THE FUTURE OF FINTECH

RAPID GROWTH ATTRACTS SMART CAPITAL

AFRICA

October 2022

INTRODUCTION

Early-mover Africa becomes a funding powerhouse in the region

Africa has enjoyed an early-mover's position in the application of fintech in effecting financial inclusion and economic transformation. The success of the continent's mobile money revolution caught the world's attention over a decade ago, bringing into sharp focus the potential inherent in the combination of finance and technology – with innovation and empathy.

The system was simple, scalable, accessible, and made possible by unlikely partnerships. It enabled real-time transactions, and brought millions of unbanked individuals into the financial mainstream.

This triumph of inclusion fired imaginations as a cross-sector success story. In the Sub-Saharan Africa (SSA) region, fintech startups recorded 894% year-on-year growth in funding in 2021 – the second highest in the Middle East, Africa, and Pakistan region during the period, and the highest yearly growth rate over the past five years. SSA received USD 1.56 billion in funding, the highest in the region by a wide margin.

The diversity of sectors that fintech covers is represented in companies that have now become a part of Mastercard's suite of partners and customers, from cryptocurrency and open banking to data intelligence and identity solutions.

With agility at the heart of solutions, fintech companies partner with others so they can play to their strengths while relying on others to do what they are good at, thereby rounding out an innovative solution. These fintech solutions are made possible on the back of robust technologies, payment rails, security systems, and compliance frameworks, because everyone brings their best work to the table.

At Mastercard, we are committed to help fuel fintech acceleration by offering access to our expertise, network, and technology. Fintech companies harness our strengths, be it a portfolio of technology solutions, APIs, developer tools, partner network, startup programs, and a community experience for every fintech company and payments developer, helping turn their bold ideas into reality.

The themes that emerge out of the future of fintech in Africa are solutions that are digital-first, user-centric, and collaborative. Whether it is in introducing digital payments, international remittances, or introducing eKYC, technology is being put to use to solve real-life problems.

In the fintech ecosystems of Africa, various subsectors within the fintech space have different levels of regulation, penetration, and product development. While digital payments, e-money, and remittances have near-complete regulatory coverage across Africa, P2P lending and equity crowdfunding are among developing sectors.

For fintech companies to succeed, partnerships need to transform into multilateral collaborations to innovate, facilitate, accelerate, scale, and, yes, regulate. All stakeholders come together to work on solutions that address actual needs. Proactive regulators are working together to create pan-regional frameworks, which protect the consumer while developing an ecosystem in which entrepreneurs can thrive and succeed.

With agility at the heart of solutions, fintech companies partner with others so they can play to their strengths while relying on others to do what they are good at, thereby rounding out an innovative solution

KEY FINDINGS

Ecosystem

- Africa's domestic e-payments market is projected to see 20% revenue growth per year (compared to 7% globally), reaching around USD 40 billion by 2025.
- Kenya, Nigeria, and South Africa are among the countries leading the transition to digital payments, with infrastructure and policy frameworks that enable the growth.
- Fintech innovation in Africa has been driven by the need to resolve pain points as well as increase financial and digital inclusion.
- Fintech companies have tied up with banks, MNOs, and other stakeholders to develop payment solutions for consumers and micro and small merchants.
- Over 90% of jurisdictions in Africa have established regulatory frameworks for digital payments.
- During the pandemic, 72% of African jurisdictions implemented measures in respect of digital payments and international remittances, as compared to 61% globally.
- In South Africa, 85% say they will continue to use digital cross-border payments after the pandemic, compared to the global average of 71%.

Funding

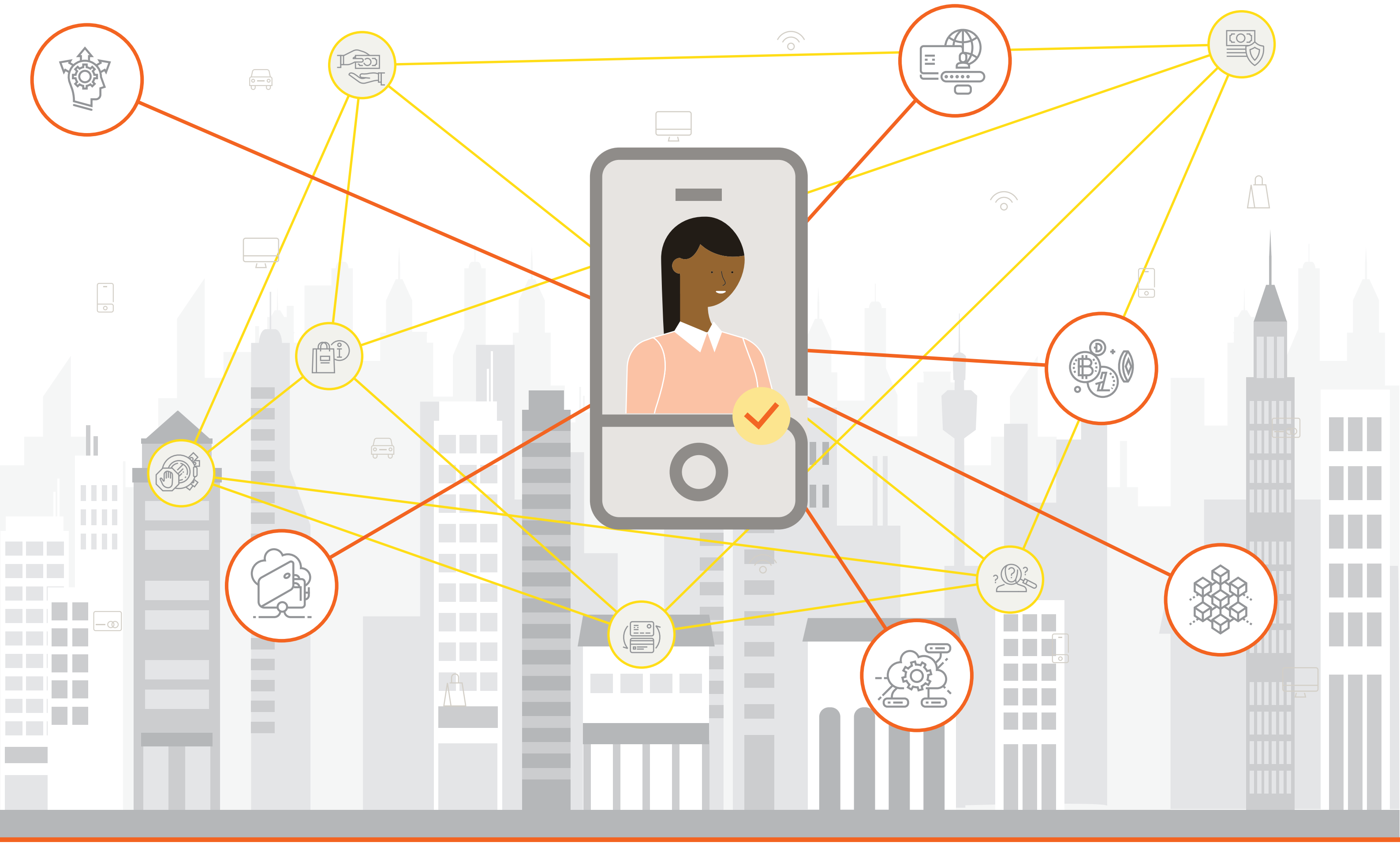
- Sub-Saharan Africa's fintech startups recorded 894% year-on-year growth in funding in 2021, the second highest in the Middle East, Africa, and Pakistan region.
- Nigeria emerged as a leading fintech hub across the Middle East, Africa, and Pakistan as startups there accounted for a third of all funding deployed into fintech in 2021.
- Fintech startups in Africa overall grew from 311 in 2019 to 564 in 2021, with South Africa, Nigeria, and Kenya emerging as key hubs.
- The fintech sector accounted for 27% of the number of deals closed and 61% of the USD 2.7 billion venture capital deployed across Africa in 2021.

Regulation

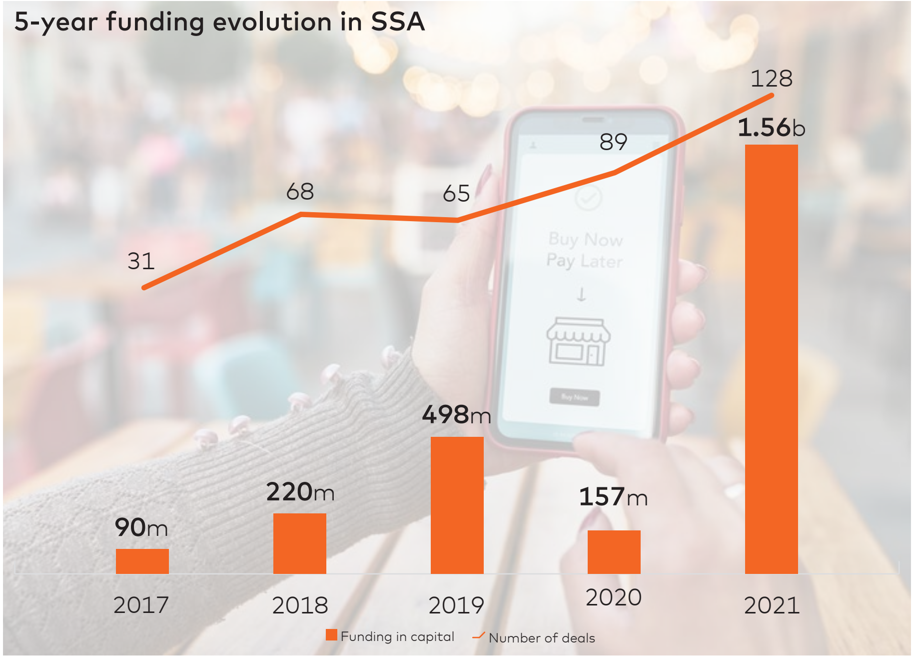
- Regulators across countries have adopted a collaborative approach to enable the introduction of new solutions by fintech companies.
- The African market is not unified in regulatory terms, which poses challenges in scaling; but examples such as the Pan-African Payment and Settlement System can prove to be transformational for cross-border payments.
- The paucity of formal identification in Africa has long been recognized as a hurdle to extending the reach of digital finance. In a survey, 53% of markets in the SSA region indicated that they "urgently needed" more regulatory support for eKYC processes, which present an opportunity for fintech companies.
- 65% of jurisdictions in Africa indicated that they had no plans to implement an open banking framework, compared to 30% of regulators in APAC and 23% in MENA.

CHAPTER 1

State of fintech



- Africa has been at the forefront of payments innovation
- Fintech is building inclusion in Africa from the ground up
- SSA fintech startups recorded 894% growth in funding in 2021
- Smartphone adoption is a key tool for fintech adoption in Africa



Source: 2022 Fintech Venture Investment Report, MAGNiTT

20%

is the share of fintech in the total technology unicorns value in 2021

Fintech is emerging as Africa's most vibrant sector

Africa has been at the forefront of financial innovation, developing use cases such as mobile money and using fintech as a vehicle for financial inclusion. Bringing millions of previously unbanked people into the financial mainstream has resulted in creating data footprints that can streamline financial lives, provide access to funding and financing, and introduce predictability. This has remained one of the crucial factors in regulators and central banks facilitating fintech in Africa.

Combining finance and technology with innovation and creativity has resulted in the financial technology, or fintech, sector witnessing accelerated growth on the global and regional startup scene in the past five years. Fintech, which the International Monetary Fund (IMF) likened to a "brave new world for the financial sector," comprises "products, developers, and operators of alternative financial systems."[1]

The fintech ecosystem, simply put, is the value chain of stakeholders that collaborate toward a common goal of innovation and adoption of new technologies to deliver financial services. These include governments, regulators, financial institutions, payment and technology companies, funders, and entrepreneurs. A collaborative approach enables fintech companies to partner with other stakeholders, with the aim of scaling, standardization, and increasing market share via access to a wider customer base and partner network.

Recent years have seen a faster rate of digitization, driving the adoption of neobanks and digital payments. Cryptocurrency, non-fungible tokens (NFTs), and blockchain-backed technologies have come into the mainstream, often backed by dynamic regulation that supports the growth of more affordable financial services. Financial innovation has seen many fintech success stories across the spectrum of peer-to-peer lending, high-frequency trading, big data, and robotics.

$287b

was raised from 534 fintech exits globally in 2021

Globally, fintech funding jumped to a new record of USD 131.5 billion in 2021. The number of fintech unicorns reached 235 with 34 born in Q4-2021. Fintech companies now represent more than 20% of total tech unicorn value, compared to 15% in the previous year[2,3].

On the demand side, the role of micro, small, and medium enterprises (MSMEs) has been crucial to fintech's growth. MSMEs use fintech and e-commerce solutions to scale, source, and reach. The growth in alternative payment rails and emerging platforms are shaping the commercial landscape.

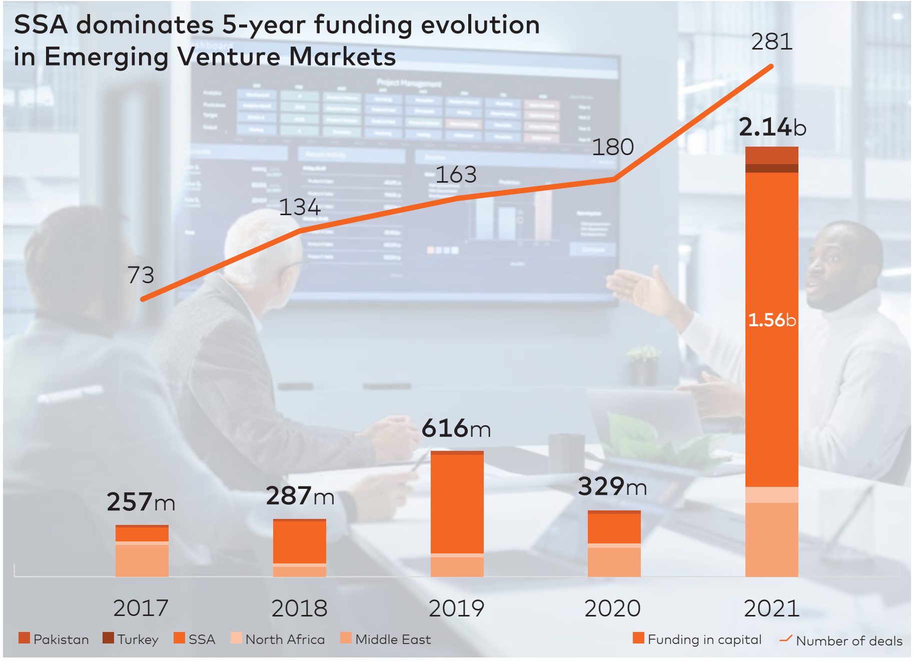
Buoyed by demand, fintech has seen products based on multi-faceted innovation in emerging and mature economies. Providing scalable financial services using the internet, blockchain, and algorithms, fintech companies have widened the reach of financial services traditionally offered by banks, including loans, payments, investments, or wealth management.

Data show that the number of global fintech unicorns was 6.5% more in 2021, compared to 2020. Globally, USD 287 billion was collectively raised across 534 fintech exits in 2021[4].

The regional star in funding

In the Sub-Saharan Africa (SSA) region, fintech startups recorded 894% year-on-year growth in funding in 2021 – the second highest in the Middle East, Africa, and Pakistan region during the period, and the highest yearly growth rate over the past five years. SSA received USD 1.56 billion in funding, the highest in the region by a wide margin.

Source: 2022 Fintech Venture Investment Report, MAGNiTT



Source: 2022 Fintech Venture Investment Report, MAGNiTT

Nigeria emerged as a leading fintech hub across the Middle East, Africa, and Pakistan as startups there accounted for a third of all funding deployed into fintech in 2021. Within Nigeria, fintech accounted for 71% of all venture capital[5].

564

fintech startups were recorded in Africa in 2021

Fintech startups in Africa grew from 311 in 2019 to 564 in 2021, with South Africa, Nigeria, and Kenya emerging as key hubs[6]. The sector accounted for 27% of the record-high number of deals closed and 61% of the USD 2.7 billion deployed across Africa in 2021. The space was characterized by mega deals of more than USD 100 million each[5].

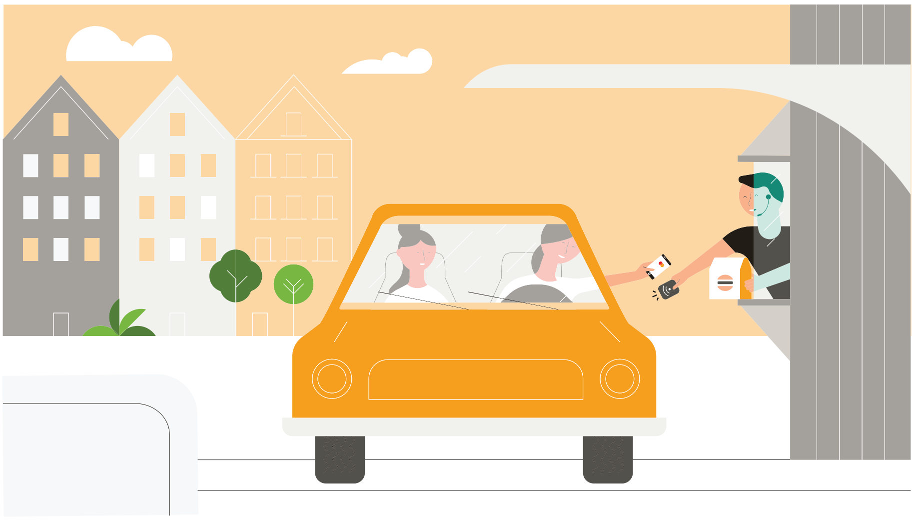
The rapidly growing sector comprises sub-segments of particular interest, including digital payments, e-money, international remittances, peer to peer (P2P) lending, and equity crowdfunding[7].

Infrastructure and regulation support growth

On a continent where more than half the adult population has no access to banking services, fintech startups can be considered as building inclusion from the ground up. Smartphones are the most important tool for fintech adoption in Africa. Of the nearly 400 million new mobile subscribers expected to sign up globally by 2025, the majority will come from frontier markets like Africa. With efforts to remove the affordability barrier, smartphone adoption is likely to grow to 75% by 2025[8].

Within an enabling fintech infrastructure, e-commerce penetration, mobile-money penetration, and regulation, among other factors, the ecosystem thrives. In Africa, widespread use of broadband and smartphone penetration fills the infrastructure gap to enable digital fintech services. While cash dominates, newer e-payment solutions by banks and non-bank companies are likely to grow. Africa's domestic e-payments market is projected to see 20% revenue growth per year (compared to 7% globally), reaching around USD 40 billion by 2025[9].

Increased use of payment methods in the last 12 months



50% Tappable smartphone mobile wallet

48% Paying directly from bank account (account to account)

51% Instant payment service (money transfer)

50% Digital wallet

39% QR Code

48% Cash

33% Buy now pay later/ installment plan

52% Digital money transfer app

45% Cryptocurrency

58% Contactless card

44% Biometric payment technologies

89%

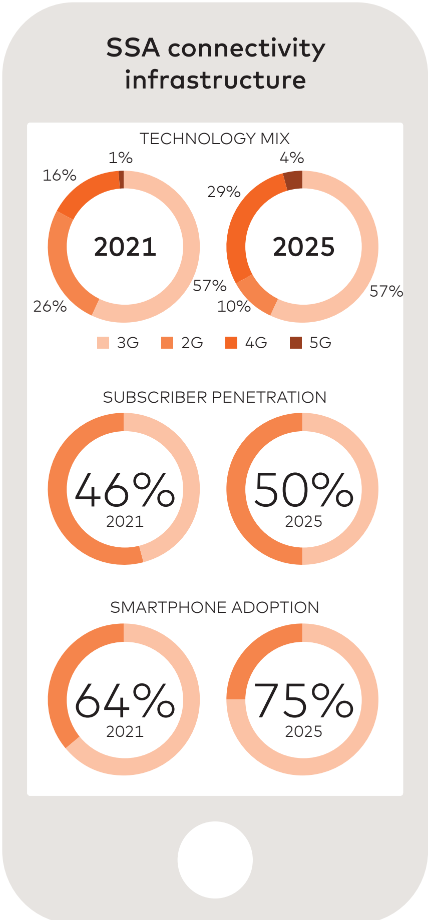
of users in the wider region have used at least one digital payment method in the last year

Among users, % selecting ranked by last year usage

Source: Global New Payments Index, EEMEA Mastercard, May 2022

Within Africa, Kenya, Nigeria, and South Africa are among the countries leading the transition to digital payments, with existing or rapidly developing infrastructure and policy frameworks that enable the growth[9].

Proactive regulators have been friends of fintech in Africa, so much so that the regulation of M-Pesa in Kenya has become a case study[10].



Source: The Mobile Economy 2022, GSMA.

Policymakers across the region have come to prioritize affordable internet and mobile penetration. Regulators have facilitated safe, secure, and rapid growth of fintech through a range of innovative and bespoke regulation that business frameworks and licensing support the safe use of innovative technologies while minimizing risk.

The IMF has noted that regulators across countries have recognized the need to adapt their approaches to strike the right balance between enabling financial innovation and addressing the challenges and risks to financial integrity, consumer protection, and financial stability. The way forward includes international agreements on data privacy, cybersecurity, digital identification, cross-border digital currencies, and the regulation of big tech[11].

Globally, as well as in Africa, regulators believe that fintech has a supportive role to play in market development. Over 90% of jurisdictions in Africa have already established regulatory frameworks for digital payments. During the pandemic, 72% of jurisdictions implemented measures in respect of digital payments and international remittances, as compared to 61% globally, underscoring the importance of this vertical[7].

Private sector efforts, whether by global companies or by regional players, has been crucial in filling gaps in the fintech ecosystem. Africa's fintech potential is drawing global investors, venture capitalists and large corporates. The thriving fintech startup scene is attracting investments from across the world, including the US and China[11].

INTERVIEW | **Reda Helal**
Group Managing Director, Processing Business – Africa and Co-Head Group Processing, Network International

"The overall fintech story in Africa is still in its early stages of exponential growth"

Network International is a payment solutions provider in the Middle East and Africa (MEA). It has enabled over 200 financial institutions to deliver payment services to 16 million card holding consumers and serving over 150,000 merchants. In 2019, Network listed on the London Stock Exchange.

Headquartered in the UAE, Network has operational centers and offices in Egypt, South Africa, Nigeria, Ghana, Kenya, Jordan, and Saudi Arabia. It operates in 50 countries across the MEA region.

What are the macroeconomic drivers for fintech growth in Africa?

There is a huge upside for digital financial services. Cash is still used in around 90% of transactions. Only 40% of adults have a bank account. In countries where this number is high, resulting in enhanced financial inclusion, there is further potential to increase the depth of inclusion through services such as saving and borrowing. Other factors playing into the growth story are:

- Increasing smartphone ownership
- Declining internet costs
- Expanded network coverage
- Youngest population (median age 20) with the world's highest growth rate (2.7%)
- Rapidly urbanizing population (more than a billion urban population by 2045)
- Fast growth in personal consumption expenditure during 2020-2025 (CAGR of 4.8%).

How does Africa's fintech market compare with the region and world?

Penetration of fintech revenues (in terms of share of financial services revenue) is at 2% to 3% in Africa, according to research by McKinsey and Company. However, if you exclude South Africa, the fintech penetration is 3% to 5%, which is in line with global benchmarks for developed countries. Based on this data alone, you may conclude that the African fintech sector is mature and in advanced stages of growth. However, in leading African markets such as Kenya and Ghana, the fintech penetration is nearly two times the global benchmark.

The overall fintech growth story in Africa is still in its early stages of exponential growth. Several African countries (where fintech penetration is below 2% to 3%) have a significant opportunity to tap further potential in the sector. If overall African fintech penetration reaches the levels of Kenya, the fintech revenues on the continent could grow eight times from USD 4-6 billion in 2020 to reach USD 30 billion by 2025. Also, fintech growth in the 54 African countries will not be uniform. According to McKinsey, the leading markets (and regions) in terms of growth will be Ghana, Francophone West Africa, Nigeria, and Egypt.

Where is the demand coming from?

Current leaders of African fintech have been focused on building the foundations of financial services infrastructure with basic solutions tailored to African customers, such as wallets (P2P), bill payments, remittances, payments (offline and online). In the next phase, they will focus on advanced services such as lending (retail and SME), wealth management, banking as a service, and business services like analytics, invoicing, and spend management.

In the short term, payments and wallets are likely to grow fastest, both at around 20% CAGR from 2020-2025 (according to McKinsey). Again, the demand for fintech services will vary across countries in the next phase. Economies with advanced financial systems and digital infrastructure, such as South Africa and Nigeria, are likely to see demand for innovation in advanced services, such as B2B liquidity and regulatory technology such as AML and KYC compliance. Markets where financial systems and infrastructure are still growing, such as Egypt, are likely to see demand for services such as BaaS, embedded finance, BNPL, and SME lending.

How robust is the enabling ecosystem?

According to UNCTAD, 39 out of 54 African countries have either legislation or draft legislations in place on data protection and privacy, creating clarity for new fintech entrants. During the last four years, several countries like Ghana, Sierra Leone, Kenya, Rwanda, Mauritius, Mozambique, Nigeria, Uganda, Tunisia, and South Africa have set up regulatory sandboxes. These provide a route to market for innovative fintech and help governments solve the challenges of financial inclusion and financial stability.

Positive regulatory policy agreements, such as the African Continental Free Trade Area and the planned roll-out of the Pan-African Payment and Settlement System may open new avenues of growth for fintech that develops digital solutions that solves the challenges of increasing cross-border payments.

What is your regulation wish-list?

A progressive government would create the right balance and the right incentives for the fintech sector to grow. This could include forums to discuss ideas, promote investment in the sector, and adopt fintech solutions in government.

CHAPTER 2

Market dynamics

- At 2.6%, Africa has the fastest annual population growth rate in the world
- The pace of technological growth fuels customer aspirations and drives fintech development
- Contactless solutions enable digital acceptance at small and micro businesses
- Fintech works collaboratively, with missing specialties integrated into solutions using partnerships

Consumer expectations drive innovation and partnerships

The young African consumer is poised to make the most of the fintech products that address their specific requirements. At 2.6%, Africa has the fastest annual population growth rate in the world (the global average is 1%), with 15-to-64-year-olds comprising 55% of the total[1,2].

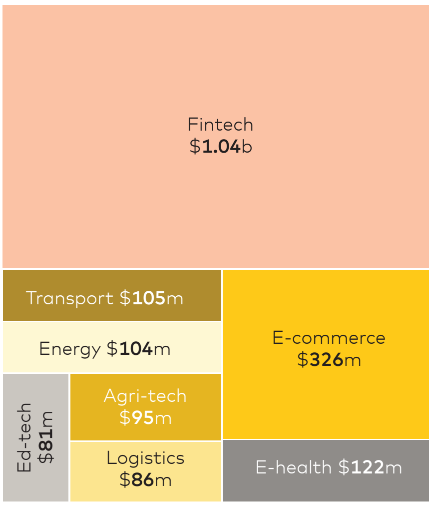
In fact, the origins of mobile money in Africa have been traced to consumers' innovative use of prepaid airtime to settle debt and pay for transactions[3]. ICT and digital solutions find ready acceptance, driving the fintech sectors in Africa.

Payments and digital banking are the leading sectors, along with lending, which is tapping into an underserved market where credit penetration is very low. Using artificial intelligence (AI) and machine learning techniques to create alternative ways for credit scoring facilitates lower risk for lenders. Challenger banks are also entering some markets[4].

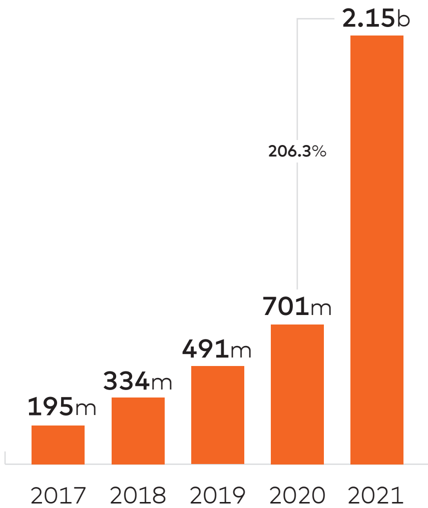
Post-2020, access to entrepreneurial fintech apps, portals, and streamlined websites have enabled numerous consumers to optimize their financial health, using just their smartphone.

Pan-Africa funding overview

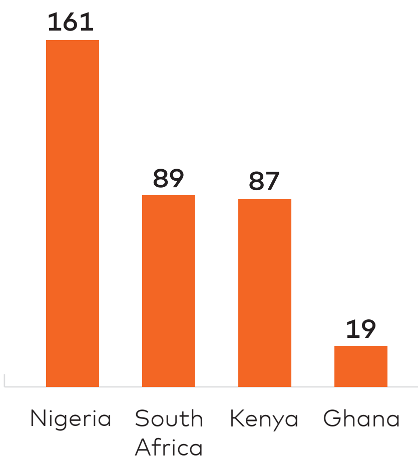
Top sectors in funding, 2021



Growth in Africa funding (USD)



Number of startups funded, 2021



200%

CAGR in funding attracted by startups in Africa over the past five years

Source: African Tech Startups Funding Report 2021, Disrupt Africa.

Consumers turn to fintech for everyday finance needs

57% see making a payment as the most beneficial use case

86% use digital tools for at least one financial task

74% connect their bank account to other platforms to pay bills

76% know at least a little about open banking

74% would like to be able to make purchases and pay bills direct from their bank account to merchants / utility providers without inputting card details or writing a cheque

91% know at least a little about A2A (when payments go from consumer's bank to the merchants)

75% have connected their accounts for banking activities

68% are comfortable paying directly from bank account

Source: Global New Payments Index, EEMEA Mastercard, May 2022

Mastercard research has shown that once they adopt digital tools for any reason, consumers continue to use them. Mastercard's Economic Outlook 2022 estimates that 20% of the digital shift in the retail space prompted by the pandemic will continue[5].

While financial inclusion remains a crucial goal, many fintech startups are focusing on pain points that they can identify and empathize with, leading to a diverse pool of entrepreneurial opportunity.

Fintech activity takes a different iteration depending on the catchment being served. In South Africa, for instance, data show a rise in the number of people using cross-border payments to support friends and family in 2022. In South Africa, 85% will use cross-border payments to send money internationally after the pandemic, compared to the global average of 71%[6].

In Africa, contactless solutions enable digital acceptance at small and micro businesses that tend to operate in a cash economy due to the relatively high cost and complexity of obtaining traditional point of sale (POS) devices.

The PayContactless solution uses Mastercard's Tap on Phone, a simple and cost-effective digital payment technology that bypasses traditional POS devices. This is expected to boost digital payment acceptance at small and micro enterprises in Nigeria, Ghana, Kenya, Uganda, and other key markets[7]. The fintech ecosystem essentially works collaboratively, with companies integrating other specialties into their offering to ensure solutions serve specific needs.

Funding reaches unprecedented levels

In 2021, investment into tech startups across Africa – not just SSA – reached unprecedented levels, passing the USD 2 billion mark for the first time. The USD 2.15 billion secured was an increase of 206.3% on 2021. Total annual funding for African tech startups has increased by 1,056.5% since 2015 while the average deal size has more than doubled to USD 3.8 million. Significant amounts were raised by Nigerian and South African fintech firms and digital banks, and Kenyan AI platforms[8].

224

investors were attracted by startups in Africa in 2021, the largest number among Emerging Venture Markets

In fact, fintech was the largest beneficiary of the enhanced funding in Africa, which saw new unicorns emerge and round sizes set records. Fintech companies in Africa raised USD 1.04 billion in 2021, up 547.7% from 2020. This took fintech's share of total funding to just under half of the total, compared to less than a quarter in the previous year[8]. SSA also attracted the largest number of investors (224) among Emerging Venture Markets in 2021, of which 72% were international entities[9].

Fintech influences its ecosystem

1. **Tech-led:** Technology used to play a secondary role in product development. Today, technology drives product development. For instance, Blockchain, which was jokingly referred to as a "solution looking for a problem," is estimated to reach USD 36.04 billion by 2028, at a CAGR of 59.9% between 2021 and 2028 based on potential application in the payments, clearing and settlement, and identity management fields[10,11].

End-user targeted fintech

B2B or B2C fintech companies that embed financial services.

These include:

- Challenger banks
- Digital wallets
- Super-apps
- Alternative lenders
- Wealth management apps
- Crypto wallets
- Brokerages

The enablers of fintech

These solution providers build connectivity and infrastructure for end-user fintech companies.

These include:

- Data aggregators
- BaaS providers
- Issuer processors
- Systems integrators
- Credit scoring providers
- Digital onboarding providers
- Loyalty providers

Subsectors within the fintech spectrum

- **Payment Service Provider / Gateway:** Fintech companies, such as payment aggregators that enable merchants to accept payments from a variety of methods, with the ability to hold funds during the settlement process.
- **E-wallet provider:** Fintech companies, including licensed e-money issuers, that accept and return currency to account holders. E-money issuers allow for the payment execution and transfer of funds for Person-to-Person, Person-to-Merchant, and Bill Pay.
- **Fintech enabler:** Intermediaries that provide financial products and services to downstream fintech companies, banks, and merchants to serve their end-users. These include technology providers, payment facilitators, card issuance processors, and digital wallet facilitators, among others.
- **Paytech provider:** Fintech companies that offer either single or multiple services to customers – remittances, B2C offerings, value-added services, and crypto exchange houses, among others.
- **Digital banks:** Operate exclusively online without traditional physical branch networks.

2. **User-led:** User experience at every level, right from imagining products and services, is at the core of fintech. It drives and is, in turn, driven by customer expectation for the solution to be at their fingertips, immediately and effortlessly.

3. **Banking as a service (BaaS):** The dual role played by technology and consumer expectation leads to embedded services, where banks and non-banks work together towards a common cause, offering products and services as part of an experience.

4. **Regulator-led:** As financial innovation results in new products being delivered by non-regulated entities, regulatory awareness and intervention are expected to increase, with a focus on accountability and dispute resolution for consumer protection[12].

5. **Deals and unicorns:** The focus on fintech activity is likely to transform emerging markets that remain underserved. This brings into focus geographies such as Africa, Southeast Asia, Latin America, and the Middle East[12].

6. **Super-apps:** Research shows that the market may show readiness for and even demand super-apps. Consumers who already use a variety of apps for everything from ride hailing to e-commerce, money transfers, and education, would accept a proposition that goes even further: super-apps that combine many functions in a single application[13].

INTERVIEW | **Drisha Kirkman**
Head of Program Management and Sustainability, Paymentology

"Partnerships and relationships are critical within this ecosystem"

Paymentology is one of the first truly global issuer processors that gives banks and fintech companies the technology and experience to issue and process cards for major networks and local switch partners, putting cards and payments into the hands of millions of people worldwide.

As part of the SaltPay Group, which acquired it in 2021, Paymentology is backed by the same funders that grew PayPal, Square, and Stripe. Europe-based SaltPay brings Paymentology significant funding to keep growing and improving delivery on uptime, time to market, and cutting-edge features.

Which factors are enabling the growth of fintech in Africa?

The big opportunity for growth in Africa lies in the underbanked communities that have never had access to traditional banking services. This gives rise to a burgeoning fintech sector trying to solve needs not served otherwise. Card acceptance is still very limited and expensive for merchants. It creates an opportunity for leapfrogging traditional acquiring channels.

The infrastructure in Africa does not compare to developed markets. Mobile phone penetration is extremely high, making digital solutions the obvious priority. Access to social media and the internet has brought the international marketplace to local residents' screens. This in turn is creating exponential demand for access to cross-border e-commerce. A large number of Africa's diaspora still works abroad or in neighboring countries. As a result, the need for cost effective, easily accessible cross-border remittance solutions is high.

What has played a role in the growth of Paymentology?

Security has been an issue across the African continent. The shift to more secure ways of making payments has been a driving force in Paymentology's growth. Our system and platform allow customers to go cashless by offering alternative payment methods through our secure partners like Mastercard.

Second, the significant growth in wallets has had a huge impact on our business. But wallets are not always universally accepted and are often country- or region-specific. Our platform makes wallets accessible universally through a card network like Mastercard. We were one of the pioneers in doing this back in 2011 with Orange Botswana. Since then, we have grown to integrate some of the largest wallet platforms in the world.

Third is the rise of online purchases globally. Our platform allows customers to shop virtually without a credit card. In Africa, where card penetration is low, consumers and traders usually do not have access to online shopping. Through our platform, we enable fintech firms and issuers to issue virtual cards. This has become extremely popular in the developing countries in which we operate. We have seen a lot of e-commerce businesses emerging.

How robust is the seed and venture funding ecosystem for fintech?

Seed funding, especially for our fintech clients, takes longer than usual. This led to a decrease in funding in Africa. There has been a reluctance to fund startups because of issues around regulation. There is a lack of education in the fintech environment, which can be an opportunity for funders to provide startups with more tools for growth.

How are regulators responding?

Central banks and regulators have been alarmed by several 'rogue fintechs' bypassing regulations and compromising consumers and businesses. What the ecosystem needs to be effective, adapt to changes quickly, and maintain pace with a fast-growing industry is still not well understood. Some fintech companies in Africa have sufficient seed funding and solid business plans, but their growth is stifled by regulators requiring them to acquire licenses that do not consider the new ecosystem.

Governments need to start participating in discussions with national and regional fintech associations and commit to supporting the growth of new and innovative ways to foster financial inclusion and growing economies. There is a need to re-evaluate licensing requirements for the new ecosystem players. This will accelerate route to market.

Do fintech companies benefit from partnerships with global companies?

Absolutely. Global companies like Mastercard and Paymentology bring a wealth of experience and a large network of expertise, not to mention the scale benefit of infrastructure that fintechs would not access otherwise. Partnering with Mastercard, for instance, gives a fintech access to a global market with interoperability across channels, technology, partners, and the latest advances in fraud and dispute management, protection, and AML practices.

A partnership with Paymentology eliminates the need for a fintech to build specialist functions from scratch and provides a cost-effective solution. This allows the fintech to focus on its core strength and area of expertise.

INTERVIEW | **Cyril Shonibare**
Product Strategy and Operations, Paysyack

"Funding for fintech startups in Africa continues to scale year on year"

Paystack facilitates secure payments for merchants from multiple local and global payment channels. Acquired by Stripe in 2020, Paystack has more than 70,000 merchants in its client base, whom it offers frictionless and painless payment solutions that include channels such as cards, bank accounts, bank transfers, USSD, Apple Pay, QR, and mobile money.

The company says its APIs are simple for developers to integrate, while its business solutions include detailed reporting, alerts, and data export.

This gives the merchant the ability to conduct easy reconciliation; get reports on successful, abandoned, and failed transactions; the option to implement granular user permissions; automated chargeback alerts; and analyze customer purchase patterns.

What factors or trends are playing into the growth of the fintech ecosystem in Africa? How is it different from other, neighboring countries or regions?

The African fintech space has grown exponentially in the last decade due to a number of factors including:

- Deepening mobile usage and internet penetration
- Fast-growing young population on the continent
- Underdeveloped traditional financial services ecosystem presenting an opportunity for fintech to fulfil the needs of consumers

In Nigeria specifically, since the 2010s, a number of regulatory policies have been introduced resulting in growth in the fintech sector.

Some of these policies include the introduction of instant payment rails by the central switch, NIBSS.

What are your plans for growth?

New markets. We are currently live in Nigeria, Ghana, and South Africa. We have plans to go live in other African markets in the next 12-18 months. In our existing markets, we plan to continue growing our merchant base and helping our existing merchants grow their businesses.

Who are the main stakeholders in the fintech ecosystem in Nigeria?

Central Bank of Nigeria, the Nigerian Interbank Settlement System (NIBSS), Central Switch, deposit money banks, payment service banks, agent networks, payment service providers, and card networks.

How robust is the seed and venture funding ecosystem for fintech startups? What has your experience been?

The funding ecosystem for fintech startups in Africa continues to scale year on year. In 2021, about two-thirds of all funding raised in the African startup ecosystem was for fintech. This year, despite the slowdown in global markets, funding for African fintech has continued growing, already surpassing the amount of funding raised in previous years.

What is Paystack's vision? Do you see yourself scaling regionally, globally? What are the factors that will support this?

As a company, we aim to facilitate payments within African countries, between African countries, and between African countries and the rest of the world. We are building the digital infrastructure for commerce in Africa and helping merchants grow their businesses.

Do fintech companies in your region benefit from partnerships with global companies like Mastercard in the technology and payments industries? If yes, how?

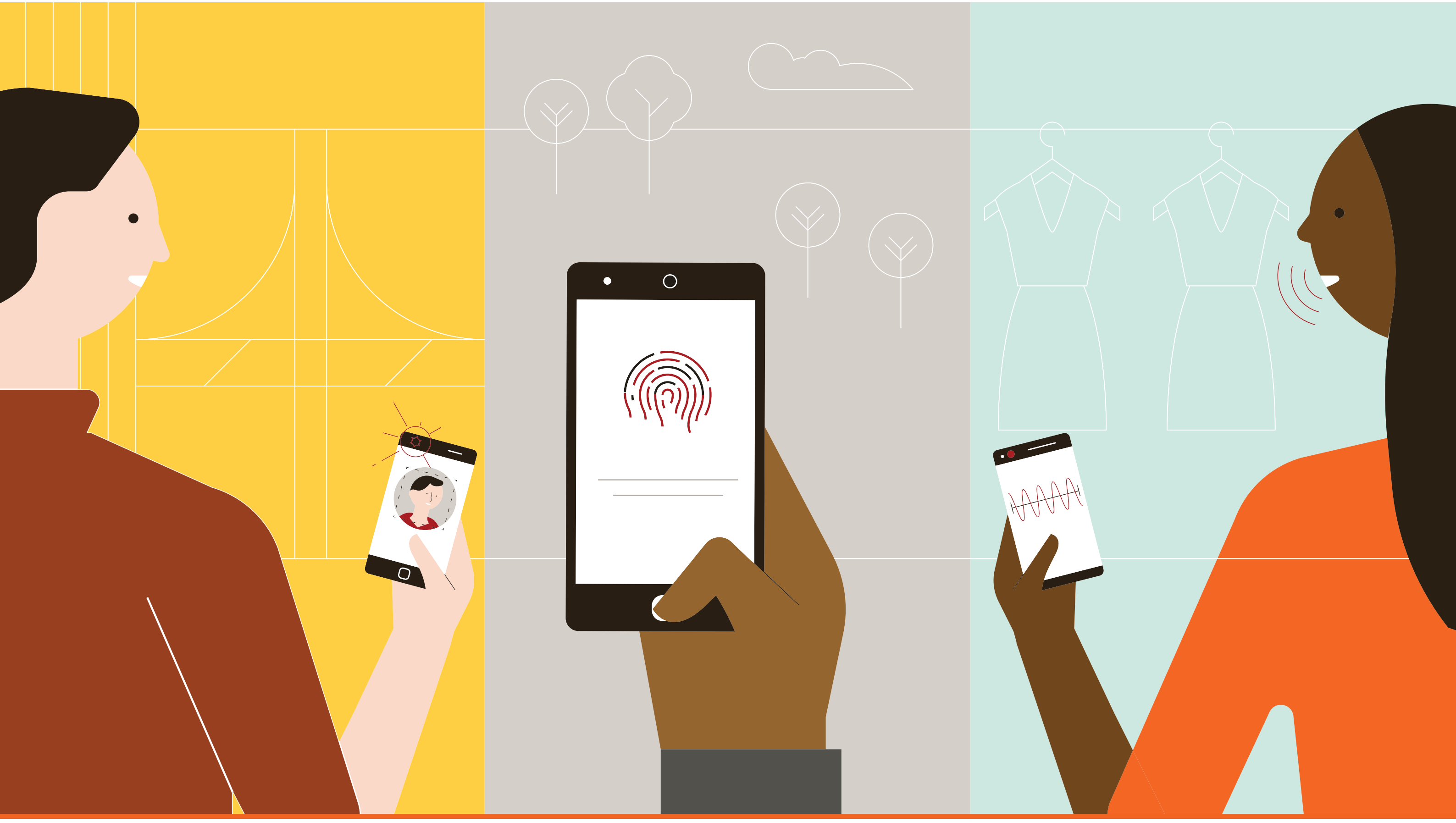
Partnerships with global companies such as Mastercard are essential for fintech companies in Africa. Our relationship with Mastercard enables us to seamlessly collect payments from local, regional, and international issuers that are connected to Mastercard's network.

Are there any factors or trends holding back growth of the fintech sector? If yes, what are these, and how would you like to see these challenges addressed?

In my opinion, the biggest challenge to the growth of the African fintech sector is the lack of uniformity in regulation across the continent. Each regulator on the continent has very different processes, requirements, and attitudes towards fintech innovation. This is further exacerbated by the number of different currencies in use across the continent.

CHAPTER 3

Regulation, private sector participation, and economic impact



- Africa has proactive regulators who foster innovation for financial, digital, and economic inclusion
- During the COVID-19 pandemic, many regulators across Africa accelerated regulatory innovation
- 45% of the population has no official identity, making eKYC a seamless entry point for fintech
- Payments and remittances are regulated across Africa; other aspects are not so well regulated

45%

of the population in Sub-Saharan Africa does not have an official identity document

Proactive regulators foster innovation

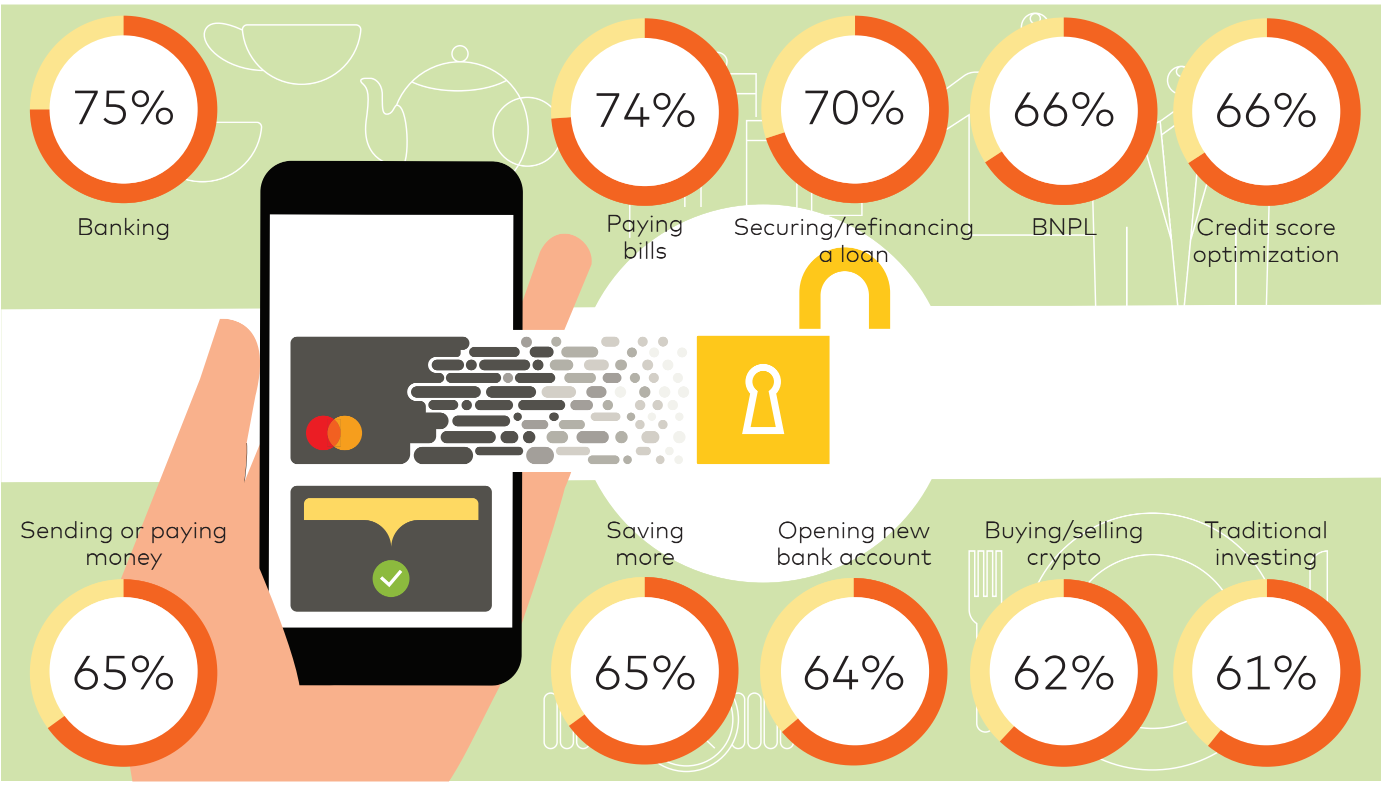
Africa is home to some of the most proactive regulators, who continue to foster innovation to ensure not just financial but also digital and economic inclusion. The last couple of years have seen numerous regulatory innovation initiatives and sandboxes emerge in Africa. The successful implementation of the "test and learn" approach towards mobile money has a set a precedent, demonstrating the usefulness of accelerating the ability of regulators to respond to financial innovation[1].

Regulators draw a clear line between banks and non-banks, between financial and non-financial institutions. Fintech companies have been encouraged to work in collaboration with other stakeholders to deliver solutions, or obtain micro-finance licenses, which allow them to take deposits from customers[2].

Fintech regulation is very much a work in progress, with regulators finding bespoke solutions while working alongside other stakeholders. What is common across jurisdictions is the aim of achieving the right balance between fostering innovation and protecting consumers.

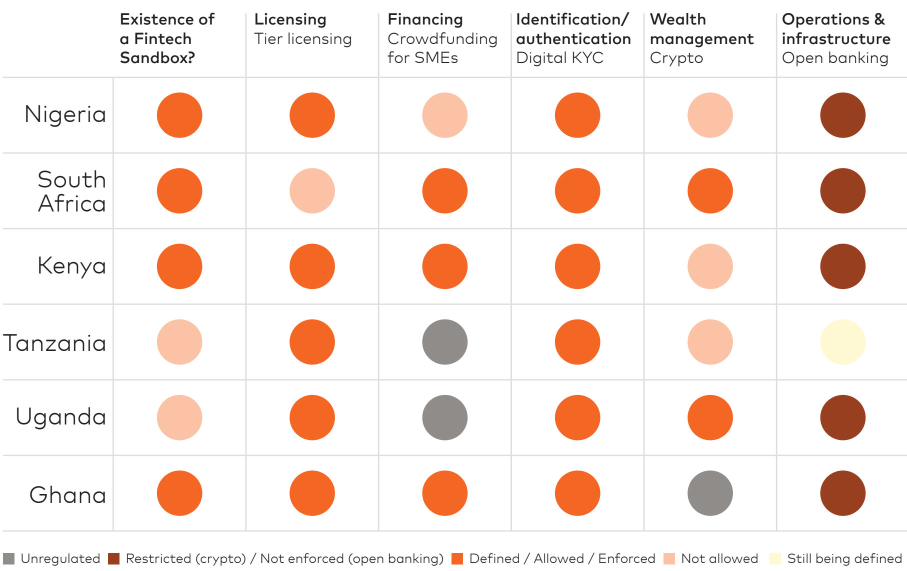
Unlike, say, the US or European markets, which have pan-regional regulations, the African market is not unified in regulatory terms, which poses challenges in scaling. However, examples such as the Pan-African Payment and Settlement System (PAPSS), being developed by the African Continental Free Trade Area to ease payments constraints across more than 50 countries and 40 currencies, can prove to be transformational for cross-border payments.

Top financial activities users are willing to connect to their bank account



Source: Global New Payments Index, EEMEA Mastercard, May 2022

Enabling environments in selected African jurisdictions



Source: Fintech in Africa: The end of the beginning, McKinsey and Company.

Regional initiatives such as the South African Development Community Real Time Gross Settlement System (SADC RTGS18) are already enabling transaction settlements within regions, doing away with complex correspondent banking arrangements[3]. During the COVID-19 pandemic, many regulators across Africa accelerated regulatory innovation. Digital infrastructure was prioritized, along with regtech solutions, which support innovation offices and regulatory sandboxes in providing solutions uniquely suited to local needs.

With a proactive and supportive regulatory framework, the growth of fintech is tied to increased entrepreneurial activity, which in turn promotes job growth and economic expansion. In mature ecosystems, the role of the government is limited to setting policy and regulation, allowing the private sector to take the lead.

53%

respondents in a survey said they "urgently need" regulatory support for eKYC

In emerging fintech environments, the government is likely to be involved across the entire ecosystem via its funding of co-working hubs and accelerators or even providing seed finance and grants. Compared to their global counterparts, African regulators are more likely to use regtech to automate compliance and oversight processes[1].

eKYC is a starting point for scaling fintech

Regional collaborations among regulators can help achieve scale and minimize fragmentation to increase cross-border activity. Regulators do this by recognizing other similar jurisdictions. For example, already in 2022, the Digital Cooperation Organization (DCO) announced that Bahrain, Nigeria, and Saudi Arabia would provide a "startup passport" that facilitates the entry of entrepreneurs in one DCO member country into other member countries[4]. Startups such as Ukheshe offer innovative software as a service (SaaS) solutions to banks in order to overcome hurdles in cross-border payments[5].

The paucity of formal identification has long been recognized as a hurdle to extending the reach of digital finance.

In SSA, 45% of the population (approximately 500 million people) do not have an official identity. Close to half of the global population that lacks documentation is in Africa[6], making the Know Your Customer (KYC) process fraught and resource intensive. Enabling eKYC can partially help overcome the challenge. The use of electronic verification – supported by almost half the jurisdictions in Africa – requires financial services providers and governments to collaborate in accessing private or public databases[1]. In a survey, 53% of respondents in the SSA region indicated that they "urgently needed" more regulatory support for eKYC processes[1]. For fintech companies, eKYC paves the way for scaling digital finance, and eliminates resource-intensive manual processes, lowering the cost of onboarding clients[1].

Digital payments, e-money, and remittances have near-complete coverage across African regulatory frameworks, while P2P lending, equity crowdfunding and others are not as well-regulated

Crypto and open banking still need attention

Various subsectors within the fintech space have different levels of regulation. Globally, and in the region, a vast majority of fintech companies are involved in payments and remittance activity. Consequently, payments enjoy a robust regulatory framework, with at least one regulator/ agency with a mandate/ authority for payments in each jurisdiction. A general regulatory framework, by and large, covers digital payments as well, with licensing being mandatory before commencing any payments activity.

Of the fintech segments, digital payments, e-money, and remittances have near-complete coverage across Africa, in the form of a regulatory framework. However, other verticals such as P2P lending and equity crowdfunding are not as well-regulated[1]. Overarching industry-wide regulations protect fintech companies and consumers. For instance, data protection is at various stages of implementation. Data is the lifeblood of the fintech industry. Many fintech business models rely on data, and the need to secure it, in line with global best practice. Cybersecurity, both in its overarching form as domestic frameworks, and specifically for the financial services industry, is also in focus[1].

Initiatives that prioritize financial sector cybersecurity and data protection pave the way for safe and secure open banking frameworks, in which data sharing becomes more feasible.

Open banking invites participation

Open banking, which refers to the process by which banks and other traditional financial institutions give customers and third parties easy digital access to their financial data, often facilitated by APIs and communication protocols, has been a topic for discussion. It enables third-party providers to enter and service the market. Regulators are aware of the potential of open banking in developing innovative solutions aimed at underserved populations.

Open banking is used by both Payment Initiation Service Providers (PISPs), who are authorized to make payments on behalf of the customer, and Account Information Service Providers (AISPs), who use account information and data to personalize services or provide insights[1].

Open banking frameworks govern the protocols by which information is shared and requested, in line with consumer protection and cybersecurity guidelines. The Mastercard New Payments Index 2022 shows that consumers are using open banking for a variety of tasks, including bill payments, loans, Buy Now Pay Later (BNPL) payments, credit score optimization, remittances, saving, trading cryptocurrency, paying off loans, and financial planning, among other things. Over 50% consumers across the region want to link their accounts to automate payments, because transactions are faster. And almost 50% find it more convenient to track and manage bill payments, or transactions between accounts, and general financial management. However, about 40% are concerned with the security of their finances and personal identity, which is where an effective regulatory environment comes in[7].

Globally, open banking frameworks as policy innovation are increasingly being implemented. However, in SSA, in 65% jurisdictions indicated that they had no plans to implement an open banking framework, compared to 30% of regulators in APAC and 23% in MENA. Nigeria emerges as a case study, in the fact that the regulator has mandated open banking frameworks, along with financial services data protection rules[1].

65%

of jurisdictions have indicated they have no plans yet to implement open banking frameworks

To make open banking work, however, nuances in each of the countries need to be addressed and regulations need to accommodate individual territory requirements. Any effort to simply copy and paste a solution like Europe's PSD2 or Australia's CDR could prove counterproductive[8].

INTERVIEW | **Ngozi Megwa**
Senior Vice President Digital Partners and Enablers, EEMEA, Mastercard

"We are fintech's partner to co-create solutions that help them build, launch, and grow"

Which trends are playing into the regional and global fintech sector?

We are seeing three main segments that are growing and dominating the funding space in the region. The first one is payments. That is by far the largest segment of the fintech space at this time. The second is crypto, and it is emerging very quickly, growing at an enormous rate. The third piece is lending, via BNPL payments or alternative lending methods. Those are primarily the three main segments that are growing across the markets in which we operate.

How robust is cross-border growth for fintech companies in the region?

There are both local and regional factors at play. Cross-border payments, for instance, are particularly important in the Middle East, especially in the GCC market, because remittances form a major component. There are significant opportunities to develop products that save costs as well as transaction time for end-users. When it comes to localization, the nature of fintech is such that it needs to adapt to everything, including the local regulations, consumer behavior, internet penetration rates, etc. Even in markets where internet access is high, internet banking penetration may not be high. The levels of financial literacy vary. Localization includes being aware of cultural factors and incorporating them. There are both public and private sector attempts to work across markets in the form of fintech associations and regulatory corridors, so that it's possible to learn from shared experiences. There is a positive approach towards collaboration, which is very encouraging for all stakeholders.

How robust is the seed and venture funding ecosystem for fintech?

We have seen a tremendous amount of investment coming into the fintech space, specifically around payments, across all markets in Eastern Europe, Middle East, and Africa. This peaked during 2021, when there was accelerated growth in the sector. However, there is still room for growth.

What are the regional variations in the types of fintech companies being set up – e.g. enablers, PSPs, gateways, e-wallets, paytech providers, among others?

There is growth across categories. Enablers are fulfilling a great need across categories. We see a lot of enablement on B2B enterprises based on providing access or an API, which enables multiple capabilities.

Are there regional variances in the maturity of infrastructure?

Certain markets are significantly ahead, others are catching up. But one of the big stories about fintech is cooperation, collaboration, and partnership. If there is a missing piece, they partner with someone and integrate it into the solution. It is simple and it is growing. So there are cases of fintech companies partnering with each other to solve for certain pain points and enabling crucial use cases.

How does a global company like Mastercard fit into a largely startup-driven fintech ecosystem?

We are digital first. The system is symbiotic and constantly evolving. We know that our customers today look very different than they did a few years ago. Today, we're in a multi-segment business, in which fintech companies are a very important segment. As Mastercard, it is very important that we embrace this change.

Fintech companies have key requirements – to grow their customer base and business, obtain higher valuations, and receive endorsements. We provide our expertise and our solutions, and we partner with fintech companies to co-create the solutions that help them build, launch, and grow.

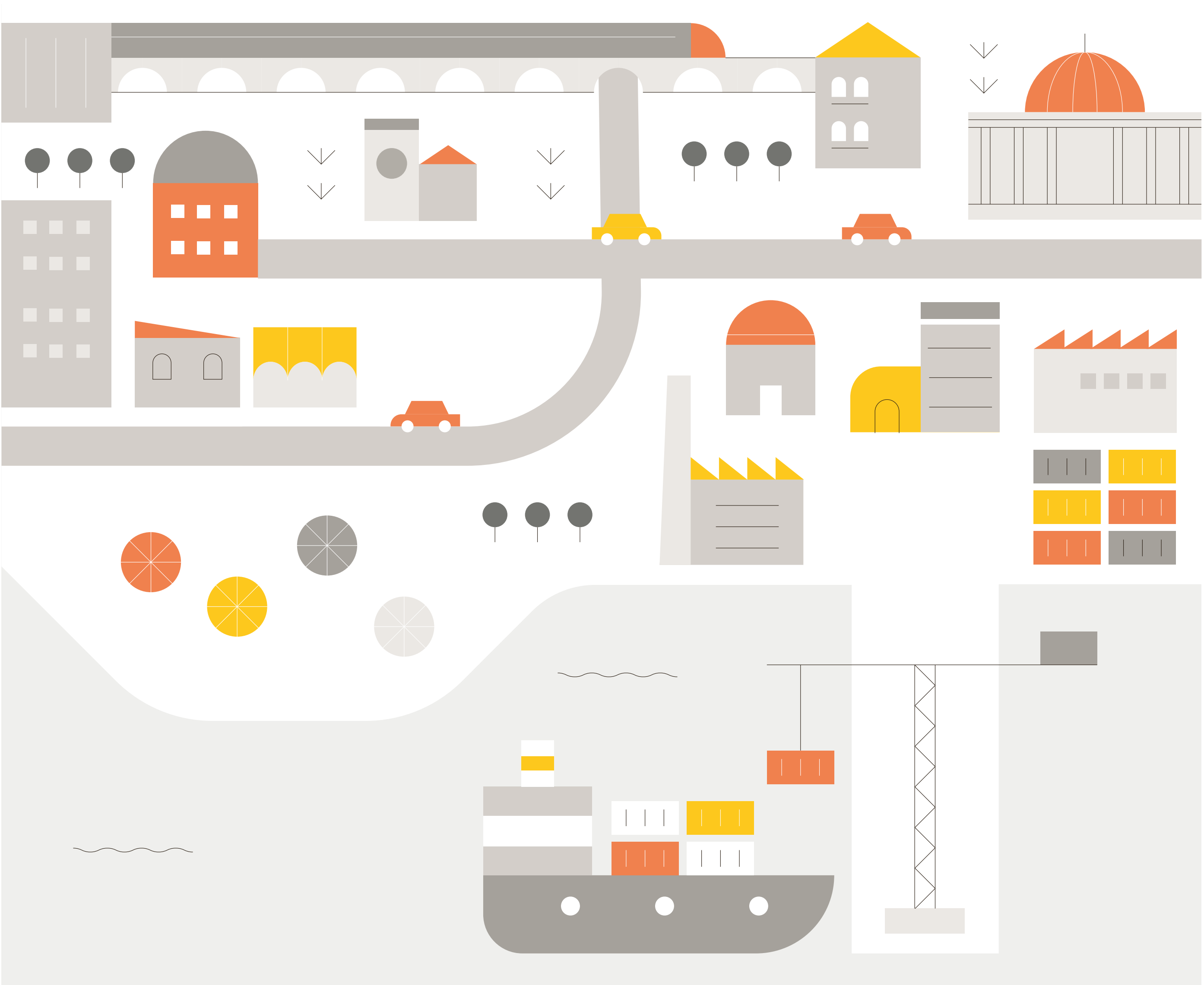
How symbiotic are Mastercard's relationships with customers?

Fintech companies have become an increasingly important segment for us. They are channels for innovation and growth, as well as partners for co-creation. They come in different shapes and forms. Some fintech companies engage in issuing and acquiring activity and are, therefore, our direct customers. Others are "enablers" that help our customers digitize and innovate, often specializing in segments or flows that are not yet serviced. Still others are small startups, pushing the boundaries of financial services. They preview innovation and offer us the opportunity to explore new use cases. Startups help us learn more about areas that we are already focused on and highlight areas we should focus on. As we imagine the future, these aspects become critically important.

Which payments use cases are supporting future growth?

From a payments flow perspective, each market is nuanced. We try to ensure that we provide capabilities across all use cases. Bill payments, for instance, are very important. Similarly, B2B is an important stream, along with peer-to-peer networks. Lastly, government disbursement is obviously something very important for us. So the full payment picture is very important.

Country profiles



- Kenya's fintech ecosystem and its regulation can be traced back to the development of the M-Pesa platform in March 2007
- Nigeria has frameworks that enable P2P lending and equity crowdfunding and is one of two jurisdictions in Africa that has an open banking framework
- The fintech sector is the largest employer among South African startups, accounting for almost 40% of jobs

NIGERIA

MARKET OVERVIEW

- Nigeria is a major player in tech startup funding in Africa and the fintech sector is dominated by the payments segment
- Lagos is one of the continent's major startup hubs, with 88.4% of Nigerian tech startups based there
- Fintech is the leading sub-sector of the Nigerian startup space, both in terms of activity and amount of funding
- 15.6% of Nigerian tech startups have at least one woman in the founding team
- 45.1% of startups have gone through acceleration or incubation (38.6% in Egypt and 25.7% in South Africa)
- Fintech sector accounts for almost half of startup employment

FUNDING

- A third of all fintech funding in Emerging Venture Markets in 2021 was in Nigeria
- Among EVMs, Nigeria ranked first in 2021 by both fintech deals and funding
- Nigeria produced two unicorns in 2021

ENABLING SYSTEMS

- Nigeria has frameworks that enable P2P lending and equity crowdfunding and is one of two jurisdictions in Africa that has an open banking framework
- The country is home to over 164 innovation hubs
- Nigeria produced two unicorns in 2021

KENYA

MARKET OVERVIEW

- Transformation of the financial ecosystem began with the development of the M-Pesa platform in March 2007
- Financial inclusion increased from 26.7% in 2006 to 83.7% in 2021
- Nairobi is dubbed "Silicon Savannah" due to its strong tech ecosystem, acting as a regional hub
- The Central Bank of Kenya has outlined a path for the country's payment capabilities with the launch of its National Payments Strategy 2022–2025
- Within fintech, the lending subsector commands 30%, followed by payments at 27%, and blockchain at 15%
- During the first 11 months of 2021, Kenyans made 1.9 trillion mobile money transactions worth more than USD 55 billion, up 20% over the number of transactions in all of 2020

ENABLING SYSTEMS

- Regulation of fintech can be traced to its early mobile payments and mobile money approach of "test and learn", which led to the enactment of a dedicated payments regulatory framework
- Kenya is an early adopter of regulatory sandboxes and innovation offices in Africa
- Digital identity systems include access to governmental data, allowing financial service providers to authenticate identity

SOUTH AFRICA

MARKET OVERVIEW

- Cape Town is the startup capital of South Africa, accounting for 45.9% of ventures; Johannesburg follows with 41.6%
- Fintech is a major driver of startup activity with 30% of companies active in that space
- 14.3% of South African tech startups have at least one female founder
- 25.7% of startups are accelerated; South Africa has the continent's oldest tech incubator
- Fintech is the largest employer among startups, accounting for almost 40% of jobs
- Payments and remittances attract the most startups in fintech, 27.2% in 2021; lending and financing produce 17%

FUNDING

- Five of the 10 largest fintech funding rounds across Africa were raised by South Africa-based startups in 2021

ENABLING SYSTEMS

- The Inter-Governmental Fintech Working Group brings together regulators with a mandate over fintech activity
- The South African Banking Risk Information Center collaborates with the Department of Home Affairs to enable verification of customer identity against the government's biometric database

Country profiles have been compiled from various sources, including: Fintech 2022 Venture Investment Report by MAGNiTT; Fintech Regulation in Sub-Saharan Africa by the Cambridge Center for Alternative Finance at the University of Cambridge Judge Business School; and Fintech: Middle East and Africa 2021, by The Fintech Times.

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Authorship

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