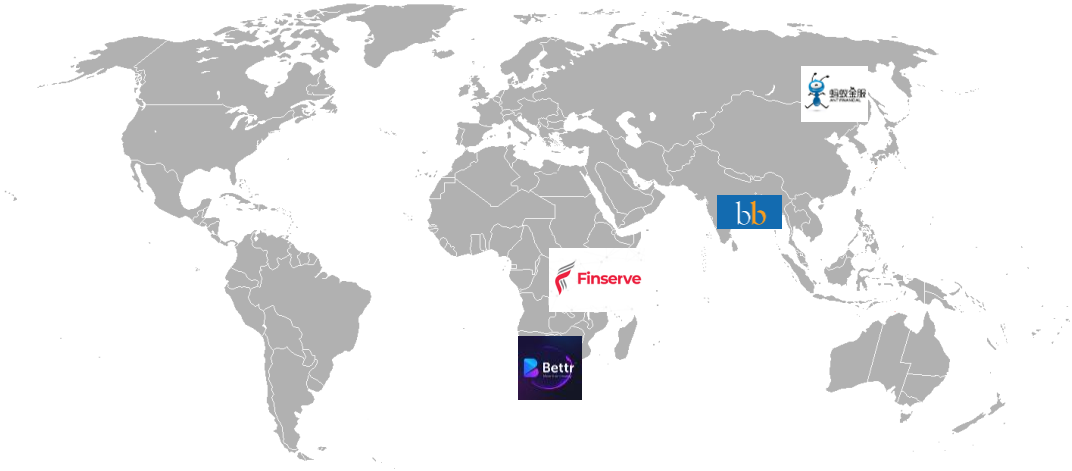
- Platform that contains a large number of partner providers, allowing customers to take out a wide range of financial services products offered by any FSP that passes the due diligence requirements of the platform.
- Provider acquires customers directly through the marketplace, their focus is on driving traffic through the platform. The customer may or may not remain within the marketplace's app or website when taking out a partner provider's product.
- So long as the partner meets the due diligence requirements, they are permitted to compete on the platform and this means there is no limit or control from the marketplace.

Example of a marketplace bank

STARLING BANK

Starling Bank (UK)

- Starling launched in the UK in 2014 with a digital native retail bank proposition, they now have 500,000 retail customers and 30,000 SME customers.
- They have since supplemented this with a marketplace offering mortgages, pensions, insurance, investment products, PFM tools and services for SMEs. So far they have 15 partners, Starling do not originate products in these sectors themselves.
- Starling cherry-pick partners based on technology and values. Eventually, they want an open marketplace where any provider that passes their Due Diligence can offer products to Starling customers and use a two way data flow to do so.
- Starling take a customer acquisition fee or a revenue share from the partner when customers take out a product or service via the marketplace.



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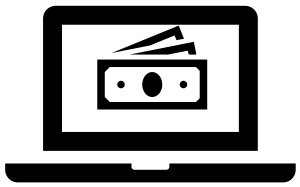
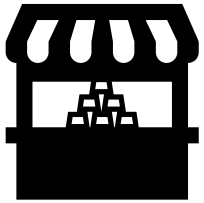
There are several hybrids and dependencies between models



Fully digital retail bank

Limited purpose bank



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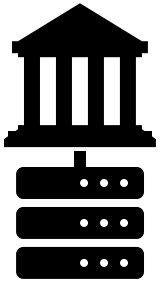
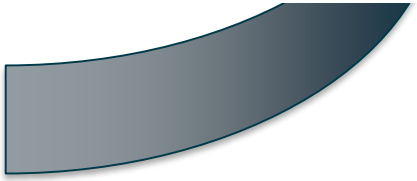


Banking-as-a-Service



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How Can Digital Banking Deliver Financial Inclusion?

First, we need to understand the barriers to financial inclusion on the demand side

- Lack of trust
- Cultural, social & demographic factors (suitability)
- Information asymmetry and awareness
- Limited financial capabilities

(Source: CGAP, 2015)

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We also need to understand barriers to financial inclusion on the supply side:

- Limited institutional capacity
- Weak value proposition (customer-centric)
- Underdeveloped delivery channels
- Limited understanding of market opportunities
- Limited incentives to innovate
- Predatory and irresponsible business practices

(Source: CGAP, 2015)

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Second, we need to understand operational improvements over non-digital models

Digital banking operational improvements

Front-end

- Application of data
  - Customization of products, progressive lending, alternative credit scoring
- Digital onboarding
  - Digital acquisition, digital customer due diligence, electronic signature, CICO, customization
- Financial concierge
  - Dashboards, non-automated PFM, advice, automated PFM

Back-end

- Core banking platform
- RegTech
- Integration with partners (APIs)

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We can now match the inclusion barriers with relevant digital banking features to build our hypothesis further

Barrier: Limited financial capabilities

Enabler: Simplicity

Digital Banking Features: Digital acquisition, segmentation of clients and customization, access to national digital ID, digital onboarding, automated PFM, advice concierge, underserved / unserved customer base, use of APIs, use of chatbots, voice recognition,

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Financial inclusion matchmaking (demand side)

Inclusion enablers and digital banking features	
Trust	Alternative data, progressive lending / hybrids, automated PFM, advice concierge, unserved / underserved customer base, tiered KYC, regtech, chatbots
Suitability	Digital due diligence, unserved / underserved customer base, product focus on payments, lending, deposits and savings, chatbots, voice recognition, tiered KYC
Transparency	Automated PFM, advice concierge, digital onboarding, distribution integrated with community
Simplicity	Digital acquisition, segmentation of clients and customization, access to national digital ID, digital onboarding, automated PFM, advice concierge, underserved / unserved customer base, use of APIs, use of chatbots, voice recognition

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Financial inclusion roadmap (supply side)

Barrier: Predatory and irresponsible business practices

Enabler: Revenue streams aligned with customer interest

Digital Banking Features: Progressive lending, automated PFM, use of APIs, alternative credit scoring

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Financial inclusion matchmaking (supply side)

Inclusion enablers and digital banking features	
Capacity	Unserved / underserved customer base
Customer-centric	Alternative data, progressive lending / hybrids, dashboard, advice concierge, unserved / underserved customer base, MSME customer segment, AI / ML / Big Data, digital due diligence, agent and community distribution model, voice recognition, tiered KYC
Relevant delivery channels	Digital acquisition, digital due diligence, electronic signatures, digital onboarding, automated PFM, advice concierge, chatbots, voice recognition, agent and community distribution model, use of APIs
Incentives to innovate	Digital due diligence, tiered KYC, AI / ML / Big Data, reduced cost base, increased scalability, access to national digital ID, use of APIs
Revenue streams aligned with customer interest	Progressive lending, automated PFM, use of APIs
Access to capital	Automated PFM, advice concierge, interest rate spread

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With this information in mind, we see two pathways for digital banking to potentially improve financial inclusion

1. Digitization to serve excluded or underserved

- Firms that pursue digitization to provide the infrastructure that allows them to service unbanked and underserved customers through overcoming the key barriers to financial inclusion.
- The goal of these providers is to profitably serve excluded segments, as they see doing so as a commercial opportunity. e.g. **MBC, Monese, Finserve, Petal**

2. Inclusion as a 'positive externality'

- Firms that pursue digitization to make innovative operational improvements that allow them to better serve customers that are already served in the banking system.
- Whilst these firms do not see financial inclusion as their objective, in some instances financial inclusion may become possible as a byproduct of the digitization process e.g. **WiloBank, NuBank, Jenius, Tandem, Yolt, Monzo**

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Any Example?

There are many positive signs

First ever bank account for 50% of their 35,000 accountholders

Applied APIs to provide instant payment to farmers in Kenya

Used 'translation as a service' in customer service communication

Installed digital banking kiosks in over 500 grocery stores across South Africa, many of these are located in rural provinces

Created bespoke refugee camp digital banking model, currently being used in Malawi

Applied alternative data to make better credit approval decisions

Provide an eKYC platform to facilitate digital identification for customer onboarding

Evidence from our interviews indicates that digital banking can strip out cost

- Customer Acquisition Cost (CAC) typically falls to around **5-15% of that of a traditional retail bank**.

- Digital banks are able to spend just **1-5% of the cost of operating a branch** by using alternative distribution channels.

- Cost-to-Income (CTI) can **be 20%+ lower for banks serving customers through digital channels** when compared to serving them through traditional channels.

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What’s Next?

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This is what we have done so far

- Developed a **business model canvas** to compare different businesses
- **Interviewed ~50 individuals** (digital banks, investors, technical specialists and other stakeholders around the world)
- Identified the **key differentiators between digital and traditional banking**
- Ranked these differentiators based on their **capacity to overcome barriers to financial inclusion**
- Created a **taxonomy for categorizing** the diversity of digital banking business models
- Analyzed which of the digital banking business models incorporate the digital banking **differentiators that are most significant for financial inclusion**

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What we are planning to do next

- Supplement the qualitative analysis of the business models with **quantitative analysis of the financials** of digital banks across our taxonomy through collecting quantitative data from several firms.
- Firms will be selected based on criteria relating to:
  - i) geography
  - ii) relevance for financial inclusion
  - iii) data availability
- Collect specific data to assess the ability of the business models to overcome each of the financial inclusion barriers.
- Analyze this data and use it to **refine the taxonomy** further.
- **Develop case studies** of specific digital banking providers that have a particularly valuable story to tell our audience of FSPs and investors.

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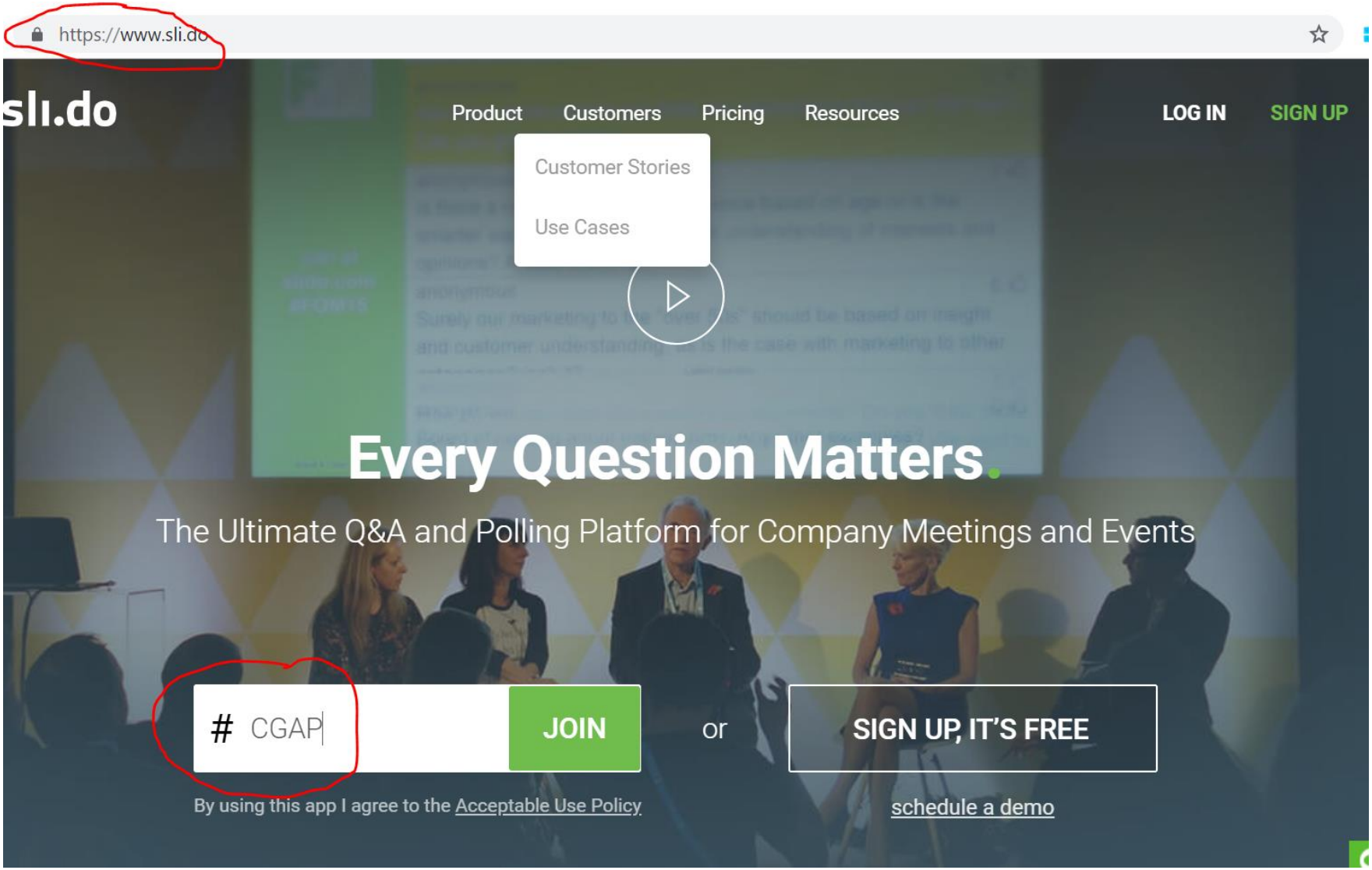

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Any Questions?

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Thank you

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UKaid from the British people

npm platform for inclusive finance

AGENZIA ITALIANA PER LA COOPERAZIONE ALLO SVILUPPO

USAID FROM THE AMERICAN PEOPLE

UNCDF Microfinance • Capital Development

KOICA Korea International Cooperation Agency

UNDP

BILL & MELINDA GATES foundation

Sida

MetLife Foundation

Norad

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

OMIDYAR NETWORK™

cdp cassa depositi e prestiti

Australian Government
Department of Foreign Affairs and Trade

Ministry of Foreign Affairs of the Netherlands

giz

UDENRIGSMINISTERIET
MINISTRY OF FOREIGN AFFAIRS OF DENMARK

IDB Inter-American Development Bank

Michael & Susan Dell FOUNDATION

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

Italian Development Cooperation
Ministry of Foreign Affairs and International Cooperation

FOMIN Fondo Multilateral de Inversiones
Miembro del Grupo BID

BANQUE AFRICAINE DE DÉVELOPPEMENT
AFRICAN DEVELOPMENT BANK
AFRICAN DEVELOPMENT FUND
FONDS AFRICAIN DE DÉVELOPPEMENT

KFW

IFC International Finance Corporation

FMO Entrepreneurial Development Bank

European Investment Bank

Citi Foundation

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