CFC Africa Insights

Digitalizing Africa:

The rise of Fintech Companies

CASABLANCA FINANCE CITY
القطب المالي للدار البيضاء

pwc

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Table of contents

Foreword

The African Fintech landscape differs from global trends. Whereas, in developed countries the momentum evolves around higher technology (blockchain and artificial intelligence), African Fintechs contribute mostly to financial inclusion, reaching out to non-served and underserved populations, and bridging the financing gap for SMEs.

> To this end, financial centers in Africa, such as Casablanca Finance City, have an important role to play in building Fintech ecosystems, fostering synergies, innovation and access to financing for startups.

This report, produced in collaboration with PwC Advisory Africa, among the leading professional services networks in the world and a CFC community member, is part of our CFC Africa Insights series. It sheds light on the current growth of Fintechs in Africa and the challenges that still lie ahead.

These series of reports showcase the collective knowledge and African expertise of our members and are part of CFC's core value proposition. They are meant to provide international investors with insightful information and data to better comprehend Africa's diversity and access the different business opportunities that exist.

I wish you a pleasant read.

Said Ibrahimi
CEO of Casablanca Finance City

On behalf of PwC Morocco, and the PwC network, it is my privilege to present to you our report on Fintech Companies in Africa, part of the CFC Africa Insights series.

In the past few years, we have seen global megatrends such as demographic change, urbanization, shifts in global economic power, and technological innovation continue to affect business dynamics all around the world. This is particularly true in Africa with its young population, its ever-expanding mega-cities but above all its adoption of new technologies. Not hindered by legacy systems and infrastructure, Africa is using new technological innovations to leapfrog traditional development and provide solutions adapted to the specifics of the continent.

> The rise of Fintech Companies in Africa is a fact. And we should encourage and support companies that are part of it, as their success will be vital to resolving some of Africa's most structural problems.

At PwC, we focus on building trust in society and solve important problems. We all know that the African continent faces many problems. Yet, we are convinced that many of these problems can and will be resolved by Africans, with locally built solutions. The number of start-up companies in Africa is encouraging and their focus on some of Africa's most structural problems is heartwarming. In this publication, we explore in particular the rise of Fintech Companies in Africa and their focus on problems such as financial inclusion.

While we will outline in this publication that there are still some real difficulties to overcome for Fintech Companies in Africa, our publication highlights above all a positive story and trend. It will be fascinating to see how this trend develops in Africa over the years to come.

Réda Loumany
Territory Managing Partner PwC Morocco

Executive Summary

Fintech Companies are businesses providing financial services and products using new and innovative technological solutions and are present across various sub-segments in the banking and insurance sectors. The Fintech industry has risen quickly thanks to three main global trends: a fast moving technological environment, changing customer habits and the structural impact of the global financial crisis on the traditional financial corporations.

Fintech Companies have disrupted traditional models by offering a better customer experience through innovation. This has created a competitive environment for traditional financial institutions and Fintech Companies; however, this competition is now gradually turning into a "coopetition model" as ways to collaborate are being tested and deployed.

While all global regions are seeing the development of Fintech Companies, the United States and Europe have been the most active hubs and Asia (through India and China) is catching up. In these regions, the necessary environment needed for Fintech Companies is present: mature financial services markets with significant private equity presence, a large pool of talent readily available, as well as adapted and supportive regulatory frameworks. In Africa, the Fintech industry does exist, but is relatively small compared to other regions.

The Fintech sector is the most active sub-sector within the African start-up ecosystem. It mostly targets solutions to improve financial inclusion by addressing the unbanked segments of the population. Some of the most important drivers for Fintech development are low banking rates, strong mobile/internet penetration, young tech-savvy demographics and a significant diaspora with ties to their respective African countries.

The development of Fintech ecosystems happens at different rates of speed in Africa.

There are at least eight countries leading the Fintech movement and three types of ecosystems / regions: Africa's "Leading" Fintech Ecosystems in Anglophone Africa (e.g., Nigeria, Ghana, South Africa and Kenya), Northern Africa's "Emerging" Fintech Ecosystem (e.g., Morocco, Tunisia) and "Promising" Fintech Ecosystems in Francophone Africa (e.g., Senegal, Côte d'Ivoire).

A large and well-trained workforce is required for the continuing growth of the different Fintech ecosystems in Africa. Yet, improving the education system remains a major headache for many African countries. The young population of Africa is one of its greatest assets. Governments and the members of the various African Fintech ecosystems should work hand-in-hand to make this a priority.

Fintech Companies in Africa continue to emerge and grow thanks to the increasing interest of banks and telecom companies, which are offering not only collaboration options, but also access to markets and deep industry expertise. However, the regulatory environment in Africa is yet to be adapted to these new market players and slows down the development of the Fintech ecosystem in certain regions. Addressing the regulatory challenges for Fintech Companies in Africa would complement the governments' efforts in offering financing options tailored to the needs of Fintech Companies, since access to finance continues to be a daunting issue for their founders.

So while the rise of Fintech Companies in Africa is on a positive trend, close collaboration and full alignment of initiatives by all parties will be required to accelerate and consolidate this growth. Institutions that focus on creating financial ecosystems and facilitate investments, such as the Casablanca Finance City, are perfectly positioned to facilitate this process.

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Fintech Companies have disrupted traditional models by offering a better customer journey through innovation

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The Fintech sector is the most active sub-sector within the African start-up ecosystem, with **39% of all venture capital backed deals in 2018.** It mostly targets solutions to improve financial inclusion by addressing the unbanked segments of the population

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The development of Fintech ecosystems happens at different rates of speed in Africa

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A large and well-trained workforce is required for the continuing growth of the different Fintech ecosystems in Africa. The African continent has a population that is one of the youngest in the world, with a **median age of 19.4 years** old.

Traditional financial corporations are embracing the disruptive nature of Fintech Companies: **82% expect to increase Fintech partnerships** in the next three to five years

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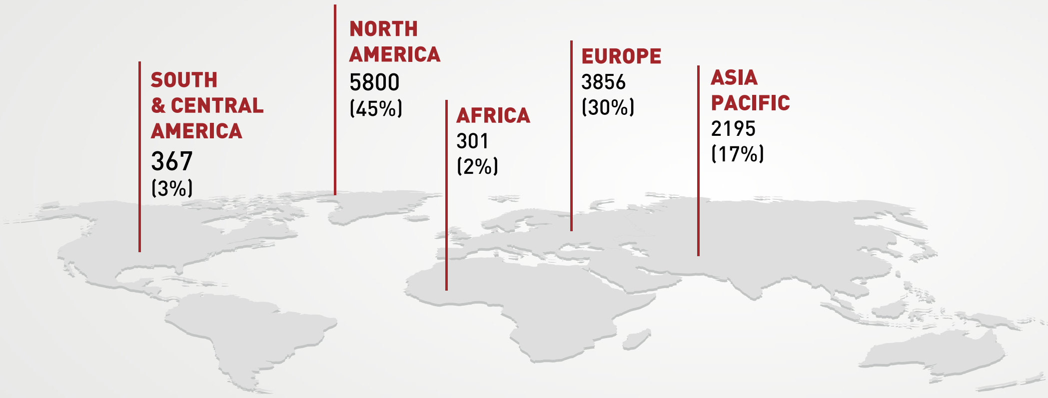
FINTEC
LSM/VK

THE RISE OF FINTECH COMPANIES: HOW THE TRADITIONAL MODEL OF THE FINANCIAL SERVICES INDUSTRY IS BEING DISRUPTED

What is a Fintech Company?

Fintech Companies are businesses providing financial services and products by making use of new technologies. We can compare them to technology-oriented startups that have a digital marketing and commercial approach, that rely on a targeted product offer. Fintech Companies directly compete with banks and insurers, in almost all areas of the financial sector.

Fintech Companies split by region, over ~13 000 identified Fintech Companies



The landscape of Fintech Companies all around the world shows that there are nearly 13. 000 Fintech Companies, mainly based in North America (half of them). Another third of them are based in Europe. Africa only represents 2% of the total Fintech Companies worldwide.

Source: Pitchbook.com

Fintech Companies are spread over many sub-segments of the financial sector

Fintech Companies operate in many fields, and provide end-user services (within the B2C or B2B market) as well as platform or infrastructure services. We have identified 12 main areas in which Fintech Companies operate:

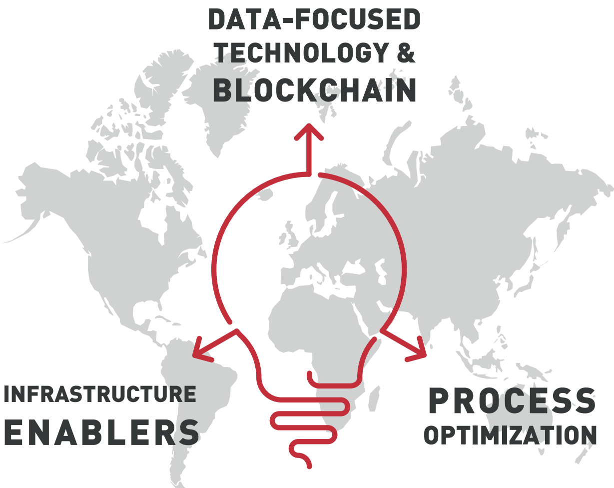
Example of Fintech Companies per segment[2]

Source: CB Insights

The number of Fintech Companies has risen quickly thanks to three main global trends

The Fintech industry has risen quickly thanks to three main global trends:
- a fast moving technological environment with some new developments
- changing customer habits, especially those of the younger, tech-savy generation
- structural impact of the global financial crisis on traditional financial corporations.

A fast moving technological environment and breakthrough nurturing new use cases



We have witnessed over the last few years some incredible technological breakthroughs that can be applied easily in the area of financial services. Their application is leading to radical changes in an industry historically dominated by large financial institutions, often referred to as the incumbents. New technologies such as Big Data, Artificial Intelligence and Blockchain are changing the actual model in a fundamental way. Fintech Companies are early adopters of these technological breakthroughs, allowing them to build a competitive advantage over traditional financial corporations. We can split these technological breakthroughs in three categories:

Data-Focused technologies & Blockchain

Data Analytics consists in processing large sets of data to detect market trends, consumers' preferences, predict the future of customers' needs, and help them to accelerate decision-making processes. By doing so, these technologies allow financial services companies to use instantly available information (historical financial transactions and external data on clients e. g. social media) to provide personalized offerings.

Artificial Intelligence allows computer systems to scan environments, think and make a decision similarly to human intelligence. User experiences will improve by providing an assistance in decision making (intelligent chat-bots, personal financial advisors, etc.)

+14%
In the global GDP by 2030 thanks to the use of intelligent systems

$15,7
TRILLION
AI added value to the global economy

Blockchain is a technology that allows information to be stored through a distributed database that provides a large number of new use cases for financial services. By relying on a peer-to-peer network, blockchains reinforce trust in transactions made and provides new use-cases through so-called smart contracts.

Process automation

Robotic Process Automation consists of software and algorithms that allow financial services companies to automate repetitive, rule-based processes and activities more efficiently. It makes banking processes more efficient by industrializing tasks, optimizing the effort and reducing the margin of error.

Infrastructure enablers

Cloud infrastructure will help financial services companies build their applications in a flexible and scalable way. Optimizing the execution time from an IT perspective, and therefore optimizing the time-to-market of products and services. The cloud also helps firms optimize costs, through pay-per-use opportunities.

Application programming interfaces are being developed and offered to clients in order to enhance and personalize offerings, as it facilitates real-time data exchange between actors within the ecosystems (banks, Fintech Companies, etc...).

Demographical trends that radically change customers habits

People around the world are increasingly more connected and better equipped

A rising number of people around the world now have access to affordable data plans, allowing them to discover new digital services. This evolution has reshaped the commercial relationship with customers, making digital/mobile channels the center of sales strategies. By 2020, around 2.87 billion people in the world will have a smartphone whereas mobile internet will gain a penetration rate of about 50% by 2022. In Africa specifically, GSMA Intelligence expects the number of smartphones to reach 690 million by 2025, further confirming that this trend is as present on the continent as it is in the rest of the world.

$4
BILLION
Worth of purchases through mobile phones in 2018

$34
BILLION
Worth of purchases through mobile phones in few years

Source: Forrester research

As part of this "digitalization" of the world population, access to financial services has increased considerably. For example, online purchases through mobile phones have witnessed an unprecedented rise. Consumers are currently making over $4 billion worth of purchases through their mobile phones. Researchers predict that the numbers will reach $34 billion in just a few years' time. In Africa, this is also the case, as we have witnessed the rise of e-commerce platforms such as Jumia, Avito, Konga, Hmizate, Kilimall, Zando, and BidorBuy.

Social and behavioral change foster the development of digital services and products

Milennials have a different mindset in comparison to the clients financial institutions are used to serving. Millennials are mostly experience-centric, whereas other clients tends to favor brand loyalty. They also expect more real-time delivery and driven by service costs. This demographic was born between the early 80's and 90's. They expect a faster real-time delivery and lower service cost. In addition, they search for transparency and convenience. They demand a personalized product or service to be at their fingertips at any given time. Millennials expect quick reactivity on behalf of their bank (generally, a return within the hour), whether it is a human or robot response.They rely on multi-channel approach, with strong expectations on digital channels: they are more likely to communicate with their banks through phone, e-mail or bank internal messaging application rather than through physical branches.

83%

Of Millennials would switch banks if they get better rewards

FREE

93%

Of Millennials consider a no-fees banking for their daily needs

85%

Of Millennials are saving every month a small part of their income

65%

Of them are excepting digital budgeting tools from their banks

These recent social behavior changes have created a sort of "uberization" of financial services and products leading to an ongoing disintermediation process: no longer are banks and their branch network at the center of the industry, mobile technology is.

The increasing importance of emerging markets in the growth of the world population, combined with the rise of a middle class

Between 2017 and 2050, half of the world's population will emerge from nine countries with emerging markets: Nigeria, Pakistan, India, Ethiopia, Uganda, Indonesia, the USA, the Democratic Republic of the Congo, and Tanzania.

As the populations in emerging countries grow, so does the middle class, helping a large amount of people move out of poverty. This new middle class is financially comfortable and fond of demonstrating their status through purchases and usage of the latest smart devices.

The rise of this new middle class, with increasing disposable income, is an important trend to watch, as this population is growing by about 5% each year: it will reach almost 5 billion people in 2030, multiplied by 2,5 from 2009 to 2030. In Africa, the middle class is also expected to grow, reaching 1.1 billion by 2060 according to the African Development Bank. This would represent 42% of the predicted population on the continent.

7,6 BILLION
Current world's population

8,6 BILLION
World's population by 2030

9,8 BILLION
World's population by 2050

Source: http://www.uhy.com/the-worlds-fastest-growing-middle-class/

The global financial crisis, and the structural impact on the traditional financial corporations

Recent events in the financial industry, in particular the global financial crisis, have resulted in an important loss of trust from customers and has led to questioning the morality of the industry. This has favored the rise of Fintech Companies, which are now for many customers a viable alternative. We identified five other factors that have led to the rise of Fintech Companies:

TALENT

Skilled people working in the financial sector decided to part ways with traditional banking and take on an entrepreneurial route to reimagining and rebuilding the financial industry as a whole

TECHNOLOGY

Technologies evolution and affordability brought down some entering barriers in the market, making it easier for new comers to exploit opportunities without huge upfront investment

INNOVATION

Late awareness of banks concerning innovation and technologies implementa-tion, as regulatory compliance and risk control were the primary stakes for financial institutions, allowed Fintech Companies to take a leading advantage over the traditional players

PRUDENTIAL REQUIREMENTS

Through new prudential requirements following Basel III setting up new solvency and liquidity norms banks have put stronger mechanisms of credit acceptance leading to credit lines contraction for businesses and individuals leading Fintech Companies developing alternative funding offers for customers and SME such as marketplace lending & alternative platforms

FINANCIAL SECTOR LIBERALIZATION

Financial sector liberalization, particularly through regulation evolutions, which forced banks to open their data for third parties, helped Fintech Compagnies in gaining access to customer data quicker than expected. Open banking directives had forced incumbents to develop API in order to give third parties access to their customers data, boosting new Fintech offers on the market, such as aggregator players (e.g.,PSD2)

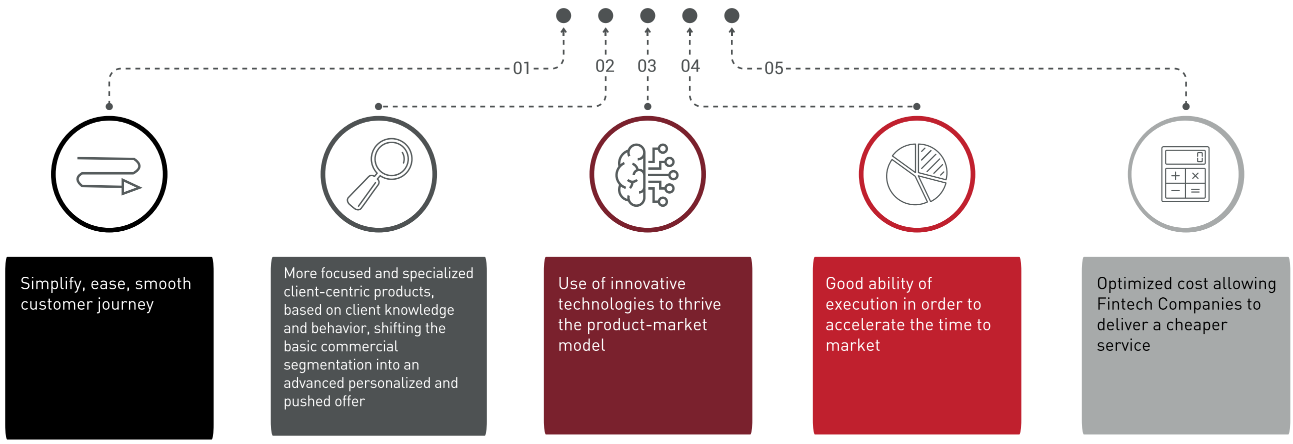
Fintech Companies disrupt traditional model and change customer standards

Fintech Companies are changing the standards of financial services by solving many customers' pain points by providing innovative customer experiences

The differentiating factor of Fintech Companies is to be a game changer by focusing on a specific market approach, addressing the clients through their financial needs or consumption habits.

The following pain points have been cited by clients of traditional financial insitutions; low quality customer service, no single point of contact, high costs, slow adaption rate to change and impersonalized solutions. Fintech Companies generally find a disruptive way to solve these pain points by setting up a new model to approach the client. They focus on:

> Silicon Valley is coming. There are hundreds of startups with a lot of brains and money working on various alternatives to traditional banking. They are very good at reducing 'the pain points'
>
> **Jamie Dimon**
>
> JP Morgan Chase & co.
> Chairman and Chief Executive Officer



Fintech Companies offer a simplified smooth customer journey

By using the client experience as a starting point, Fintech Companies have built their business model on their capacity to offer a better experience, with the use of new technology, whereas traditional financial institutions remain focused on client proximity, offering a coverage of their needs through a physical branches network and dedicated contact persons. Fintech Companies provide customer services on an ATAWAD model (AnyTime, AnyWhere, AnyDevice), with no constraints allowing the customer to use the financial services on 24/7 basis.

Fintech Companies aim to develop specialized client-centric products

With a clear focus on tailored services and specialized client-centric products, Fintech Companies focus on tailored services and client-centric products, whereas traditional financial institutions cover a global need relying on a very large offer aligned with each segment served. Based on client knowledge and behavior, Fintech Companies are shifting the basic commercial segmentation into a more advanced and personalized offer.

Fintech Companies use innovative technologies to thrive the product-market model

Fintech Companies have built their offer around new technologies that focus on product innovation and enhancement of user experience. Indeed, data is able to provide proactive insights on the client's needs, allowing Fintechs to suggest personalized products. The traditional financial institutions are often struggling with maintaining their legacy systems, which are often complex, diverse and not reliable.

Fintech Companies use their ability to execute quickly and accelerate the time-to-market

Fintech Companies optimize their time-to-market (the time it takes to convert an idea into a product offered to a client) through the agile methodology, which accelerates development and process of execution. Traditional actors are still trying to shift from a time-and-cost development model, based on a global product development approach (design, development, tests, go-live...).

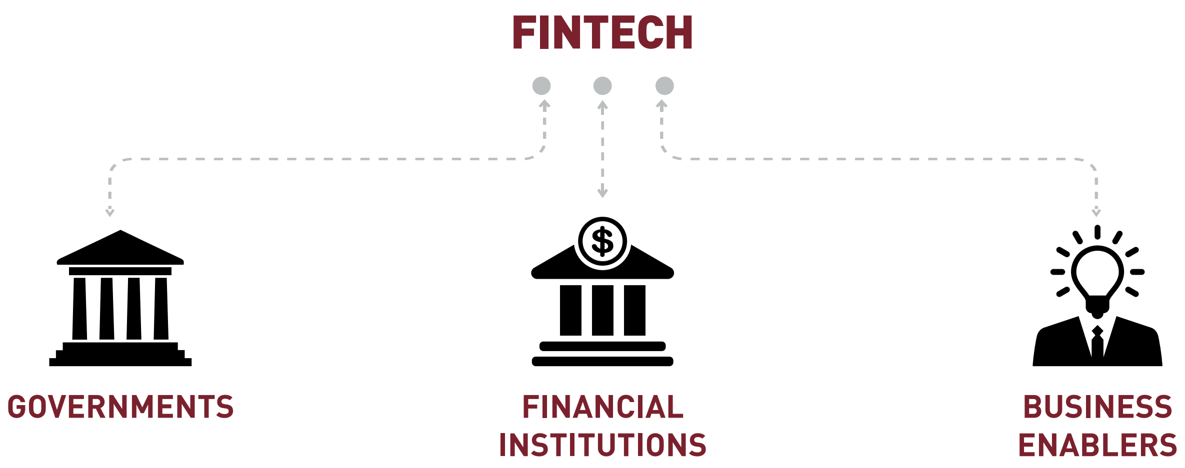
Fintech Companies optimize costs allowing them to deliver a cheaper service

Fintech Companies can be cheaper than the traditional financial institutions, since they are able to optimize their costs to the fullest. Traditional financial institutions have put in place an economies-of-scale approach, based on global optimization of costs as volumes increase. Fintech Companies benefit from their low cost structure as they focus on one product or business line (e. g. payment, loans, wealth management...) and often address one or two value chain segments with a limited number of target client segments.

Despite their fast growing development and success, many Fintech Companies are still struggling and often face technological threats, which they need to overcome. For example, when accessing third party data for customer research, they are exposed to cyber-risks or attacks. Due to their dependence on data, open sources and interactions through multiple channels, their vulnerability increases as more systems are connected.

The large and ever changing Fintech ecosystem is hard to understand, create and maintain

Establishing and nurturing a Fintech ecosystem is difficult given the level of sustained collaboration that is necessary among governments, financial institutions, and entrepreneurs. For a Fintech ecosystem to function, it is imperative that each participant clearly understands its role, as well as the benefits it stands to gain from its involvement.



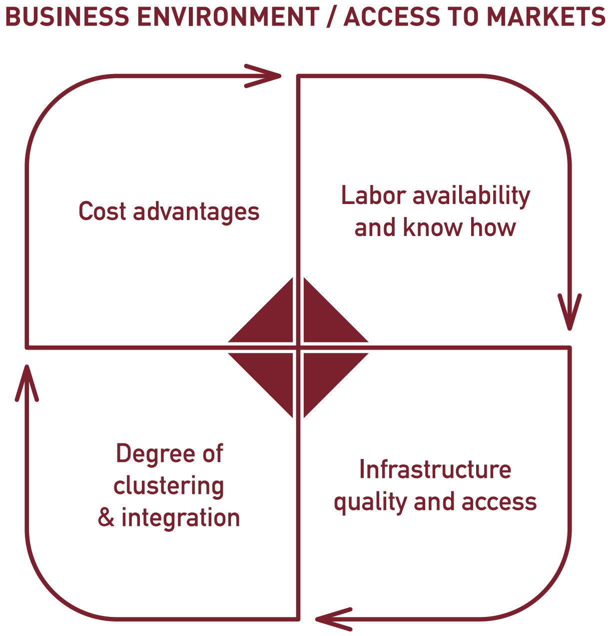
Governments
must implement and enforce policies and a regulatory environment that will ease the development of a Fintech ecosystem, which will lead to more entrepreneurial activity by financial services and technology firms, leading to more job creation. It also improves the country's overall competitiveness.

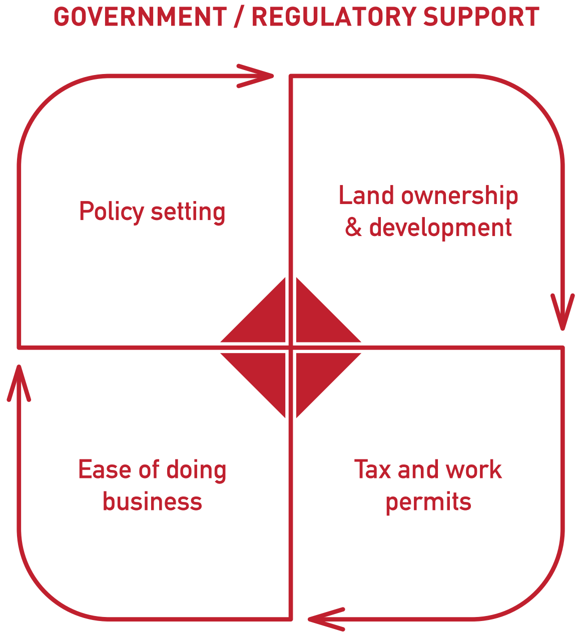
Financial institutions,
including global/local banks, private equity firms and venture capitals can provide extensive content and market expertise to the ecosystem. Many of these financial institutions can stimulate their own innovation by establishing partnerships with Fintech Companies. These partnerships can strengthen the competitive position of financial institutions, for example, by shortening the time it takes for new products and services to reach the market. In Africa, we observe an increasing number of partnerships between Fintech Companies and financial institutions, but above all with telecom companies.

Business enablers
(entrepreneurs) contribute through building and providing innovative and often disruptive technology solutions to the Fintech ecosystem. In return, entrepreneurs benefit from greater access to financing and market expertise, as well as a receptive market for their innovations.

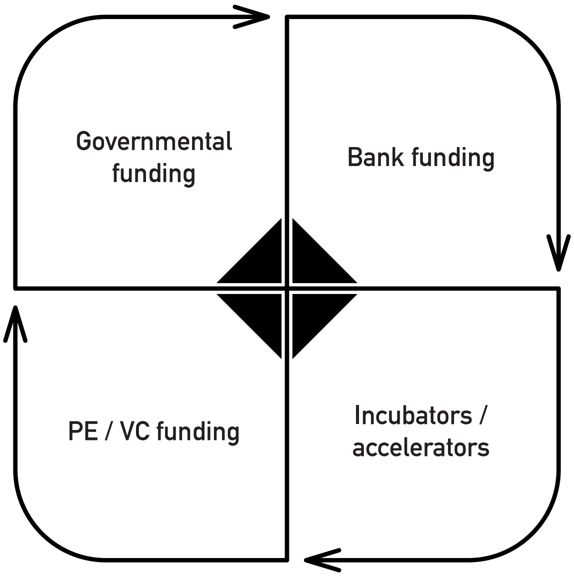
The rise of Fintech Companies requires a global reflection by all participants, taking into account the specificities of all participants.

A well-designed Fintech ecosystem takes into account 4 critical design elements

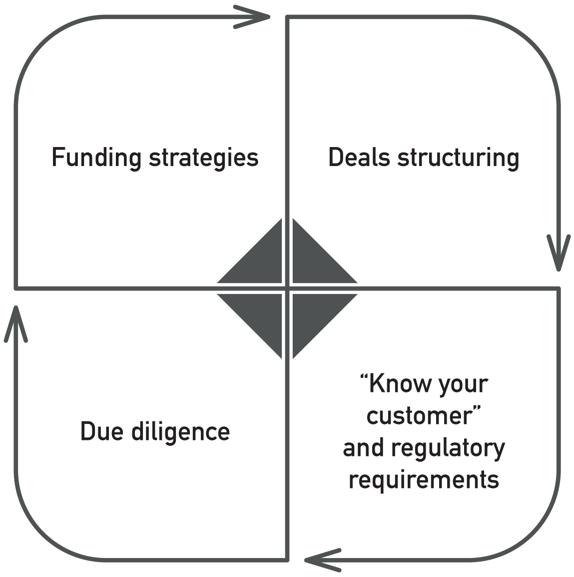




ACCESS TO CAPITAL



FINANCIAL EXPERTISE



Business environment/access to markets

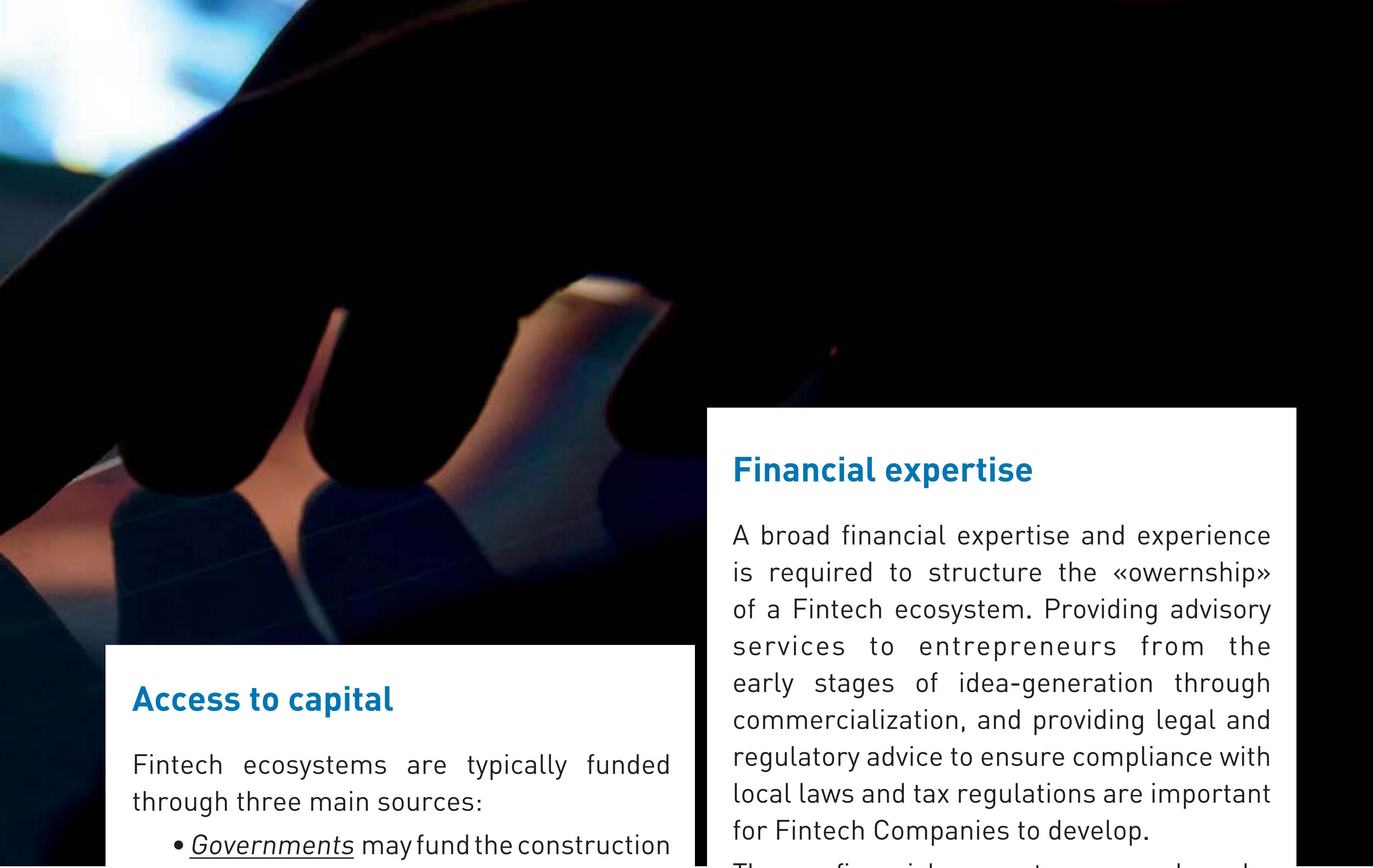
A Fintech ecosystem flourishes only if there will be an overall cost advantage to working in a country or region. This means, for example, that facilities (such as land and real estate, equipment, technologies, and utilities) must all be available and affordable.

The degree of integration and synergies among the players is another factor that should be taken into consideration. Technology clusters (or hubs), where entrepreneurs have similar business objectives and are integrated, make it easier for the ecosystem to flourish. These clusters promote the availability of skilled labor and expertise (such as banking analysts, IT developers, sales force, and management staff).

Finally, the quality of infrastructure is critically important. This includes the state of physical infrastructure (e.g., roads and ports), the ecosystem's connections (e.g., distance to existing business hubs and ease of access), the utilities (power, water, telecommunication, solid IT infrastructure and networks such as fiber optic etc...), and the overall quality of real estate and facilities.

Government/regulatory support

Governments can influence many aspects of the ecosystem, including the creation of business friendly regulations (such as copyright, product registration, initial public offering requirements, intellectual property etc...), and by keeping taxes and fees low. However, the extent of the government's involvement can vary.



Access to capital

Fintech ecosystems are typically funded through three main sources:

- *Governments* may fund the construction of a Fintech hub by providing seed funds, interest-free grants or provision of subsidized offices and co-working spaces. In addition, governments may provide initial financial support to venture capitals, private equity funds, banks (via a consortium) and incubators to encourage investments in small businesses.
- *Venture capital funds and private equity firms* are traditional investors in Fintech Startups. The involvement of these investors will typically increase as these Fintech Startups mature, their business models gain momentum, and they reach a critical mass, making them interesting targets.
- *Incubators and accelerators* prepare businesses for venture capital fundraising and provide grants and investments. By offering financial and due diligence services to entrepreneurs, they become a one-stop shop for buyers and sellers in the ecosystem.

Financial expertise

A broad financial expertise and experience is required to structure the «owernship» of a Fintech ecosystem. Providing advisory services to entrepreneurs from the early stages of idea-generation through commercialization, and providing legal and regulatory advice to ensure compliance with local laws and tax regulations are important for Fintech Companies to develop.

These financial experts can also be instrumental in lobbying for financial or regulatory measures (e.g., relaxation of IPO requirements, reduced taxation, and financial participation of governments) that help the creation and later on the acquisition of startups. For example, by promoting simplified and adapted business regulations (e. g., copyrights, product registration) these experts support entrepreneurs and financial services players and increase the attractiveness of the overall ecosystem.

Fintech Companies and traditional financial institutions are exploring a new Coopetition model

Traditional financial corporations have observed the rise of Fintech Companies while trying to keep up with their own digital transformation

To adapt to changes in their customer's behaviors, traditional financial institutions have begun to shift by developing their front office (client-facing) solution and digitizing customer interfaces (through e-banking and mobile service). While focusing on their transformation, traditional financial corporations have observed the rise of Fintech Companies, having intially ignored their potential.

As they had to integrate the new digital distribution channels into their offering, traditional financial corporations had to adapt to the implications of running a multichannel distribution model. They were struggling with legacy IT systems and infrastructure and were trying to find the right balance between digital transformation and the importance of the branch network, while maintaining their profitability.

During this shift, traditional corporations were faced with the challenges of change and began to look towards Fintech Companies

The challenge for the finance industry was to set up new approaches to drive change, deliver innovation, and offer a faster service responding to customers' needs on the market; they had to be agile on their organization and their IT systems by exploring new external models.

Banks have to upgrade themselves, or risk being burnt to the grounds.

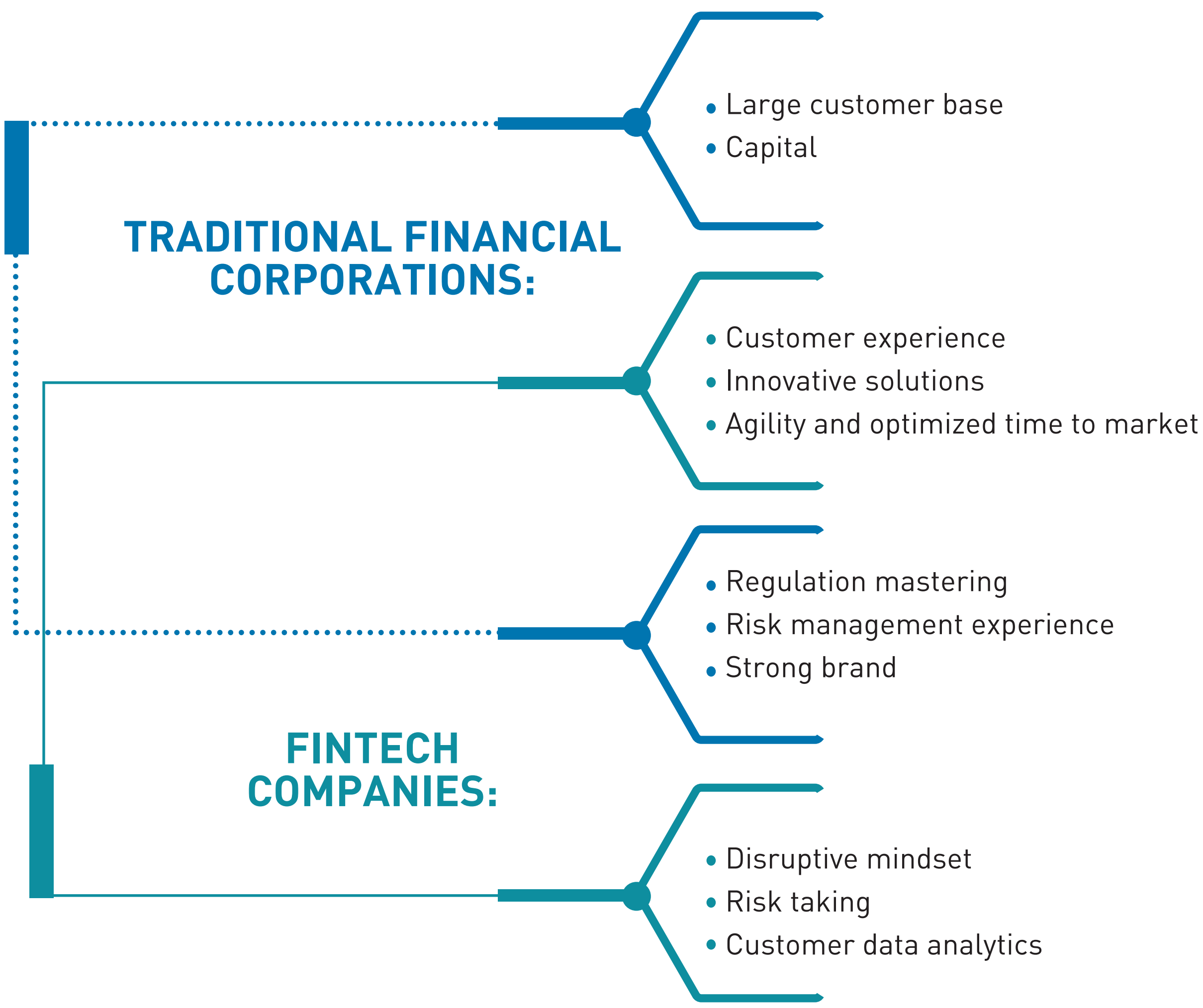
JP Nicols, Co-founder
Bank Innovators council

On the other hand, Fintech Companies, that have had their breakthrough are looking for new opportunities to further scale-up. They focus, particularly, on two main items: enlarging their customer base and increasing their capital to grow further.

Collaboration between Fintech and traditional financial corporation is a win-win deal, since each has complementary strengths

Fintech Companies that had evolved from startups and wanted to challenge traditional financial corporations, start to look at the broader business ecosystems to establish partnerships. Fintech Companies did not just need capital they also needed customers in order to gain a critical size.

Main strengths for Fintech Companies and traditional financial corporations



Collaboration between Fintech Companies and traditional financial corporations can take the shape of three different models: from the basic partnership to investment to acquisition

Fintech Companies and traditional financial corporations are starting to explore different ways of working. There are three main models and often companies decide to implement a combination of the following models.

Merger & Acquisition

Investment or acquisition of a Fintech Company, fostering the digital footprint and access to technology, while leveraging the investment / acquisition by integrating product within banks product line. The next gap of "fintegration" for banks consists in being able to integrate numerous Fintech platforms with their IT, being able to propose various innovative offers to customers, on many business lines (front-to-back integration).

Collaboration / Investment

Collaborating with a Fintech Company allows both parts to develop and test new technologies and solutions, while the Fintech remains isolated from incumbents environment and organization. However, banks help the Fintech company grow faster through sharing their competencies (legal / regulatory assistance or through incubation / acceleration processes), whereas benefiting in return from a better understanding of the cultural and innovation approach.

Commercial partnership

A basic commercial partnership might consist of commercial approach with Fintech Companies, allowing traditional financial corporations to buy a service or a product as their client, allowing them to use the developed platform.

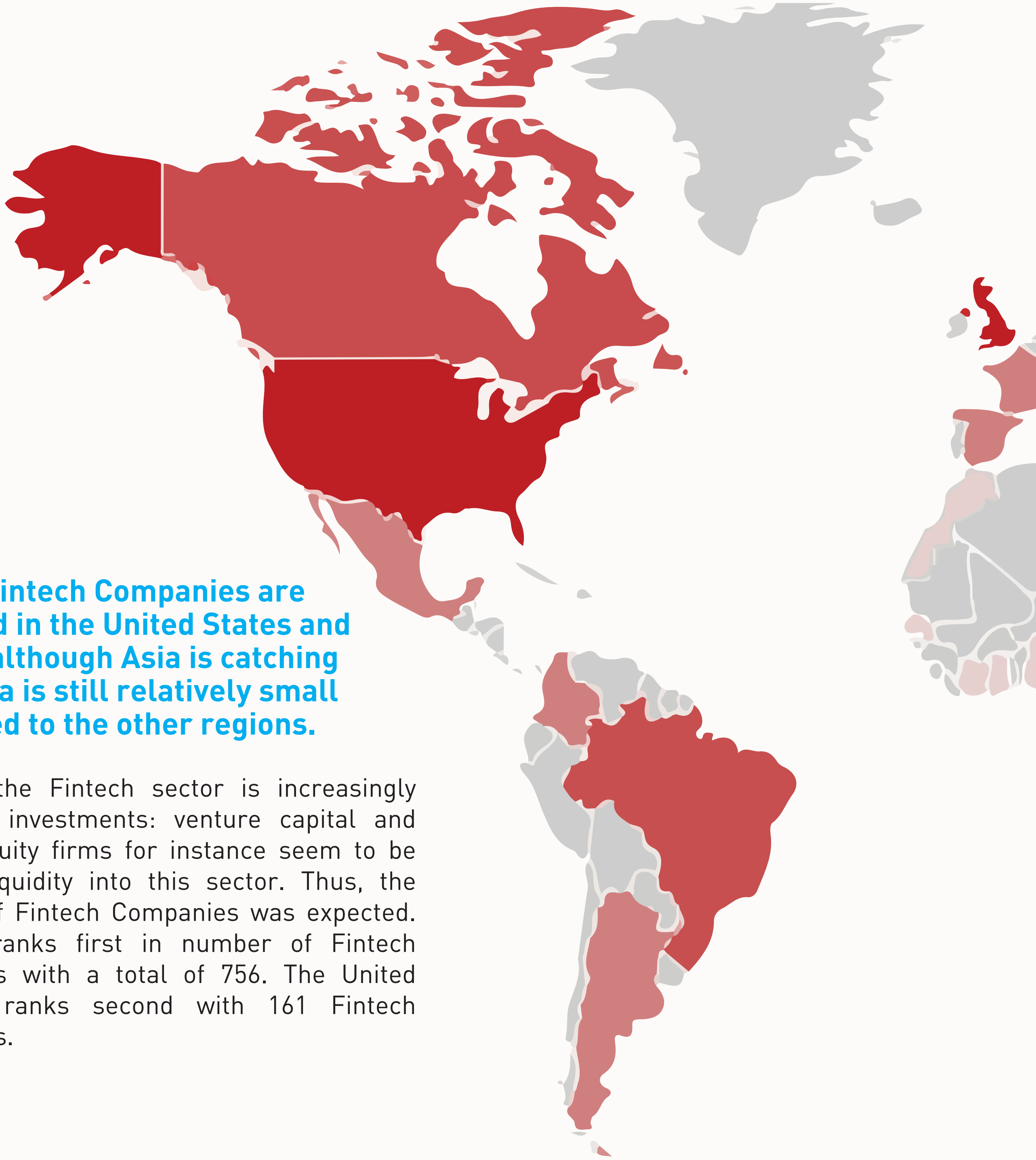
Integration or working with a Fintech company does not come easily for traditional financial corporations. There are challenges that keep the two from working together efficiently, which include differences in management, culture, decision-making, regulations and technology.

Workplace culture will play an important role in the coming years and traditional financial corporations will need to renew their purpose and brand to be aligned with changing expectations from their employees in strategic areas such as career path, diversity, flexibility and delivering social value.

By implementing a new cultural mindset, traditional financial corporations will be able to find alternative talent sources that will help drive innovation and make working with Fintech Companies less challenging.

FINTECH COMPANIES: A GLOBAL PHENOMENON REVOLUTIONIZING THE FINANCIAL SERVICES SECTOR IN ALL MAJOR ECONOMIC ZONES AND FINANCIAL CENTERS OF THE WORLD

An analysis of the most developed Fintech ecosystems around the world showcases the importance of the US market and rise of Asia



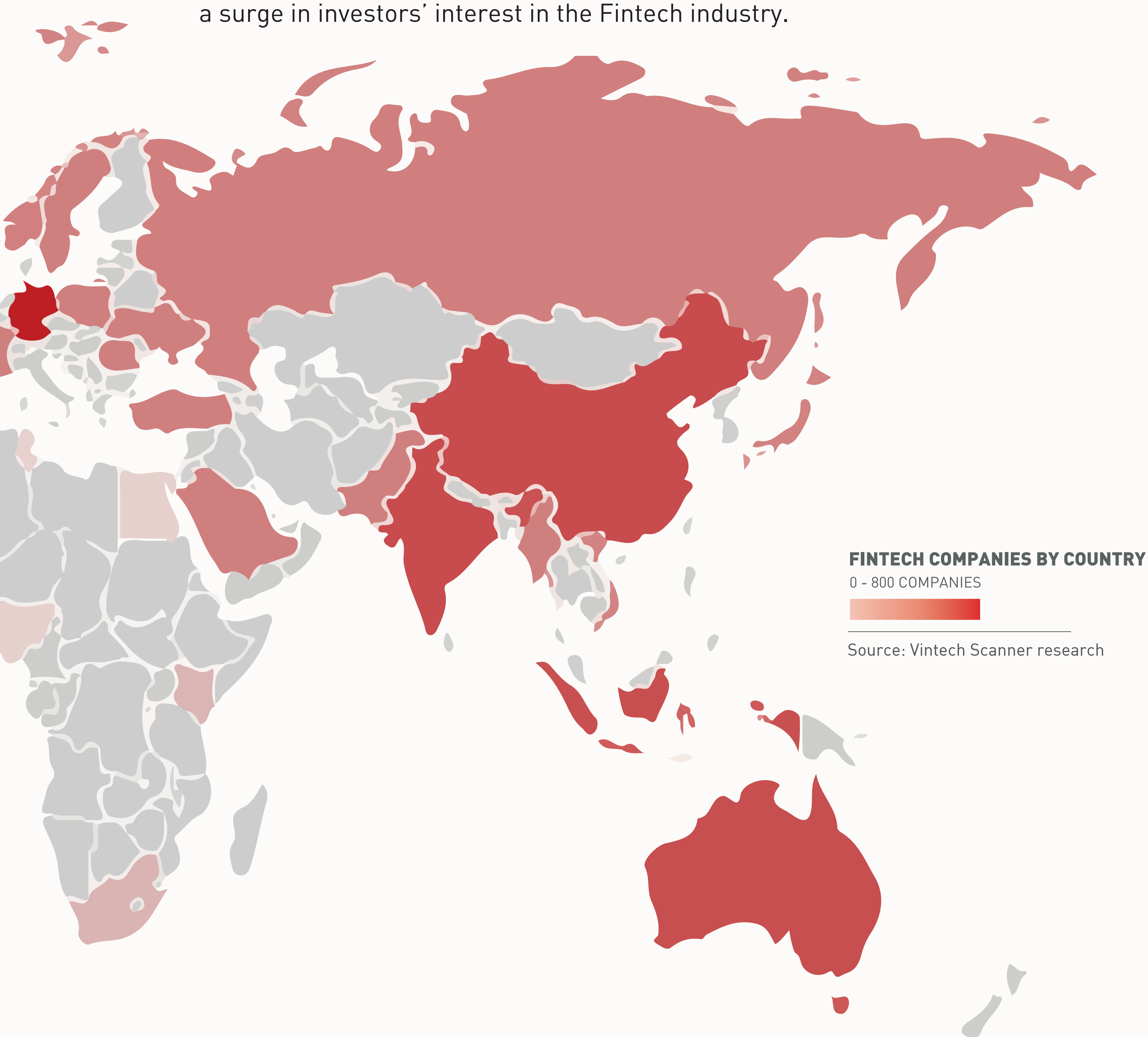
75% of Fintech Companies are launched in the United States and Europe although Asia is catching up, Africa is still relatively small compared to the other regions.

Globally, the Fintech sector is increasingly attracting investments: venture capital and private equity firms for instance seem to be pouring liquidity into this sector. Thus, the success of Fintech Companies was expected. The US ranks first in number of Fintech Companies with a total of 756. The United Kingdom ranks second with 161 Fintech Companies.

The Fintech market growth has exceeded expectations in 2018

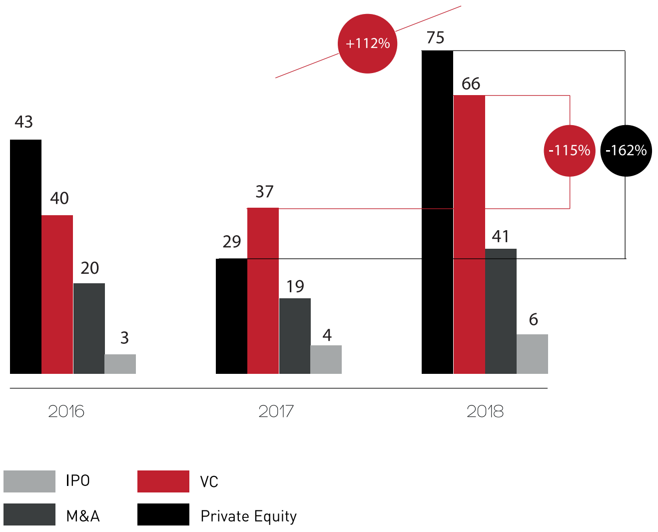
Although the overall number of deals involving a Fintech Company has decreased by 5% in 2018 worldwide (i.e., going down from 2985 to 2823), the total value of deals has increased by more than 112%, reaching 188 billion dollars. This demonstrates that the Fintech sector is becoming more structured and considered less risky.

It is also important to note that the Fintech market is generating better returns on investments compared to historical trends. The increase in investments by private equity firms (i.e., more than 162%) and venture capital (more than 115%) clearly illustrates these trends. Venture capital deals went from 16$M to 33$M and PE deals from 89$M to 213$M. The increase in the average investment per deal also reflects a surge in investors' interest in the Fintech industry.

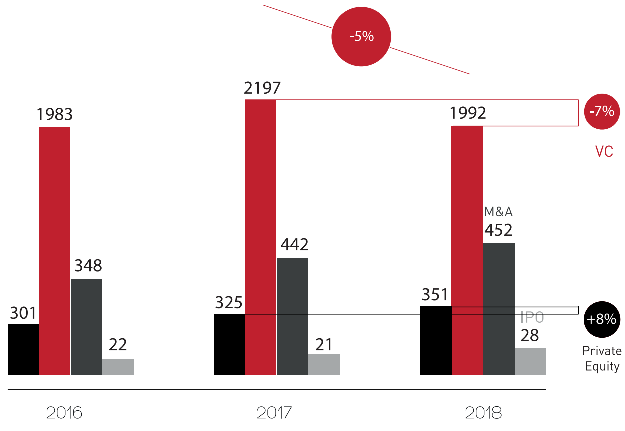


Source: Vintech Scanner research

Fintech deals activity by value ($Bn, 2016 - 2018)



Fintech deals by volume (#, 2016 - 2018)



Source: Pitchbook.com

The Fintech landscape is maturing worldwide as demonstrated by the increase in the number of mega-rounds

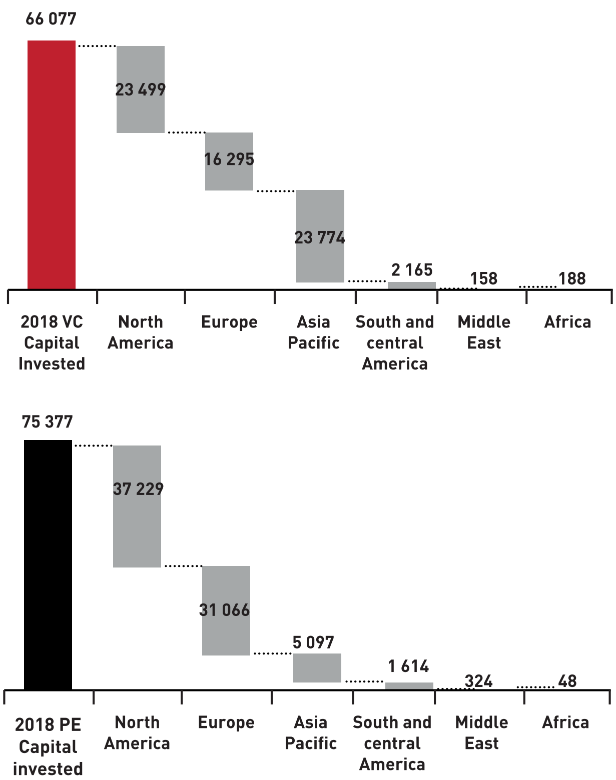
Globally, the Fintech ecosystems are maturing with several Fintech Companies being successful in securing large amounts of venture capital funds in the early, mid and late-stages of their development. In Asia, this trend is even more noticeable with a large number of mega-rounds (i.e., investments of more than $ 100 million). We observed about 52 mega-rounds, with a total worth of more than $ 24 billion.

Asia is slowly rising to become the new world leader in terms of venture capital investments dedicated to the Fintech industry

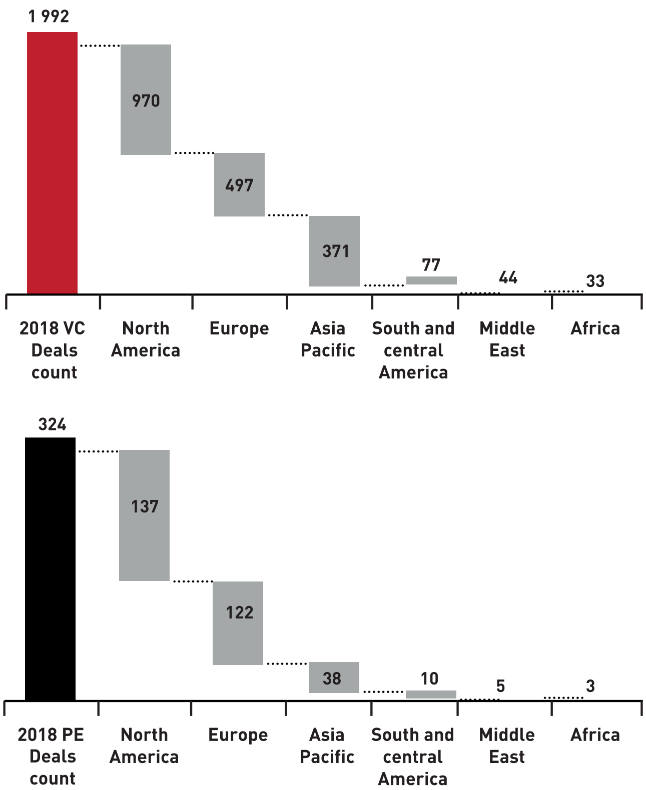
China registered a $23 billion investment towards Fintech Companies. It is important to note that the early stages of Fintech Companies are considered critical and gain the most attention from investors. This trend is essential to highlight as it demonstrates the confidence of the Chinese investors in the development of Fintech Companies in the region. This is further supported by the magnitude of the average size of venture capital deals in the Asia pacific region (i. e. $ 64 million), which is much higher than the average size of venture capital deals in the American (i. e. $ 24 million) and European markets (i. e. $ 33 million).

Nevertheless, the American and European markets also show a trend of Fintech Companies able to secure private equity firms funding in their later stages. Private equity firms are looking for less risky deals than venture capitals. They usually focus on more mature companies.

Fintech deals activity by region & value (VC + PE, 2018)



Fintech deals activity by region & volume (VC + PE, 2018)



Source: Pitchbook.com

Emergence of several Fintech unicorns internationally

Many Fintech Companies were able to secure funding in the recent years, totaling about $ 23,4 billion in funds raised.

Over 30 unicorns (start-ups valued at more than 1$ billion) emerged recently in the Fintech sector: twenty-four of them are based in the United States, five of them in China, three in the United Kingdom, two in India, and one unicorn in Germany and Brazil, with a cumulative valuation reaching over 140 billion dollars (by the end 2018).

142,5 $ billion

is the total valuation of the 35 unicorns listed in the world.

68%

of this valuation is the weight of American unicorns, 22% for Asia and 7% for Europe.

23,4 $ billion

is the total amount of fundraising done by Fintech on the 3 continents

54%

were raised in the United States, 38% in Asia and less than 5% between the United Kingdom and Germany

Source: CB insights

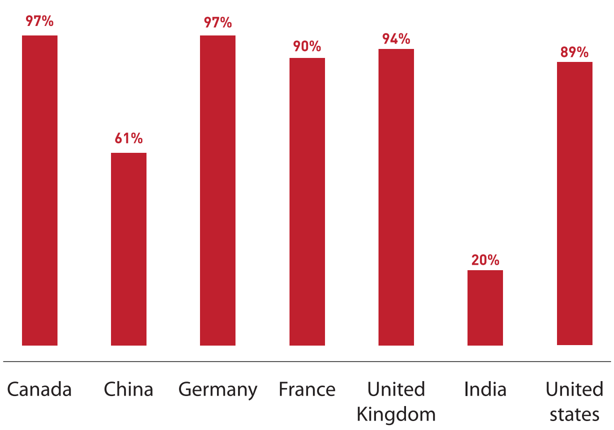
Several factors and drivers have helped Fintech ecosystems around the world to gain in maturity and be considered as a strategic industry

Mature financial services markets drive the development of Fintech ecosystems worldwide

Fintech Companies and their respective ecosystems develop in environments that enable them to grow. Globally speaking, markets that show significant maturity in financial services have had a large increase of Fintech Companies and the ecosystem surrounding them.

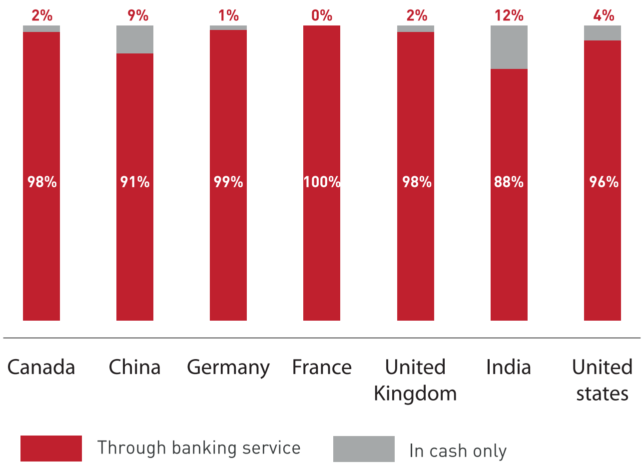
Factors such as the preparedness to use digital payments, or to use electronic channels to wire salaries are indicators of market maturities. They directly prove the willingness of the consumers to adopt new digital tools specifically applied to the financial services industry. For instance, in 2017, countries like Canada, Germany, France and the United Kingdom showed that over 90% of the population used or was willing to use digital payments and that over 90% received wages went through banking services.

Made digital payments in 2017



Source: Global Findex 2017 (The World Bank)

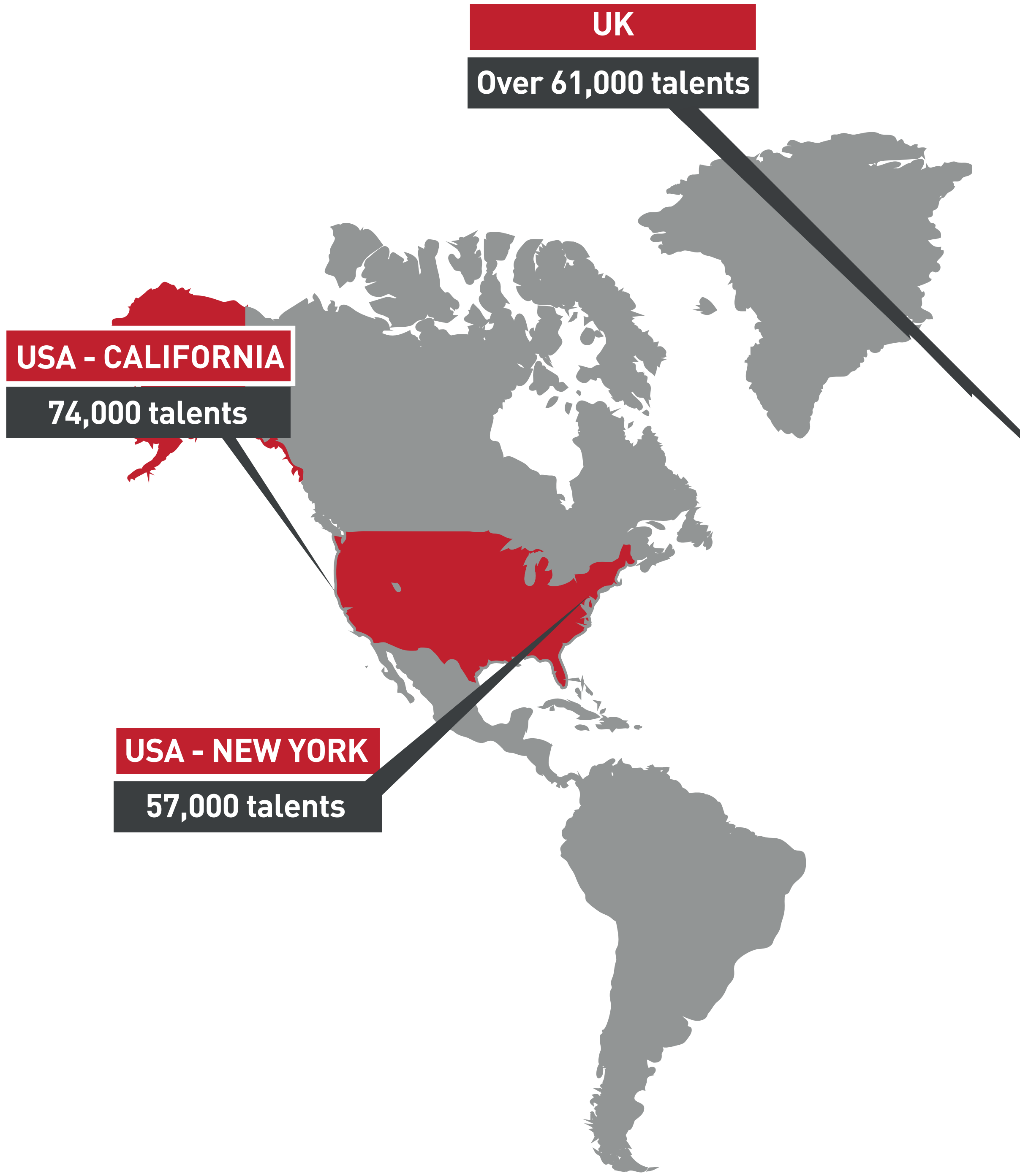
Received Wages



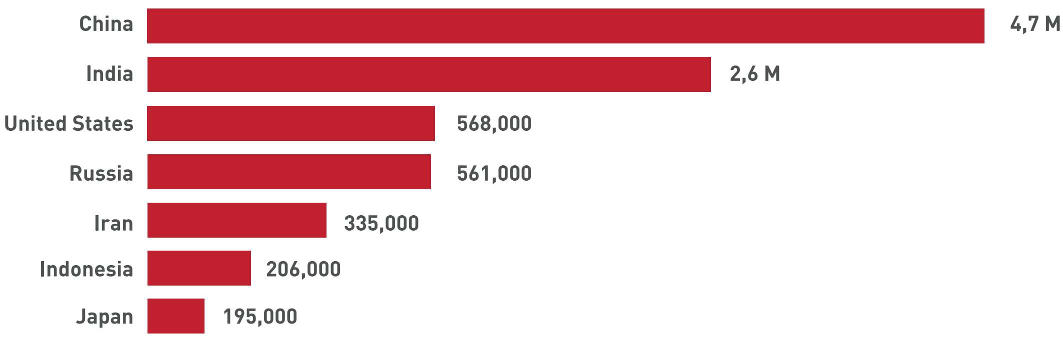
Source: Global Findex 2017 (The World Bank)

Availability of a sophisticated talent pool is equally important for the development of Fintech ecosystems

Blockchain, artificial intelligence, big data amongst others, are increasingly becoming technologies heavily relied upon in the financial services industry. This has a direct influence on what kind of talents are needed to support the development of a Fintech ecosystem. For instance, you need sophisticated IT engineers, developers and programmers to design, develop and implement Fintech solutions. This explains why we find Fintech Companies in countries with a significant availability of skilled resources. Often these countries have a strong focus on promoting skills in the field of information technology. The United States confirms this with over 130 000 people being part of the US Fintech workforce. In addition, China is heavily investing in developing a strong talent pool to tap into going forward (i.e., in 2016, it build the equivalent of nearly one university per week).

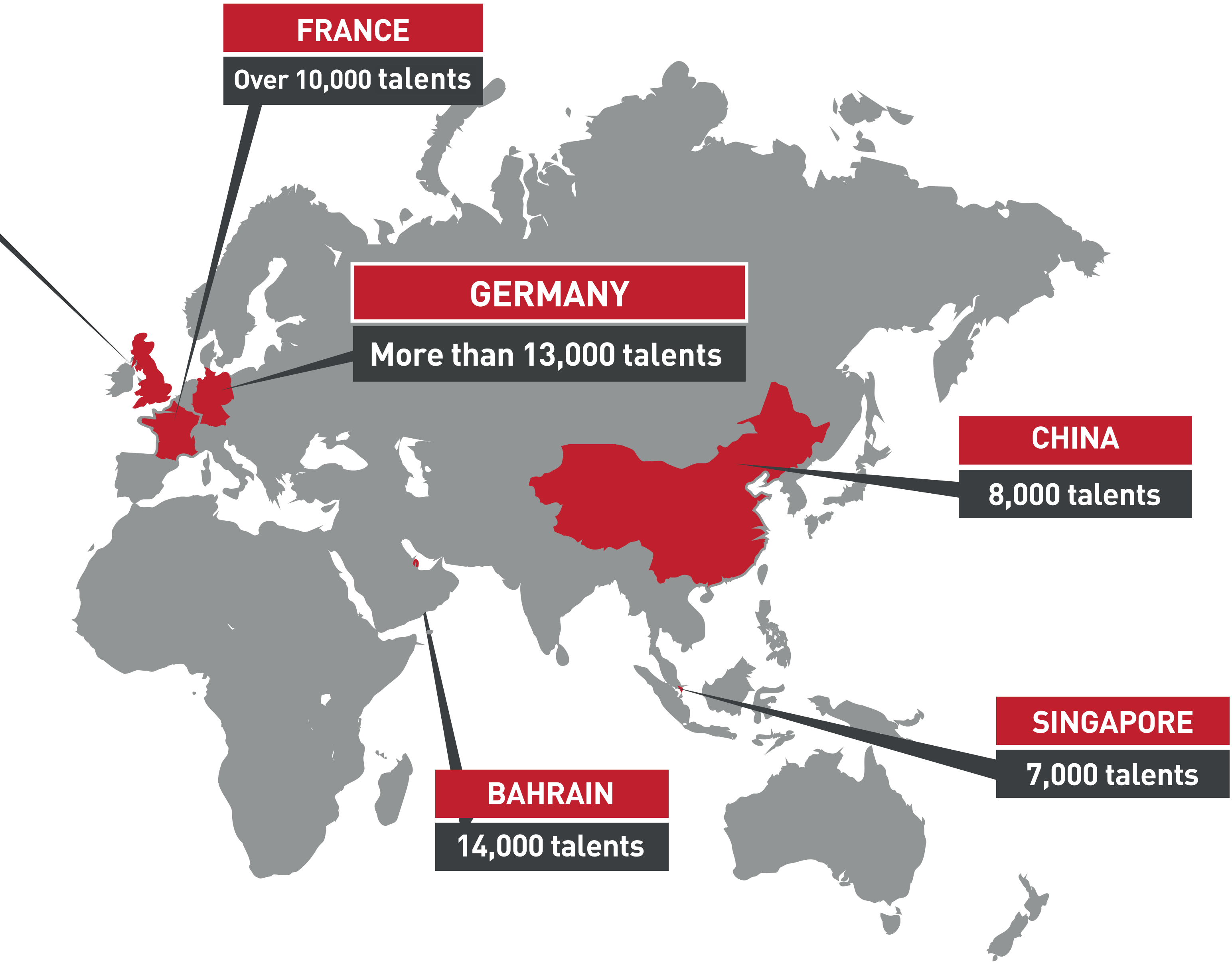


Countries with the most STEM* graduates – 2016



* STEM: Science, Technology, Engineering & Mathematics

Source: Forbes – Statista



The most successful Fintech ecosystems in the world are the ones who invested heavily in the acquisition, development and retention of talents

It is an evidence that a global race for talent with technology and digital skills has started. Several countries have launched specific initiatives to enable to acquire, develop and retain talent.

• Introducing of Fintech specialization in some universities stream - NYU STERN launched 12 graduate courses on Fintech in key areas including robo-advisory and analytics. - MIT & Columbia Univ. are aiming to provide the resources for students to focus on Fintech through short-term certificates. • «Applied sciences NYC» is a program to upsize the talent capacity with applied science and the Fintech industry.	• Fintech postgraduate program are available in a number of universities (eg. Univ. of Strathclyde). Additionally, top-tier universities including Imperial College London and Oxford University are targeting high level executives and the overall workforce with short courses on Fintech. • Development of educational resources to accommodate increasing market demands. - Launch of Scotland's first «Fintech Skills Academy», a program that provides the market with a steady flow of highly qualified experts within the field of Fintech (payment processing, systems testing, device certification,...) and prevents the talent gap from broadening for both students and employees looking to upskill their existing capabilities.	• ESILV is the first school in France that have launched a Fintech course to educate its engineers to financial technologies (Blockchain, payments, security, etc..) 200 students already trained in blockchain programming, most are already involved in projects in collaboration with large companies or start-ups. • 250 M$ is the cost of Station F, the largest startup campus in the world. Station F is the only startup campus gathering a whole entrepreneurial ecosystem under one roof, it includes: - A Tech Lab fully equipped for loT startups to prototype their products. You can get access to 3D printers, laster cutters, workshops and more - Investors present on the campus - Administrations managing intellectual property, taxes, research, visas etc...	• 15,6% of the Bahraini government budget allocated to educational initiatives in order to develop a healthy pipeline of talent that can feed the Fintech industry (882M$ in 2017 vs.846 M$ for 2016). • A government agency 'Tamkeen' offering programs linked to the financial field for reskilling talents of high caliber graduates. • Training provided by the Bahrain Institute of Banking and Finance (BIF) to firm from all sector.

• Introducing of Fintech specialization in some universities, e.g.the University of Hong Kong (HKU). • The Fintech lab (in Tsinghua University) is the first research entity dedicated to leading best practices, promoting interdisciplinary innovation, and encouraging entrepreneurship in the field of Fintech through scientific research and innovative project incubation.	• ADGM Academy upskill finance services professionals across all areas of financial technology innovation. • The Emirates Institute of Banking and Financial Studies (EIBFS) collaborate with financial institutions to launch a Fintech training lab on key subjects including blockchain artificial intelligence, and big data. • The UAE government also plays an active role in the organization of short-tem initiatives to develop the domestic talent for the Fintech industry.	• Singapore Management University (SMU) provides a practical introduction to Fintech ecosystem through its course that help the candidate understand what innovation is about and how to cultivate an innovative mindset and discovery of skills through hand-on exercises.	• Many postgraduate program are available in a number of universities, eg: - Master of Technology in Cloud Computing (K L University) - Master of Computer Application (Mahatma Gandhi University) - Master of Technology in Cyber Security and Digital Forensics (K L University)

In addition, several schools (i. e., both business and engineering schools) are adapting their programs to the demands of the Fintech sectors. For example, dedicated courses and degrees are especially targeting the necessity to foster creativity and innovation.

In addition, companies are also helping to develop talent, through dedicated educational structures. For example, in Morocco, the 1337 school was created by the OCP group, in close cooperation with the Ecole 42, a programming school in Paris. Orange has also, since 2014, implemented an initiative, named "Digital School projects", targeting digital inclusion through education. The Orange Foundation has launched this program in several countries in Africa in over 500 schools (i. e., list of countries includes but is not limited to Ivory Coast, Senegal, Tunisia, Egypt, Botswana etc.)

Financial Services regulatory framework are being adapted for Fintech Ecosystems

To facilate the creation of a Fintech ecosystem, certain public authorities realized that they had to provide an effective regulatory framework adapted to their specifics. This has lead to the creation of the so-called "sandbox".

The "Sandbox" is a program allowing early stage Fintech Companies to test their products in an environment exempted from regulatory constraints and without risks for potential customers.

The "sandbox": a new regulatory framework adapted to the rise of Fintech Companies

The idea of the regulatory sandbox consists of providing Fintech Companies a specific legal framework allowing them to experiment with innovative products and services while being exempted from the traditional regulatory constraints. Such sandbox also reduces the risks for potential customers.

Fintech Companies working within a sandbox are able to launch products and services without additional licenses. Of course, regulatory authorities can check them continuously in order to understand their operations and control the industry.

The life cycle of a sandbox consists of four main stages before the eventual launch of the products

Application

Submission of an application which sets out the start-up business plan and describes how it meets the sandbox's eligibility.

Evaluation

The firm assesses the application. The necessary time depends on the complexity of the application, the completeness of the information and the specific legal and regulatory requirements involved.

Testing

Start of tests once authorization is received The Fintech and the regulator agree on different strategies such as the transition to the real market in case of success.

Exit

The firm submits a final report to the regulator (e.g.to the FCA in the UK) about the outcome of testing. The firm decides whether it will offer new solutions outside the sandbox.

Most of the sandboxes in place in more mature Fintech ecosystems allow participants to develop their idea for a period of 2 years. The United Kingdom has been the forerunner of this sandbox model through the FCA (the Financial Conduct Authority), which has set up the first sandbox in 2016. It is worth noting that 90% of the companies that participated in the first round of applications for the UK sandbox succeeded and subsequently launched successfully their products (e. g. Luno in payment, Oval Money in wealth Management).

Following this success, sandboxes were launched in Asia (Singapore) and the Middle East (in the UAE by Abu Dhabi Global Market authority and in Bahrain by the Bahrain Central Bank).

BUD, one of the startups selected for the first edition of the British regulatory sandbox

The British Fintech startup BUD provides an integrated platform that allows banks to offer products and services to third parties, such as insurance, pensions, mortgages, etc. On the platform you can manage all your finances, be it a current account, credit card or savings account. The firm currently works with some of the top financial institutions in the UK and received the "Innovation of the Year" award at the British Bankers Awards.

Lessons learned from the sandbox

One of the co-founders, Jamie Campbell, explained the details of this experiment: "The sandbox provides a testing ground to combine the pace of innovation with user protection (consumers) and I can say that it has been a mutual learning experience for us and for the regulator" he said. "… Now, we understand how they regulate us and when we go to a customer (a bank, for example), we can sit down and we are familiar with the compliance barriers they have. For us and for small companies, regulation is an important hook to sell our products. There's no need to be afraid of the regulator", adds Campbell.

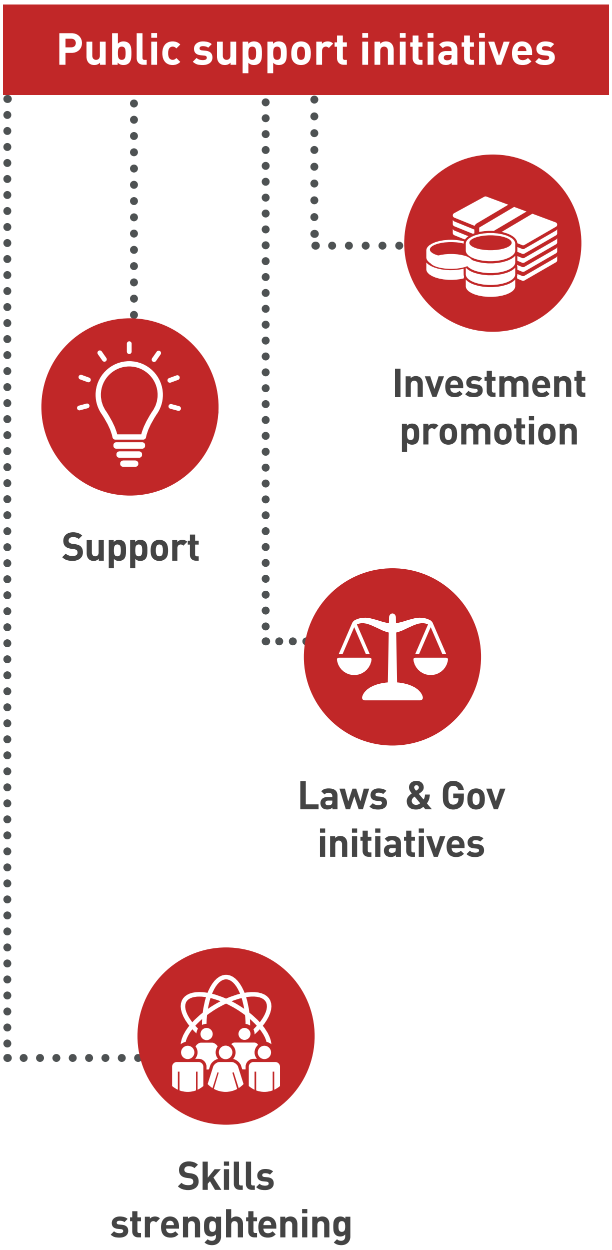
BUD has closed over 20$ million in funding

BUD raised $20 million with the support of top financial institutions like Goldman Sachs, HSBC, ANZ, Banco Sabadell and Investec, as well as Lord Fink, the former chief executive of hedge fund Man Group, and 9Yards Capital. The firm will use the funding to double its headcount to more than 120 staff by the end of the year, and expand into new markets.

Several public initiatives focus on accelerating the development of Fintech ecosystems

Several countries are investing in initiatives, backed by the public authorities, focused on accelerating the development of a Fintech ecosystem.

These public initiatives mainly target on helping Fintech Companies through better infrastructure, promoting investments, strengthening skills, and pushing for more flexible laws and regulations.



	What is it?	Illustration
Support	The public support represents all the mechanisms put in place by the public authorities to promote the development of Fintech Companies. These means of support can be in form of: - Infrastructures (mainly equipped offices) - Or expertise programs: to guide Fintech Companies in their first steps (application, understand regulatory framework/licenses, etc.).	Infrastructure: - The "H:32" in Germany: a 11. 000 square meters campus on eight floors with a full service office in Berlin as a part of the national Digital Hub Initiative launched by the Federal Ministry for Economic Affairs and Energy - The "Swave" in France: an incubator providing facilities for investors. Expertise programs: - The French authorities ACPR[1] & AMF[2] have been thinking about setting up a single window approach for the allocation of licenses in order to facilitate the process of filing and approving Fintech Companies.
Investment promotion	The role of the funds is not limited to Fintech Companies financial support, but they also contribute through services such as training, development and targeted marketing initiatives adapted to financial technologies.	- Khalifa fund for enterprise Development (UAE): a 100 M$ government fund in Dubai - International Financial Centre Fund Fintech Companies-focused: 100 M$ fund - French Tech fund in France: a 400 M€ fund whose main objective is to help Fintech Companies from incubation to growth by setting up incubators. - Independent funds[3]: BlackFin (180 M€), New Alpha AM (56 M€) - The Indian model where a $ 1. 5 Billion fund[4] was created.
Skills strenghtening	The main issue for Fintech Companies is the adequacy of skills to the need of the market. As a result, the public authorities have understood the importance of the development of school paths or the establishment of institutes capable of being a pool of talent for Fintech Companies.	- 261 M£ investment in UK in the development of technical subjects in universities (computer science or even coding, more teachers,..) - 20 M£ in the inauguration of coding institute enhancing higher digital skills - A 20 M$ investment for the development of tech talent pipe-line to prepare as for New York.
Laws & Gov initiatives	The introduction of more flexible and better adapted laws focus on new technologies makes it possible to improve the attractiveness of the places that want to be leader on a regional or even global level.	These laws focus on four points: - Bringing the best talent from around the world by facilitating the obtaining of a working document or visa as is the case in countries like France (the French Visa tech) and the United Kingdom - A revision of the taxation allowing the development of Fintech Companies compared to the traditional financial institutions (e. g. China tax policy that allows a tax 15% for Fintech Companies instead of 25% for traditional institutes). - Sharing data with all stakeholders of the financial sector (e. g. law passed by the British government to require big banks to share small and medium-sized enterprise credit data) - Allowing other actors to provide services that are in the field of traditional financial institutions (e.g. Trust law in Bahrain enabling financial institutes to broaden their approach to wealth management by offering services such as trusts).

1. ACPR: Autorité de Contrôle Prudentiel et de Résolution

2. AMF: Autorités des marchés financiers - The french authority of the financial markets

3. The historical players in the financial industry (Crédit Mutuel Arkea, Crédit Mutuel...) have also created their own investment structures in Fintechs / Insurtechs to better understand these new models and build a pool of potential strategic partners

4. Only 19% of the 1. 5 billion dollar invested mainly due to the government slowness to get funds approved (4 to 5 months) regarding application as well as the guarantees that the future entrepreneur must have (invest at least double amount that the government pumps in for the start-ups).

88%

of incumbents are increasingly concerned they are losing revenue to innovators

77%

of Financial Institutions will increase internal efforts to innovate

82%

expect to increase Fintech partnerships in the next three to five years

30%

of large financial institutions are investing in Artificial Intelligence

77%

expect to adopt blockchain as part of a production system or process by 2020

54%

of incumbents see data storage , privacy , and protection as the main regulatory barrier to innovation

20%

expected annual ROI on FinTech related projects

Source: PwC Fintech Survey 2017

FOCUS ON AFRICA: CONTRASTING GROWTH OF FINTECH COMPANIES ACROSS THE CONTINENT

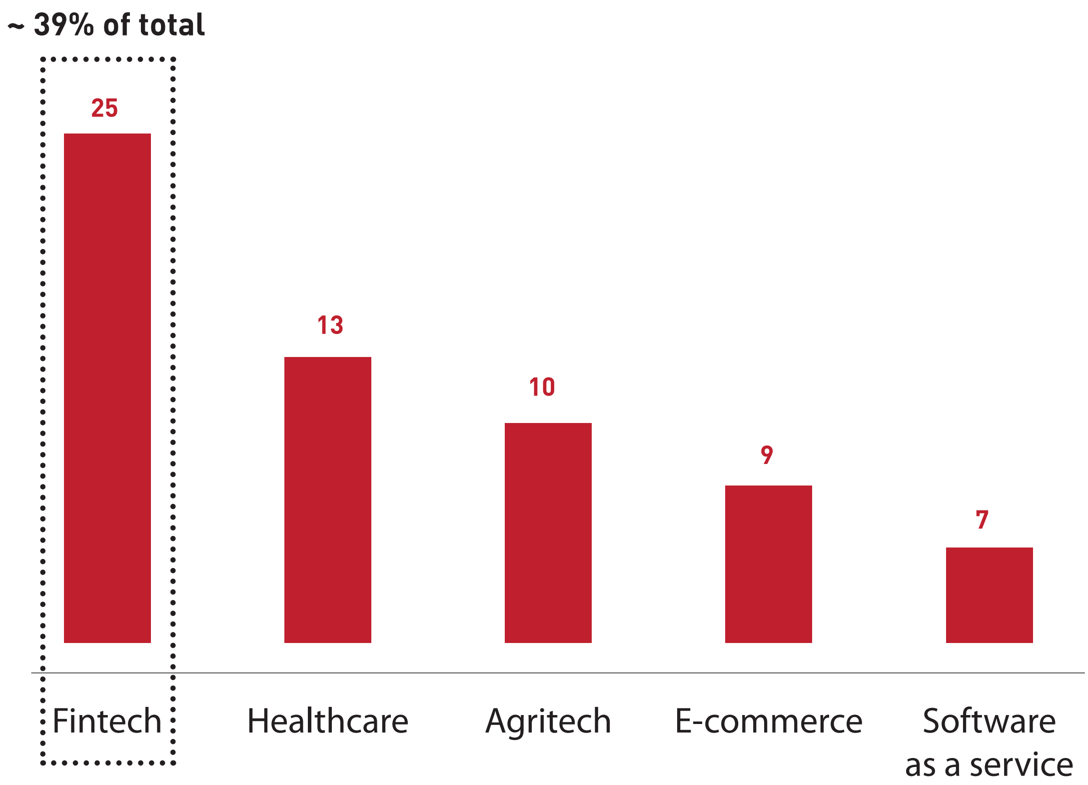
Africa is witnessing the rise of the fintech industry first hand

Globally, Fintech Companies have increasingly been gaining recognition for their ability to address financial issues through their innovative models. Their models aimed at disrupting the classical techniques of established financial institutions with new technologies acting as enablers and driving important cost reductions and an increased client proximity, have proved themselves already.

In Africa, although the share of venture capital funds raised is less than one percent of the overall funds raised worldwide, this trend is also very much present. Fintech Companies are gaining momentum on the African continent. Their number has been growing considerably, reaching over 300 by the end of 2017. They are one of the most actively funded start-up sectors in Africa, totalling ~39% of the number of deals funded between January and June 2018 (figure 1 and figure 2).

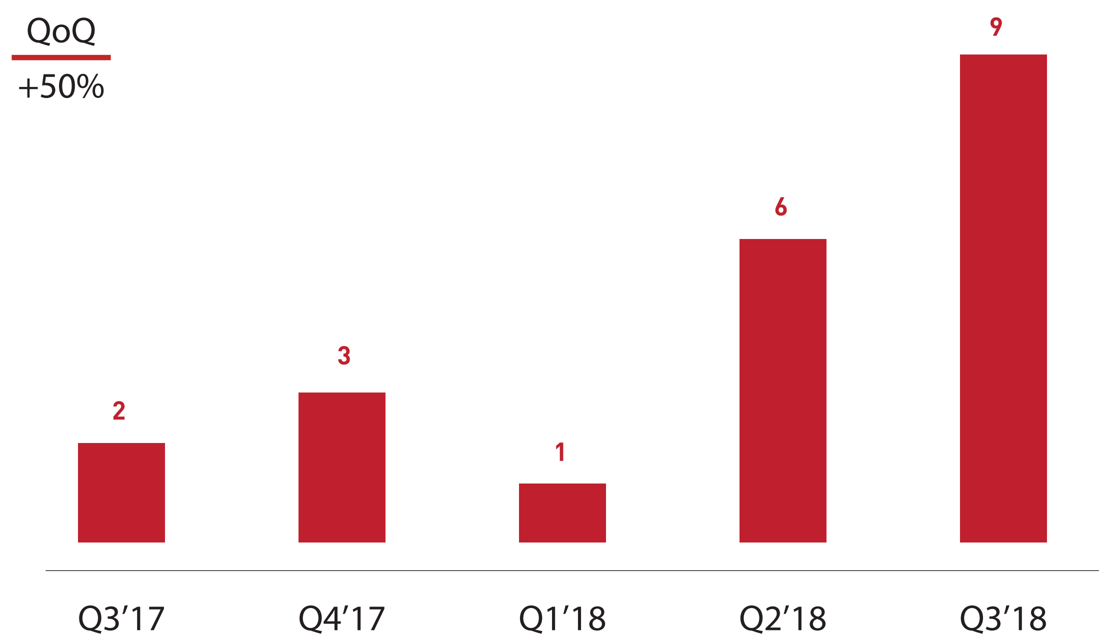
The majority of Fintech Companies in Africa emphasizes solutions on money transfers and payments, and targets mostly the unbanked populations. Money transfer and payment solutions of mobile operators have helped lift many people out of poverty creating real financial inclusion across the continent: for example, the recent regulation in Kenya for interoperability between mobile operators has increased the financial inclusion rate from 29% to 80%.

Figure 1 : Number of deals funded by sector in Africa; January – June 2018



Source: http://disrupt-africa.com/2017/06/over-300-fintech-startups-active-in-africa/

Figure 2 : Number of global VC-backed fintech deals in Africa; Q3'17 to Q3'18



Source: http://disrupt-africa.com/2017/06/over-300-fintech-startups-active-in-africa/

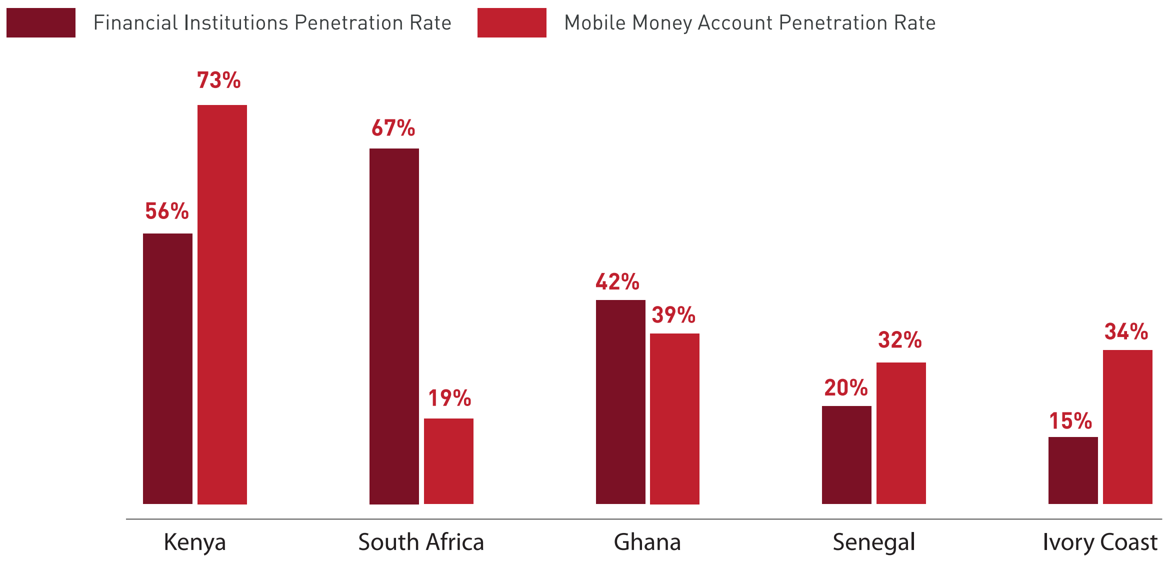
Relatively low banking rates across Africa represent a business opportunity for Fintech Companies

In Africa, a large share of the population remains unbanked despite a certain evolution in some countries. South Africa, Kenya, Ghana and Nigeria registered the highest levels of banking penetration (as a percentage of respondents age 15+, World Bank Global Findex Database, 2017) with 67%, 56%, 42% and 39% respectively. However, these levels are nowhere close to the levels countries such as Germany, France, the United Kingdom and the United States reached in 2017 (i.e., 99%, 94%, 96%, and 93%). Some other countries registered a high evolution in the share of the banked population between 2014 and 2017. For example, this was the case in Senegal with +18,6% CAGR, yet many of these countries are still not able to reach high overall levels of banking penetration. The overall banking penetration rate in Senegal only reached 20% in 2017.

Several reasons explain why banking rates are low in Africa. First, some people deem the financial institutions too far away. Others find their services too expensive. As a result, banks are unable to capture large shares of the population: financial inclusion stalls. It is clear that there is a need for cheaper and more adapted solutions, for example, solution that would address the logistical hindrances that living far away from a financial institution presents. Mobile money solutions have been increasing successfully in African countries as they address this issue. On top of that, they are cheap.

Mobile money accounts are an alternative to traditional banking products and they have been gaining momentum on the continent (Figure 3). In several African countries, there has been a clear evolution in the rates of mobile money accounts between 2014 and 2017. This evolution was the highest in Senegal with a CAGR of +74,7%, +44,2% in Ghana, +12,3% in Ivory Coast, and +10,7% in South Africa.

Figure 3 : Financial Institution vs Mobile money account penetration rates in selected countries in 2017



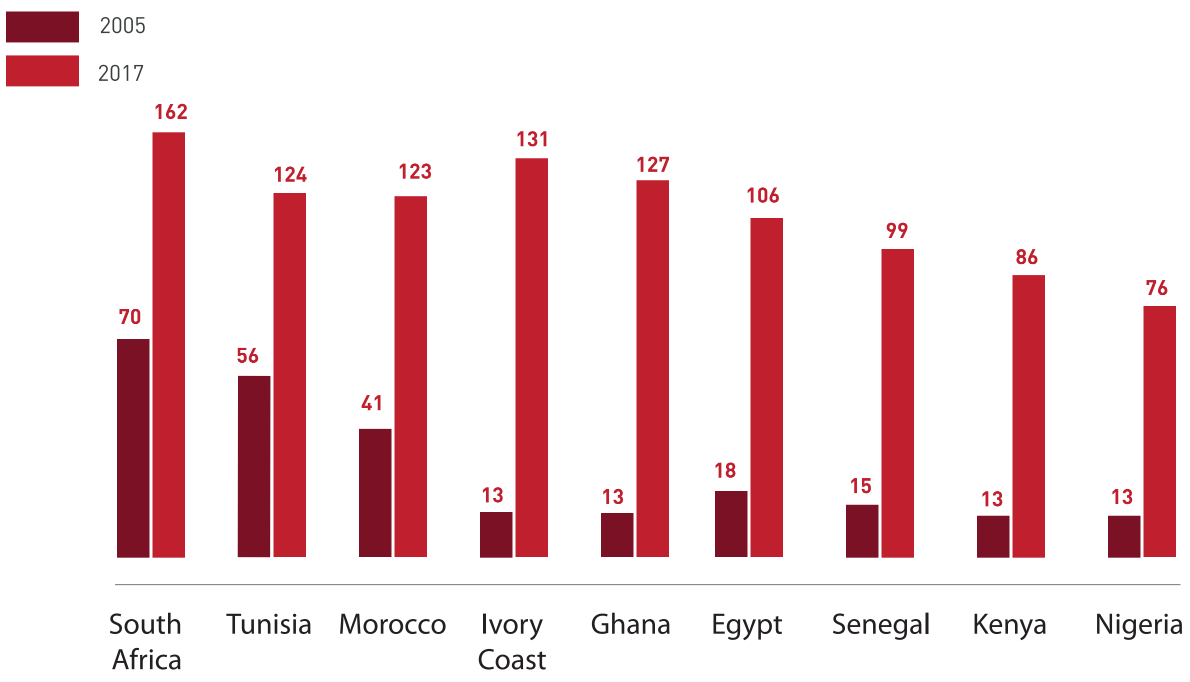
Source: World Bank Database and Strategy& Analysis

Significant increase in mobile, and internet penetration coupled with higher levels of smartphone adoption will continue to support the development of the digital economy in Africa

The evolution of the information and communication technology sector in Africa is also a driving force of the rise of Fintech Companies in Africa. It has influenced the growth of mobile and internet penetration as well as the levels of smartphone adoption in African countries. These are essential backbones for the rise of Fintech as Fintech Companies rely heavily on digital channels and on mobile and internet usage.

There is a stronger telco penetration in Africa with the evolution of mobile cellular subscriptions per 100 people from 2005 to 2017 illustrating this very clearly (Figure 4).

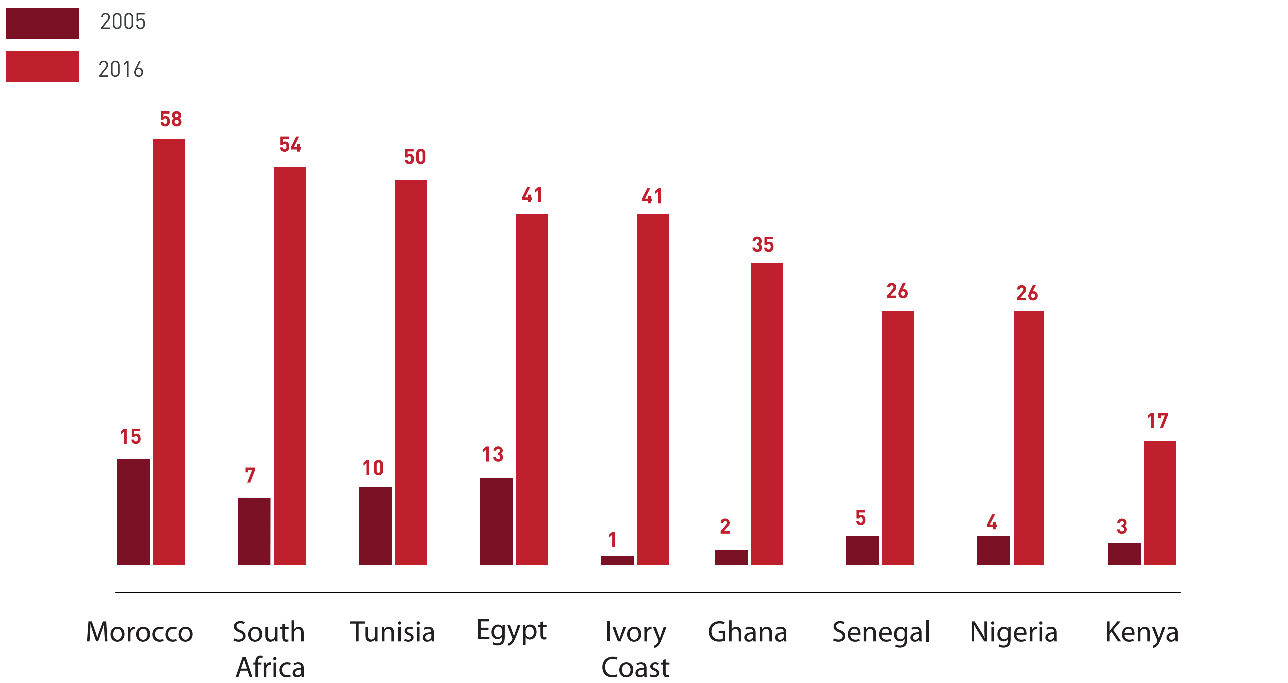
Figure 4 : Mobile cellular subscription per 100 people in selected African countries; 2005 - 2017



Source: World Bank Database and Strategy& Analysis, GSMA

Internet penetration rates have also been increasing since 2005 reaching percentages of 58% in Morocco, 54% in South Africa, 50% in Tunisia, 41% in Egypt and Ivory Coast and 35% in Ghana in 2016. Some of the highest evolutions in internet penetration between 2005 and 2016 occurred in Ivory Coast with a CAGR of +39,7%; in Ghana with +30,6%, in South Africa and Nigeria with +19,7% and in Kenya and Senegal with +16,5% (Figure 5).

Figure 5: Individuals using the Internet as a percentage of the population; 2005-2016



Source: World Bank Database and Strategy& Analysis

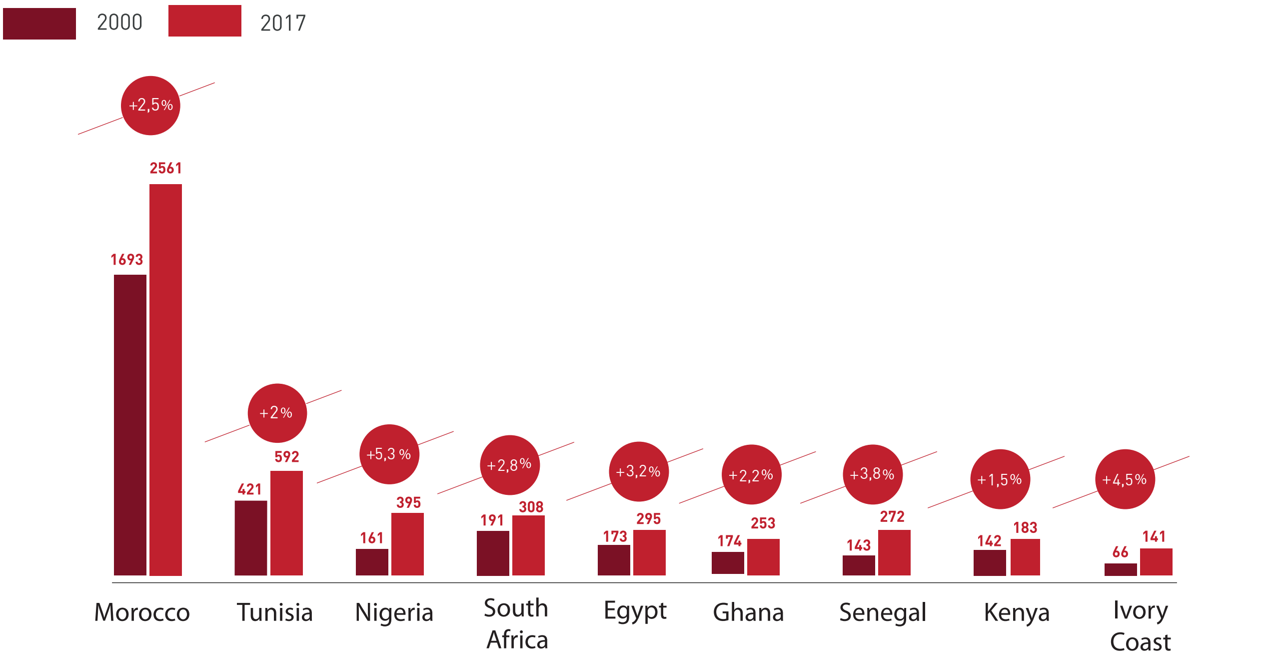
As more people rely on mobile subscriptions and use the internet in Africa, and as smartphone average selling prices decrease (i.e., a decrease of about 56% in the average selling price across Africa 2012-2017 going down from 227 to 101 USD), smartphone penetration rates become an important factor to consider. They are directly setting the ground for an even more important development of Fintech Companies. In 2018, 37,9% of the population in Morocco used smartphones vs. 35,5% in South Africa, 29,1% in Algeria, 28% in Egypt, 24% in Ghana, 20,9% in Kenya.

The African diaspora abroad continues to grow substantially thus impacting the level of remittances transferred back to the continent, creating an important business segment that Fintech Companies focus on

The strong African diaspora and its continuous growth over the years drives the increase in remittances flow back to the continent, yet the solutions offered by money transfer operators and banks are usually considered costly, which increases the need for alternative solutions.

Most African migrants have settled in European countries. The 2018 UN Migration World Migration Report highlights: "In 2017, most African-born migrants living outside the region were residing in Europe (9,3 Million)". The report points out "Since 1990, the number of African migrants living outside of the region has more than doubled, with the growth to Europe most pronounced" (Figure 6).

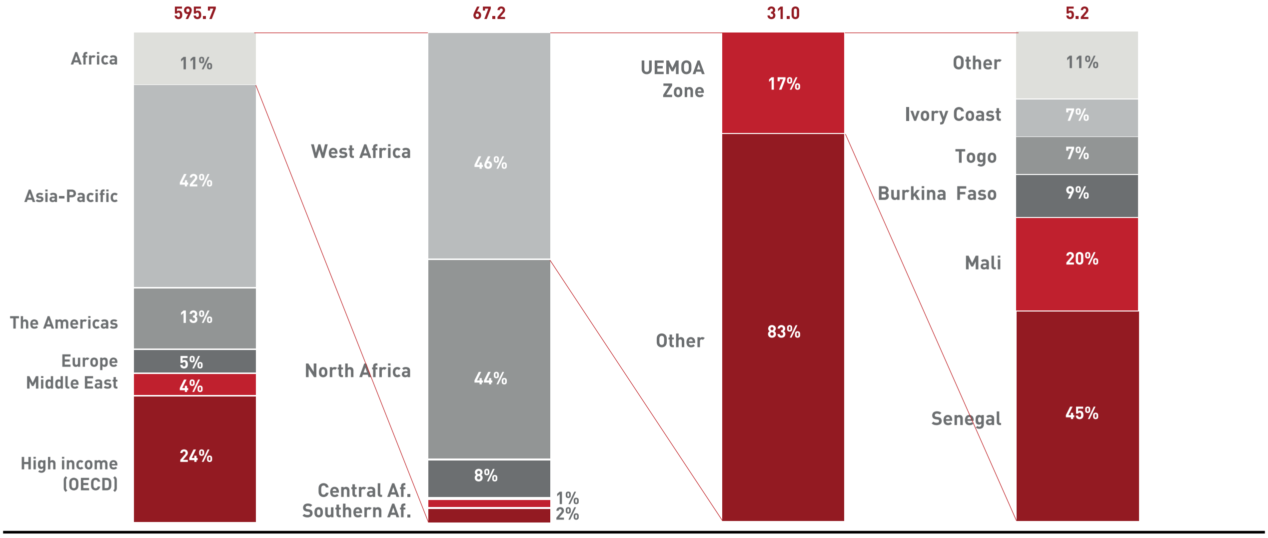
Figure 6: Number of migrants to Europe from selected African countries; in thousands 2000-2017



Source: United Nations, Department of Economic and Social Affairs, Population Division 2017, World Migration Report

There is a clear correlation between the growth in the number of migrants from Africa and the growth in the volume of international remittances sent back to the continent. In 2017, Africa has captured 11% of international remittances received worldwide (i.e., from a total of 595,7 billion USD, Africa's share was 67,2 billion USD – Figure 7).

Figure 7: Reception of international funds from migrants; in billions USD, in 2017

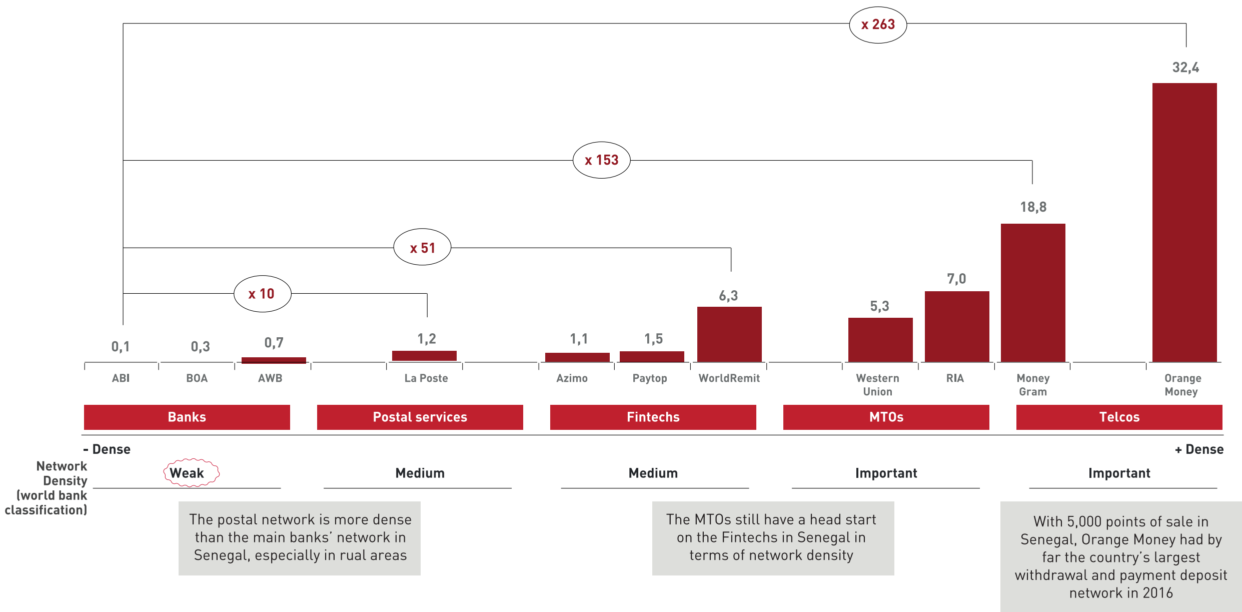


Source: World Bank Database and Strategy& Analysis

The 2018 World Migration Report highlights that Europe is the biggest "sender" of international remittances towards the UEMOA zone with 43% of the flows. In addition, the transfers going from Europe to Africa have increased by 10% since 2010, driven by the flows coming from major sending countries in Europe (i. e., France, Italy, Spain, Germany and Portugal – on average, an African migration living in a European country sends about 2000 USD per year back home).

Five main types of players share the market of international transfers and remittances in Africa. These players are Money Transfer Operators (MTOs), Fintech Companies, Banks, Postal agencies and Telecom Companies. MTOs are the most important players based on market share. Their network densities and delivery times are very appealing to users. However, they are less competitive than Fintech Companies if we compare their prices. This explains Fintech Companies with a focus on this business segment are slowly but surely catching up and capturing more and more market share of international transfers into Africa. A deep dive on Senegal's competitive landscape shows that Fintech Companies also have potential in regards to network density despite the head start of MTOs (Figure 8).

Figure 8: Points of sale per 100,000 inhabitants per player in Senegal, in 2016



Source: Enterprises' websites and Strategy& Analysis

The share of the urban population and the percentage of young people (15-29 year olds) continues its growth trajectory in Africa, providing a perfect target audience for African Fintech Companies

As the young urban population in africa continues to grow, there will be more people exposed to and interested in innovative ways to manage payments, transfers, savings and even credits. There will be an increased need for options other than the ones offered by the established historical financial institutions. Options that are cheaper and more conveniently accessed such as solutions proposed by Fintech Companies and that are accessible through mobile applications.

The annual total population of 15-29 year olds in Africa is expected to reach 414 million by 2025 from a base of 260 million in 2005 (i.e., a CAGR of +2,4%). In parallel, the percentage of the population residing in urban areas in Africa is projected to reach 45,9% by 2025 (i.e., a CAGR of 1,1% since 2005).

Africa has a population that is one of the youngest in the world, with a median age of ~19,4 years old in 2019. It is this younger part of this young population (i. e. the 15-29 year olds) that is expected to be driving the Fintech revolution.

Although Fintech Companies in Africa are increasingly targeting different sub-sectors, this trend has yet to be confirmed in the future. Most Fintech Companies remain focused on retail banking products (especially payments and transfers) and to a lesser extent Corporate Banking. Several Fintech Companies are also positioning themselves as players offering multiple services (payments, transfers, cash/savings management...).

Rise of Fintech ecosystems in Africa

A screening of ~170 Fintech Companies in various African countries have helped to explain the complexities of the rise of Fintech ecosystems in Africa. Some countries share similarities with regards to the evolution of their Fintech ecosystem. It allows us to group them in three main regions/ecosystems, each with a varying degree of maturity (Figure 9): Africa's "Leading" Fintech Ecosystems in Anglophone Africa (e. g., Nigeria, Ghana, South Africa and Kenya), Northern Africa's "Emerging" Fintech Ecosystem (e. g., Morocco, Tunisia) and "Promising" Fintech Ecosystems in Francophone Africa (e. g., Senegal, Ivory Coast).

Overall, in Africa, there is a limited business environment surrounding Fintech Companies and Fintech ecosystems. Governments are for the most part still in exploratory mode and have yet to find a good model that will be acceptable for all market participants and will not be not restrictive. A real vision with a large scope will be required to create the necessary conditions for the development of a Fintech ecosystem. This might include items such as cyber security, which is in fact a major issue on the continent.

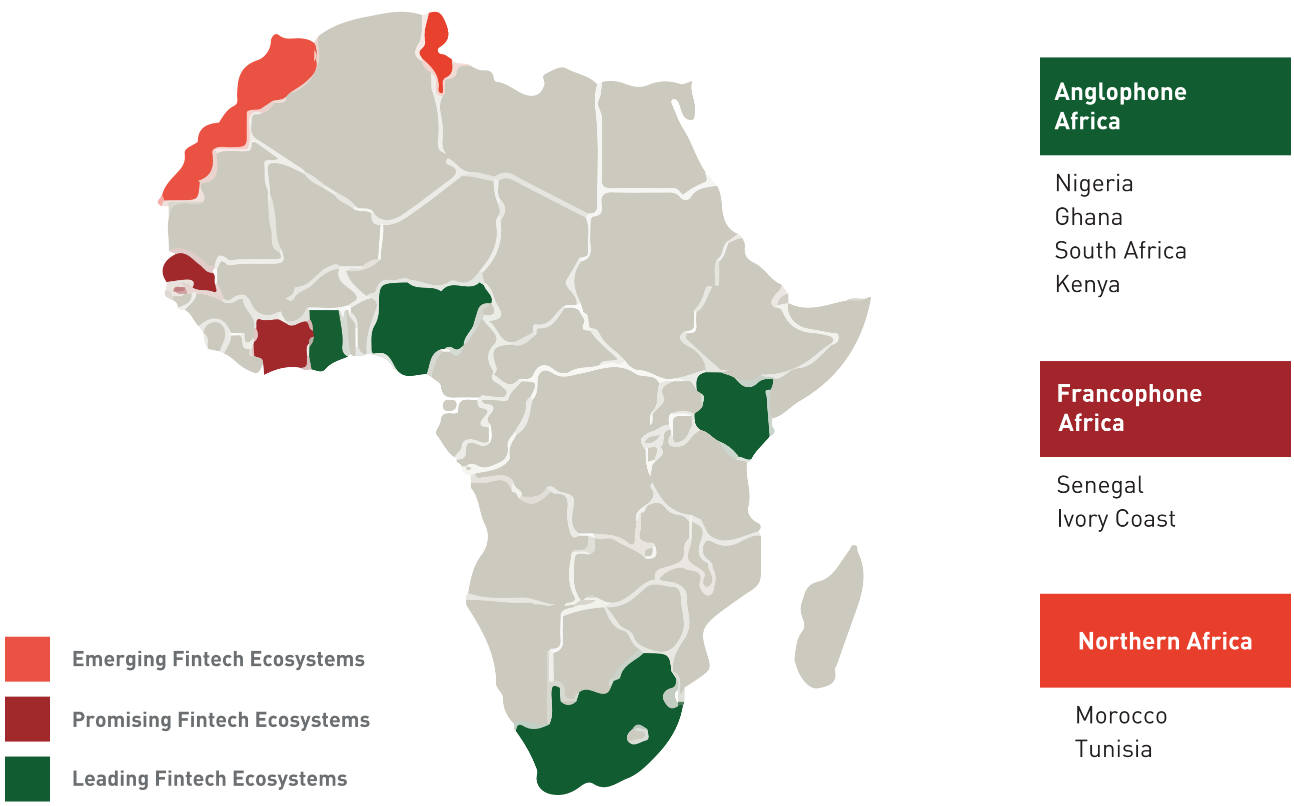
Fintech Companies rely on low-level technology, are single country focused, often owned by the founders or by large institutions, such as banks and telecom operators

So far, Fintech Companies in Africa generally rely on very simple low-level technologies. The poor infrastructure does not allow yet for very sophisticated tools to be used, in comparison to markets such as the United States or the United Kingdom. This explains why, so far, the majority of Fintechs in Africa have mainly been offering solutions in payments and transfers. In addition, the trends seem to suggest that Fintech Companies on the continent are usually owned by sole proprietors for the most part, which makes it hard for them to scale up.

Scalability is indeed an issue for several Fintech Companies on the continent as expansion across African countries is difficult, especially given the inability to capitalize on advanced infrastructure and technology solutions. This is noteworthy and illustrates why it seems like Fintech Companies in Africa are principally single country focused especially when there is a large home-market such as in Nigeria, Kenya and South Africa.

It is in this context that it becomes apparent that for a Fintech Company to succeed on the continent, and be able to expand across several markets, it has to have the backing of an established player in the financial services industry. The difficulties to scale given the state of the infrastructure added to the "non-consumption of financial services" habits in Africa are major issues that Fintech Companies face, making it essential for telcos and established financial institutions to leverage their superpower in their respective markets and provide their help to these new players. This would make the playing field slightly more level playing field for Fintech Companies to develop and grow.

Figure 9: Snapshot of African Fintech Ecosystems; Grouping of selected countries; non-exhaustive



Northern Africa – An "Emerging" Fintech Ecosystem:

Despite some initiatives launched by regulatory bodies (interoperability legislation for instance...), the current regulatory framework remains relatively inflexible and does not allow Fintech Companies to develop and progress easily. Having said that, governments are increasingly showing their support for financial technology, for instance in Tunisia where, as part of the Digital Tunisia 2020 Strategy, the government passed a Start-up Act law as recently as April 2018. This includes several tax exemptions for start-ups as well as many other incentives aiming to boost innovation and entrepreneurship in country, thus fuelling youth employment and promoting the internationalization of the economy.

Financial institutions and banks headquartered in the region are generally interested in collaborating with Fintech Companies. However, they are also worried as to how the rise of Fintech Companies will affect their operations and profitability in the long term.

In addition, the network of incubators and accelerators in the region is growing but a consolidation of the various initiatives and structures will be required to create a more dynamic ecosystem. The Fintech Companies in this region are almost all focused on payments, transfers. While some of them are still owned by the founders, many of them are working in close partnerships with, or are even owned by, banks. Specifically, Moroccan banks and Maroc Telecom (through its African subsidiaries) are exploring various models to collaborate with Fintech Companies.

In fact, of the ~170 Fintech Companies screened, roughly ~15% are in Tunisia and Morocco specifically. Examples of Fintechs in the Maghreb and Northern African region include but are not limited to: PEAQOCK Financials, FPay, Afineety in Morocco, and Kaoun, BARAC, Swiver in Tunisia.

Francophone Africa – A "Promising" Fintech Ecosystem:

Many of the governments in Francophone Africa want to support the development of Fintech Companies as they are seeing them as a viable solution to address some of the key challenges in the region, especially financial inclusion, which is in particular relevant in rural areas. Yet, real progress is relatively limited. To large extent, historical players have blocked initiatives. Telecom companies for example, in some instances, act as regulatory bodies themselves and prevent Fintech Companies from becoming a serious threatening competition (this is especially true in Ivory Coast).

The support structures in the region are mainly small players and constitute a fragmented network, who try to help Fintech Company but should become more dynamic. Mobile-money type-solutions thrive nonetheless and there is a strong adoption by the population, which is a good sign for Fintech Companies. It is worth mentioning Senegal, where despite the small home market and lack of supporting structures and an adapted regulatory environment, notable success stories exist.

Of the ~170 Fintechs screened, roughly ~10% are in Francophone Africa. Examples include:

PayDunya, Wari, Joni Joni in Senegal, Ovamba Solutions in Cameroun, and CinetPay, Panelys Cash in Ivory Coast.

Anglophone Africa – A "Leading" Fintech Ecosystem:

The region is much more dynamic in regards to the development of Fintech Companies than the rest of the continent. Several governments either have established sandboxes (Nigeria in 2018) or have considered setting them up (South Africa). The regulatory bodies are clearly pro Fintech Companies and invest time and effort in following trends to better support them.

Banks turn to Fintech Companies to differentiate themselves (especially in South Africa) and invest in the development of a Fintech ecosystem, either by directly collaborating with them or by enabling them to grow outside the walls of the banks.

The support structures are important as well; banks and telecom companies invest in them (for example in hubs, incubators, accelerators…).

Of the ~170 Fintechs screened, roughly ~70% are in Francophone Africa. Examples include but are not limited to: Nala in Tanzania, Tala, JampoPay in Kenya, InterPay in Ghana, Interswitch, Flutterwave, E-Tranzact in Nigeria and Zoona, SnapScan in South Africa.

Case Study: Deep dive on South Africa

There has been a surge in Fintech activity in the recent years in South Africa

There are ~30 to 50 Fintech Companies in South Africa according to Robyn Moore, Design Thinking Lead of PwC Cape Town and specialist in Open Innovation Methodologies. About half of them are in "growth mode," (i. e., have products and clients as well as a business model that stands).

The work done by support structures such as Startup bootcamp Afritech, SW7, and Workshop 17 and others, to incubate Fintech Companies, to help them accelerate their growth, and to get seed funding facilitates the development of the Fintech ecosystem. There are several success stories of Fintech Companies such as SnapScan (payments), which was acquired by Standard Bank, and Jumo (money transfers), which is expanding quite rapidly into Africa and even India. Some key success factors that the most prosperous South African Fintech Companies have in common are:

- A strong knowledge and understanding of the regulatory environment
- A good understanding of the financial services value chain in the specific environment of South Africa, and a capacity to capitalize on the areas of the value chain that are not executed well by the banks / insurers (especially when it concerns customer experience and service);
- A strong focus on the unbanked and uninsured segments of the population through direct models and channels instead of using intermediaries

The regulatory framework in South Africa is supporting the development of Fintech Companies

The regulatory body, the South African Revenue Bureau, is clearly pro Fintech Companies. It has been looking at research done in the field to consider its potential and evaluate its impact on financial inclusion in South Africa. Robyn Moore of PwC Cape Town, points out that the regulatory bodies are aware that one of the biggest barriers to entry for start-ups is the regulatory environment. *"It is very difficult, almost impossible, for a Fintech Company to become an established player, on their own, without the backing of a big player in the ecosystem such as a large bank or insurance firm,"* Robyn Moore adds. This is one of the reasons for example, why Fintech Companies operating in the insurance industry, are more likely to target only a part of an insurance model increasing their chances to getting buy in from a bigger player. Fintech Companies are clearly segmenting the value chain completely and going after that part of the value chain in which the insurance firms are not efficient.

Despite the progressive nature of the regulatory environment, the legislation is still under the influence of the large banks

Fintech Companies in South Africa continue to be a disadvantage in comparison to banks. They need licenses to be able to operate within an oligopoly where four to five banks share the total market. However, there is now a sandbox project in place that will allow Fintech Companies to experiment and innovate legally. The South African Revenue Bureau invested in the setup of this sandbox so they can co-develop the ecosystem directly with Fintech Companies. This is a clear demonstration that the regulatory entities in South Africa are looking at international best practices to implement progressive legislation.

The historical players in the financial industry in South Africa, such as banks and insurance firms, are increasingly looking at Fintech Companies as a lever for future growth. Banks are considering Fintech Companies for generating new revenue streams through innovative solutions that they are not able to develop on their own. Fintech Companies are more agile and innovative, which is an important advantage, especially in the saturated South African market where a few players have almost equal market shares (i. e., ABSA Bank, Standard Chartered Bank, Ned Bank, First National Bank, and more recently Capitec Bank). These banks are very profitable. However, in order to get a competitive edge over each and as a way to differentiate themselves, they realize that investing in Fintech Companies might be a solution.

Turning to Fintech Companies to differentiate their offering is even more important for banks in the context of the large unbanked part of the South African population

Fintech Companies have successfully positioned themselves as a preferred solution for the informal and unbanked sectors of the population in South Africa. Zoona is a great example of that. It is a Fintech Company offering a money transfer mechanism with the help of kiosks in townships, which help communities transfer funds using USSD tokens. Zoona has a network of trusted individuals and has established itself as a sort of informal bank. As a direct result, several banks in Zambia and Mozambique are looking to invest in them. Their success pushed governments to ask them for help in designing policies about financial services to create more financial inclusion.

Insurance firms are also looking to Fintech Companies for help. For now, there are no formal on-demand insurance models, which is why insurance companies are relying on the smaller Fintech Companies to establish a network or at least prove the case for on demand insurance before they can either buy them out or collaborate with them. This explains why several insurance companies are investing in Fintech Companies or support structures such as incubators and accelerators in South Africa.

Telco companies are very active and important, with a good access to the majority of the population of South Africa

There are only three major players in the telco environment, which again shows the oligopolistic character of the South African market. Telecom companies, unlike banks, were able to penetrate the unbanked population. As a result, there is an uplift of Fintech activity within telecom companies, with several payment mechanisms proposed, and many Fintech Companies benefit from the support of Telecom companies. A good example is SnapScan, which in its early days benefited from the support of a telecom company looking for alternative payments solutions running off a mobile instead of a bank account.

Despite the dynamic nature of the Fintech environment in South Africa, the market remains very competitive and challenging

The current segments of the population that use a bank and have insurance in South Africa are very brand loyal. This is clearly an obstacle for Fintech Companies that target them. As a result, they focus on the opportunity of becoming "a big brand for the unbanked and uninsured South Africans. For example, Capitec Bank was able to succeed, despite the fact that it is one of the youngest banks in the market – it was created about 20 years ago - because it was able to move towards a model putting customer centricity and advanced recognition technologies at the forefront of its product line.

> **I have my doubts that without a backing from big south african players, Fintech Companies would be successful on their own.**
>
> Robyn Moore, PwC Cape Town

Case Study: Deep dive on Nigeria

The ecosystem in Nigeria is a fertile ground for Fintech Companies

According to Adedoyin Amosun, Director at PwC Nigeria and expert in financial services, there are about a hundred Fintech Companies in Nigeria, all with different levels of maturity. Some of them are very succesful, thus becoming big players in the Nigerian market such as Interswitch, Pagatech, and Flutterwave.

For example, Interswitch started as a switching company owned by Nigerian banks and gradually grew until banks divested from it. It has since then shifted its focus to transfers as well as several other services (e. g., customers can buy airtime on their platform, pay their bills or effect transfers to bank accounts, and merchants can use them as a switch for selling their products and services and get payments through to their bank accounts…). Pagatech is another successful Nigerian Fintech Company, specialized in mobile money and mobile wallet solutions. Customers can load money on the wallet and can transfer funds from bank account to wallet and vice versa. This allows them to buy products and services more easily through a mobile wallet. Flutterwave is a leading Fintech Companies in Nigeria and one of the most active Fintech Companies in developing partnerships with banks to leverage Big Data for the design of innovative products and services. Recently, Flutterwave was able to secure funding from an important private equity firm. As a result, it has sufficient capacity to continue its offering in this space. The other Fintech Companies in the Nigerian market are all relatively small in comparison and are niche players that are still growing.

Banks somewhat support the development of Fintech Companies in Nigeria

Access Bank has launched a hub, Africa Fintech Foundry, where different Fintech Companies can leverage a physical space to do work and participate in competitions. The Nigerian Central Bank also has set up committees of banks and other technology players to discuss the trends and what needs to be done to accelerate the creation of Fintech Companies in the country. Two types of commercial partnerships with banks stand out. The first type of partnership is when banks collaborate with Fintech Companies for the design of products and services and provide them with anonymised data to see if there are opportunities and trends to build a new product or offering. The second type of collaboration involves Fintech Companies that work on innovation solutions outside the walls of the banks to foster the innovative process that both parties commit to engage in.

"Banks already have a strong customer base, and Fintech Companies have the creative potential that is necessary to innovate and appeal to the growing young population of the country. In the context of Nigeria, where about half of the population will be under 25 by 2020, it is important for both the Fintech Companies, banks and other financial institutions to realize this important factor," adds Adedoyin Amosun.

Overall, Fintech Companies are doing very well in driving financial inclusion in Nigeria. Once they start operations and once they have been able to develop a good application, they tend to focus on addressing interconnectivity issues and focus on the unbanked population. In Nigeria, which is the most populous country in Africa, banking rates are still low.

The government of Ivory Coast would like to see a Fintech ecosystem emerge

There is a real need for financial services in rural areas in Ivory Coast. The government is clearly struggling with improving poverty through increasing banking rates in these areas and would like Fintech Companies to invest and help improve levels of financial inclusion. However, despite the booming mobile money indicators in Abidjan, and Ivory Coast as a whole, the number of Fintech Companies is still limited.

Currently, there are not many regulatory bodies involved in supporting the development of a Fintech ecosystem in Ivory Coast. One of the few examples of a government institution providing support to start-ups in general is that of Fondation Jeunesse Numérique, in which the Autorité de Régulation des Télécommunications / TIC de Côte d'Ivoire (ARTCI) is involved as a partner. High taxes are another limiting factor in Ivory Coast. This constitutes a major area for improvement that the regulatory bodies should consider. There is a clear need for fiscal mechanisms to incentivize the use of mobile money and Fintech solutions.

Telecom companies, in a way, hinder the development of Fintech Companies in Ivory Coast

An important problem to highlight is the issue of the Unstructured Supplementary Service Data (also referred to as USSD), which is a communications protocol between phones and mobile network operators. Although, in Ivory Coast the population has adopted the use of USSD codes, telecom companies control most part controlled of these codes, thus making it extremely difficult for Fintech Companies to use them and to provide efficient solutions.

In reality, the role of the government in the development of a Fintech ecosystem in Ivory Coast is limited

On one hand, the presence of banks and telecom companies in the market is a significant: telecom companies are increasingly competing with banks in providing financial services. They are at the forefront of mobile money solutions. The majority of retired persons in Ivory Coast have mobile money accounts instead of bank accounts, and increasingly, salaries are being wired through mobile money accounts.

Orange is one of the most important players in this market. After the success of Orange Money and of Visa cards linked to Orange Money accounts, Orange invested in extending the operations of Orange Bank in Ivory Coast among others. Banks in Ivory Coast, fearing the competition from telecom companies, now position themselves on the Fintech market to close the gap. Some banks started developing Fintech products, such as Société Générale. They are also looking for an operating model that would facilitate working with Fintech Companies.

Although telecom companies are somewhat sceptical when it comes to competing with Fintech Companies in Ivory Coast, they still invest, to some extent, in the development of the ecosystem

Orange launched an accelerator called "Orange Fab Côte d'Ivoire." In addition, there are also other support structures such as the African Start-up Forum (heavily turned towards tech start-ups), and the PwC Accelerator. Other smaller structures exist as well. However, overall, there are not many support structures helping the Fintech ecosystem to gain in maturity in Ivory Coast, which creates additional challenges. There is a clear lack of advanced technical skills and business sophistication (e.g., Artificial Intelligence, Blockchain...).

There is no consensus on the number of Fintech Companies in Ivory Coast. However, the director of Africa Fintech Forum mentioned that there are ~40 Fintech Companies. The current Fintech Companies in Ivory Coast do not generally focus on credit, savings or insurance, with banks being the main players in these sectors. Even telecom companies are not yet at a level of sophistication that would allow them to compete with banks on these sectors using Fintech type products.

> **The government is ready to promote Fintech Companies in order to increase financial inclusion in Ivory Coast through digital solutions. The government wants to boost Fintech Companies, but it is still unclear what the best approach is to do so.**
>
> Régis Tade, Advisory Manager at PwC Ivory Coast
> Lionel Rey, PwC Accelerator Manager in Ivory Coast

Telecom companies and banks have led the mobile money revolution in most of Africa, but in Senegal, the landscape is slightly different

Wari is an example of a pure player, launched in Senegal in 2008 by Senegalese founders who believed in the potential of the transfer payment market at a local level. Wari quickly became a leader of money transfers. The Senegalese population adopted the solution, which made it very powerful. They were able to get over 70% of market share until Orange engaged in the Fintech and mobile money environment as recently as 2014. Many other initiatives emerged locally before Orange started competing with them. Now, Wari is just one of many successful examples. They were able to expand their operations to several countries in Africa. In addition, Wari almost bought Tigo, a mobile operator, which shows the extent of their success. Interestingly enough, Wari benefited from the support of the Total Group, which propelled them forward. Other successful Fintech Companies include Joni Joni, InTouch, PayDunya, and SudPay. According to Julien Guth, expert in digital finance and founder of Beenok, there are about ten Fintech Companies in Senegal, mainly focused on mobile money, transfers and some other innovative solutions such as ticketing and tax collecting platforms.

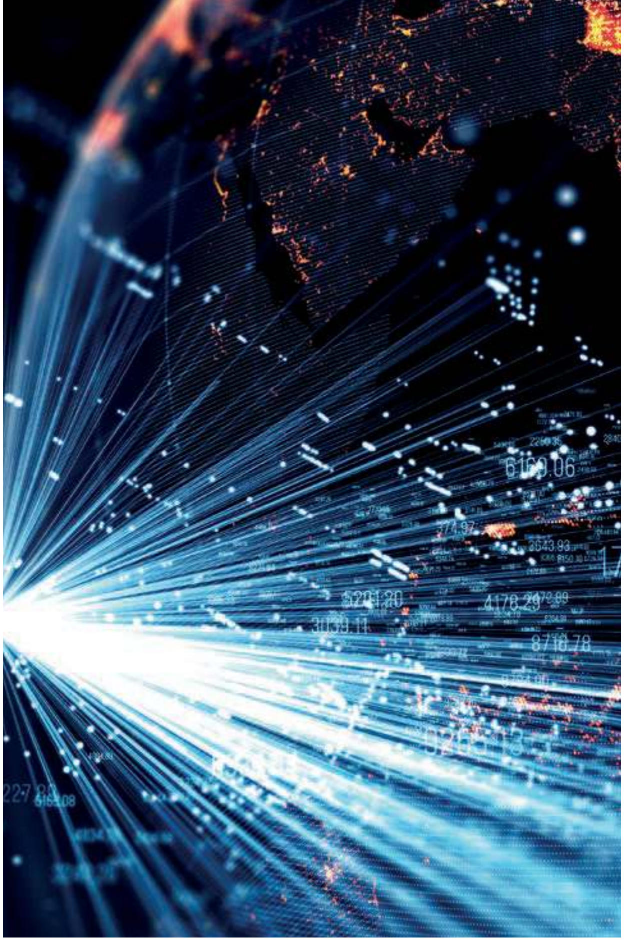
There is an important demand for Fintech type products by the Senegalese population

The Senegalese population continues to demonstrate a strong interest for Fintech type products. This strong demand, initially captured by Wari and other local initiatives, was followed by other players looking to secure market share as well. Other Fintech Companies started emerging, such as Wizall, a Senegalese Fintech Companies launched with the support of the group Total, which first focused on transfers and later on mobile money. Banque Centrale Populaire, a Moroccan bank, which wanted to deploy Wizall's solution throughout their branches, recently acquired them. BCP now benefits from Wizall's technology and competencies. Banks in Senegal have also dared to take the leap and developed Fintech type products. Société Général's YUP, a mobile money solution allowing access to financial services without having a bank account, and la Banque de Dakar's Kash Kash, which was the first to launch an offer for purely digital credit, are examples of this.

These examples showing that Fintech Companies still need the support of larger groups to boost their development. In order for Fintech Companies to acquire market share when they are starting, it is essential to have a strategic partnership with a large established player or to have some sort of investment from a big group (e.g., expertise on how to accelerate growth, how to get funding…). In some cases, these big players aim to control Fintech Companies, which might actually slow down their development in the long term.

The Senegalese government has been mostly "hands off" in regards to boosting the Fintech ecosystem

Several years ago, there was a clear space for Fintech Companies in Senegal, as other actors, such as telecom companies were not as active and influential. As a result, some initiatives had significant success very early on. It is important to highlight that the regulation in Senegal has very much facilitated the development of Fintech Companies in Senegal. As early as 2006, the Senegalese government invested in regulations on mobile money, electronic money, and payment institutions. The legislation was not perfect, but it existed, which demonstrated the government's commitment to having a proactive, flexible and supportive regulatory playing field for Fintech Companies. Recently, the government amended the regulation to provide even further clarity around Fintech Companies in the country. It is also important to highlight that the Central Bank did not do anything to "block" the development of Fintech Companies, when initiatives such as Wari and the likes were emerging.



Yet, the overall support structure landscape is relatively weak in Senegal

There are only very few support structures such as the CTIC Dakar incubator, a semi-public entity formerly led by the current CEO of InTouch, JokkoLabs, and a couple of other smaller labs and incubators such as Fablab… In general, small players individually invest in developing their own incubators through Open Innovation Labs / Initiatives (e.g., Groupe Cofina). However, there are many investment funds willing to support Fintech Companies. Examples include but are not limited to Partech Africa, KAP, and Beenok.

A Fintech Company that only aims to target the Senegalese market cannot become a true leader: the market is too small to create real scale and educating people to use financial services is costly. Wari is a counter example, some might say, however even Wari has been struggling in the face of Orange's intensified competition. Nonetheless, there are only a few entrepreneurs in Senegal and the banking rates remain undeniably low. These trends will help the local Fintech ecosystem to grow in the years to come. Another trend that will indirectly help the Fintech ecosystem locally is the creation of start-ups incorporated abroad in places like Luxembourg, the UK or France, and yet operating in Senegal (e.g., Afrimarket, Beenok…).

> **In Senegal, there are several adjacent sectors to Fintech Companies worth mentioning. Solar pay-as-you-go specifically, and Energy pay-as-you-go initiatives more generally are definitely examples of creative innovation. E-commerce players are also increasingly integrating financial solutions to their offerings.**
>
> Julien Guth, Beenok Founder

The business environment in Morocco to support the development of a Fintech Ecosystem is slowly evolving

The Moroccan financial institutions are increasingly interested in Fintech Companies, which can be witnessed through several events and initiatives such as the BCP's Fintech Challenge, AWB's Smart Up Hackathon, and Société Générale's partnership with CEED to launch Open Tech Challenge.

The creation of related infrastructure is a focus area of the relevant entities, with a key focus on facilitating the development of mobile payment solutions. In 2018, the required interoperability technology between banks and payment institutions was launched. This technology makes the "front-end" the only changing variable among operators while the whole "back-end" system is harmonized for the entire sector.

All building blocks seem to be available and united for development of a true Fintech ecosystem in the country. However, the pace of implementation of announced initiatives is slow and has to accelerate if the country wants to play a key role in the Fintech sector on the continent going forward.

The regulatory framework is still at the early stages of its development

Recently, a former law on microcredit was revoked (loi n 18.97) and replaced by "dispositive n 85.18" to offer better legal mechanisms to facilitate access to financing for start-ups and SMEs in general.

The regulatory bodies, namely Bank Al Maghrib and ANRT, are starting to loosen up the strings tied to the sector leading to a slow yet sure liberalization of the financial services industry in Morocco.

The adoption of financial services by the population has stalled in recent years and needs to be boosted by the introduction of innovative financial solutions by new players. In order to promote financial inclusion through digitization, Bank Al Maghrib has passed "Loi No. 103-12" allowing non-banks to offer payment solutions, and giving actors in the marketplace the freedom to position their e-wallets and adapt their offerings. Bank Al Maghrib clearly shows a very strong interest in Fintech Companies. In addition, a taskforce, characterized by its participative nature, united the Confédération Générale des Entreprises du Maroc (CGEM) and the Association Marocaine des Investisseurs en Capital (AMIC) to lead the efforts around the implementation of a Start-up Act in Morocco. Adil Rzal, president of AMIC, assures that Morocco will be able to implement a good legislative framework for start-ups within the coming 18 to 24 months.

There are also notable efforts to push for a law facilitating the activity of crowdfunding platforms in Morocco. Emmanuel Exposito, founder of Afineety, a crowdfunding platform, indicates that "Morocco is the only country in Africa, which has submitted a draft bill to structure the crowdfunding legal basis. Worldwide, only about 15 countries have worked on a draft bill on crowdfunding".

In Morocco, access to capital is a major issue for start-ups and only partially addressed

The government has partly resolved the issue of financing Moroccan start-ups, thanks to the funds loaned by the World Bank: $ 50 million were made available to support the launch of Innov'Invest by la Caisse Centrale de Garantie (CDG) in October 2017. Innov'Invest fund allows the government to develop two types of structures (i.e., incubators and accelerators), which receive financing for the start-ups in their portfolios. It also injects funds in other investment funds, which then finance start-ups (i.e., namely four investment funds: Azur Innovation, Green Innov Invest, Maroc Numeric Fund II and Seaf Morocco Growth.

Different types of investment funds exist, including but not limited to those specifically dedicated to start-ups, such as MITC Capital, the first to position themselves in the sector. There is only a limited number of private equity firms focused on financially supporting start-ups in Morocco, given the small size of the market. Yet, in some instances, certain Private Equity firms, which usually focus on big players, intervene and invest in small start-ups in Morocco (e.g., AfricInvest invested in Buzzkito although they generally work on bigger tickets). In terms of corporate funding, some Moroccan banks are showing interest in buying Fintech Companies and / or collaborating with them (e.g., BCP acquiring the Senegalese Fintech Company Wizall).

Most incubators and accelerators in Morocco are generalists

While several incubators and accelerators exist, they usually do not have a specific focus on Fintech Companies, and only a few are part of their portfolio. Examples of incubators that are currently operating in Morocco are Kluster CFCIM, Réseau Maroc Entreprendre, and H7. Some social incubators have also been very active in the start-up ecosystem in Morocco such as Enactus, Espace Bidaya, DareInc, and MCISE, but again, there are not many Fintech Companies (focused on financial inclusion) that are part of their portfolios. Examples of accelerators include Endeavor, La Factory, and Impact Lab – previously Numa. Overall, most incubators and accelerators are local Moroccan structures, with the exception of Endeavor and Enactus, which are international structures, capable to leverage the support of their international network.

> **Fintech Companies (Financial Technology) offer huge opportunities to strengthen financial inclusion as well as economic and social development**
>
> Abdellatif Jouahri, Wali of Bank Al Maghrib

KEY RECOMMENDATIONS

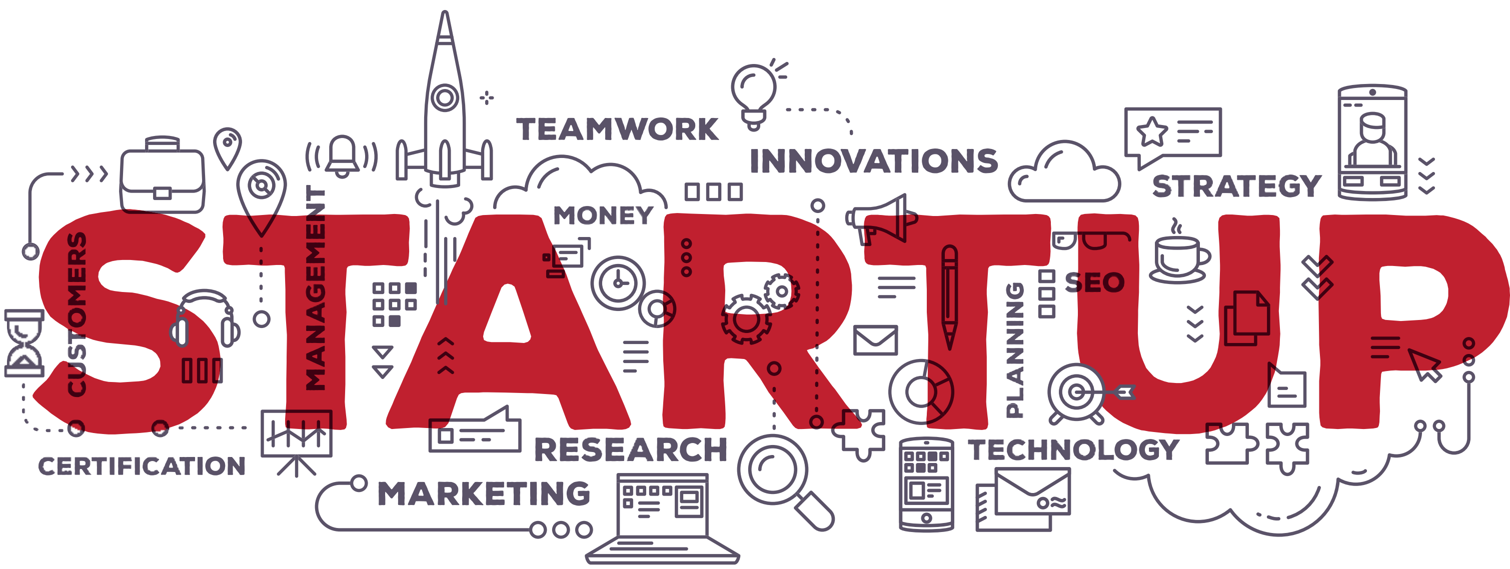
Building a successful Fintech ecosystem requires combining successfully 3 building blocks: Talent, Ease of Starting Business, and Access to Capital.

The first building block – Talent – requires the development of an educational system focused on innovation, new technologies and providing students the possibility to work on projects in parallel with their education. Often, upscaling (developing new skills) of the current workforce is required, especially in the light of the increased importance of new technologies such as Big Data, Artificial Intelligence etc. While governments play a key role in coordinating the efforts in this building block, initiatives driven by companies should also be encouraged.

The second building block – Ease of Doing Business – should focus on facilitating the creation of new companies through tax incentives and simplified procedures, adapted regulatory and legal frameworks, and the protection of intellectual property. Again, governments can and should be involved.

The third and final building block – Access to Capital – requires a financial system that works efficiently and effectively, capable of understanding the needs of newly created companies. All parties, from banks to private equity firms and venture capitalist should be "educated" on the importance of the Fintech ecosystem for the overall economy and should be encouraged to invest in it.

The different countries Africa that were analysed are just starting to develop a more integrated approach to building successful Fintech ecosystems. African governments are increasingly aware of their importance but lack the necessary means and competences to coordinate actions and accelerate initiatives. The establishment of so-called Fintech Catalysts, such as clusters or financial centres, seems to be the easiest, most efficient and coordinated method to overcome these challenges.



Fintech Catalyst

Talent

- Develop entrepreneurship in engineering and business schools and encourage collaboration between them
- Make grants and subsidies available to entrepreneurs with Fintech solutions
- Offer in house talent the opportunity to work on innovative projects

Ease of starting business

- Protect intellectual property
- Set up tax incentives for startups
- Establish encouraging regulatory frameworks

Access to Capital

- Establish incentives to boost investment in startups
- Set up funds backed up by the government to guarantee early stage investment for Fintechs

IT Infrastructure Cyber Security

Impact: Consolidation of Fintech Catalyst

- Cluster like approach to address specific aspects of the financial services (i. e., ultra specialization around themes like green and sustainable finance, Islamic finance, insurance...)
- Collaboration opportunities between Fintechs and financial institutions.
- Incubation and acceleration programs specific to Fintechs.
- A space for experimentation with Fintech products.

Insider insights

Zoom on Peaqock Financials

Mohamed Benkhaled is the CEO and Founder of Peaqock Financials. He agreed to talk to us about his experience launching and navigating the Fintech ecosystem in Morocco. Below are some highlights from our interview.

http://www.peaqock.com/

PwC: How was your experience launching Peaqock Financials and what do you think were some key factors behind its success in Morocco?

Mohamed Benkhaled: I started Peaqock Financials in 2013 / 2014 after a long experience working in the financial services industry. By the time I decided to commit myself full-time to developing a Fintech Company, I had already had a significant exposure to the financial services industry both abroad (i. e., Europe, Africa) and in Morocco. I had accumulated over 10 years of first-hand experience working in insurance, investment banking, and asset management. This allowed me to deepen my knowledge of the financial services industry to understand the need I wanted my Fintech Company to target: the need for financial data. My experiences also enabled me to pinpoint the complexities that should lead me to adapt my products to the Moroccan market. I believe the acceleration came from there.

My network was an important success factor. In my case, thanks to my prior professional experiences, I had already developed a significant professional network and spoke the "language" of potential clients. Our first client was Wafa Gestion. Later on, Maroc Numeric Fund expressed interest in the products Peaqock Financials offers.

All of this allowed the team to reach some important milestones. Today, we are a team of about 20 people, working together, driven by a passion for data. In addition, as recently as 2017, Peaqock Financials figured as one of the start-ups celebrated by Forbes Innovators Middle East. Peaqock Financials also got international recognition from Finance Innovation, a competitiveness cluster formed by the Paris Financial Center. This recognition shows how far we have come since the launch in 2014.

PwC: What specific products do you offer?

Mohamed Benkhaled: We have developed what one might call our flagship product in the form of a Personal Finance Management Solution. It boosts savings by predicting budgeting needs based on algorithms and information the user gives us access to. It also manages transactions and expenses. This is a product courted by banks! Another product is the Robot Advisor, which acts as an investment counsellor to users (i. e., checks companies, benchmarks the users, and then advises them on investment opportunities). We have also recently started developing products that are not Fintech type products. For instance, we have an Analytics platform. We are also working on R&D for a couple of other products focusing on Voice and Image Mining (but not only!).

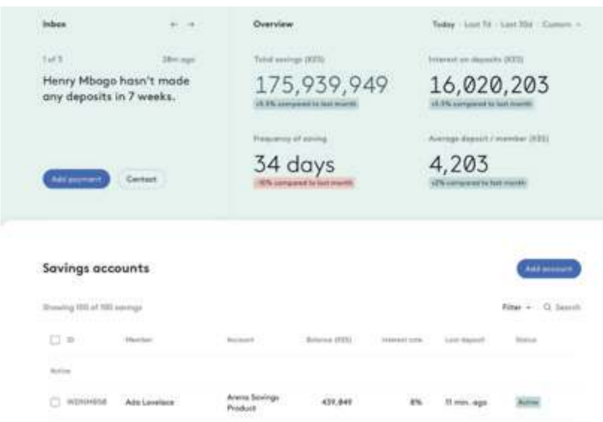
Zoom on Kwara in Kenya

Cynthia Wandia is the CEO and Founder of Kwara. She agreed to talk to us about her experience launching and navigating the Fintech ecosystem in Kenya. Below are some highlights from our interview.

https://www.kwara.com/

PwC: Can you tell us a bit more about Kwara and the concept of fair lending that it aims to promote?

Cynthia Wandia: Kwara is a digital banking platform for fair lenders launched in 2018. It provides a rich digital banking platform to established fair lenders such as credit unions or savings and credit cooperatives (SACCOs), with an open API to enable and accelerate their inclusion into the formal financial ecosystem. The premise of the SACCOs is that individuals pull savings together and borrow from that pot / have access to loan products. Members of the SACCOs have shares in the organization and receive dividends every year. The SACCOs almost function like non-profit organizations, as they are member-owned. In the US and Germany for example, these organizations are not that different from banks, members have accounts and swift codes as well as debit and credit cards. However, the interest rates are usually very low, lower than market rates or the same, which makes it possible for people who would otherwise not be able to do so, to borrow. In emerging markets, this sector is even more important because a large share of the population does not have access to the usual financial services. Kwara aims to help these SACCOs promote the concept of fair lending. In general, the SACCOs have many operational issues and tend to be manual among others. That makes their very existence threatened and does not allow them to scale up. Kwara aims to collaborate with them, help them digitize and invest in operational excellence.



PwC: Can you tell us more about your team?

Cynthia Wandia: We are a diverse team of nine employees, from four countries with five software engineers. We also have successful serial entrepreneurs advising us, and experienced corporate leaders helping us with partnerships. As we like to say, we are a small team with big ambitions and we are having fun while at it. I am actually on my way to Lagos with our CTO and Software Developer as Kwara was one of the 12 start-ups admitted to Google's Lauchpad Accelerator Program. It is a boot camp where we will get a lot of mentoring and it will facilitate our access to the Google Network.

PwC: How many clients does Kwara currently have?

Cynthia Wandia: We have 10 clients and we are reaching 14 000 members overall.

PwC: What are in your opinion some of your key success factors?

Cynthia Wandia: In Kenya, there is a willing market: people are tech adopters and will try anything. My take is as long as we keep focusing on the users, the rest will follow, and especially that we have good support and we have secured our funding.

Zoom on Panelys Solutions

Steven Sebi is the CEO and Founder of Panelys Cash. He agreed to talk to us about his experience launching and navigating the Fintech ecosystem in Ivory Coast. Below are some highlights from our interview.

http://panelyscash.com/

PwC: What is Panelys and what is the story behind its launch?

Steven Sebi: The annual mobile money market in Ivory Coast is 9. 5 billion euros – about 26 million euros per day mobile money transaction flows in Ivory Coast only. These are official numbers, which offer a sharp contrast with the low banking rates in the country. We saw an opportunity to improve financial inclusion and went for it to revolutionize the way things currently are. Panelys offers a mobile money rechargeable VISA card in partnership with United Bank for Africa, and we officially launched in December 2018. Our audience is mainly the unbanked population. We want Panelys to become their first step in the door of the formal banking system, a kind of "pre-banking" tool.

PwC: What does Panelys do differently and why does it work?

Steven Sebi: Panelys was able to acquire 750 clients in less than four months. Besides delivering rechargeable mobile money visa cards to our clients' doors, we offer several complementary advantages to anyone who decides to buy our card. For example, students who buy our card have 20% off movies. Also, people who have our card can call each other for free, which is a very attractive plus to parents for instance, as well as employees of the same company. In fact, we have had firms buy several cards just so they can benefit from the free calls between their employees before switching to full use of the card and eventually using the cards for transferring salaries. Our transfers of mobile money are instantaneous and can be done between all operators as we have licenses from all the major telecom companies in Ivory Coast: Orange Money, Moov Money, and MTN Money. The idea is that customers can transfer mobile money to their actual accounts through the card as well as complete mobile money transfers between any operators. Our delivery model has proven very successful. At first, we were the first ones to pioneer this, and now even UBA delivers and follows a similar business model. It is a model that is easily scalable and our team definitely has ambitions to expand to other countries in the future. Finally, our partnership model with UBA is one that protects our independence to be able to collaborate with other banks in other regions in the future: we are what we call their principal distributors and they do not own our product.

All of this allowed us to be recognized by the Fondation Jeunesse Numérique as one of the start-ups to watch in Ivory Coast, among 600, which had applied. Being part of the PwC Accelerator in Ivory Coast also attests to our success.

PwC: What were some of the main challenges you have had to face?

Steven Sebi: Access to capital is a big one! Although I believe start-ups in general and Fintech Companies more specifically do not need a lot of financing during the start-up phase, it is crucial for them to have access to funds that will guarantee their survival for the first three to five years (funds covering rent, electricity and internet bills…). In the early stages of Panelys, we have had to invest in the product and its development through revenues generated from the operations of SEAD Group, which was specialized in selling spices.

Zoom on Interpay Ghana

Saqib Nazir is the CEO of Interpay and Managing Director of Emergent Technology Africa. He agreed to talk to us about his experience leading Interpay in Ghana and navigating the Fintech ecosystem in the country. Below are some highlights from our interview.

https://www.interpayafrica.com/

PwC: Can you tell us more about Interpay?

Saqib Nazir: Interpay is one of the largest payment aggregator and Fintech solutions providers in Ghana. It makes it easy for any merchants to receive payments. Signing on as an Interpay merchant gives customers the ability to pay anytime and anywhere using a variety of local and international payments channels. Interpay's interoperability capabilities makes payments universal: Multi-carrier, multi-bank, multi-channel, multi-currency. We launched Interpay in 2014 and we aim to expand to 20 more markets in the next two years. My co-founder and I have been system integrators for over twenty years before changing recently from buying technology to building technology. That is how we built an interesting model through Interpay. A model so interesting it attracted a Sillicon Valley company called Emerging Payments, which ended up acquiring Interpay recently. Our goal is to facilitate financial inclusion by making it possible for people to break down their savings, insurance, bills for instance in daily or weekly payments.

PwC: How did your experience as system integrator help you with Interpay?

Saqib Nazir: That experience helped us because we already had established relationships with banks. That is even more important than having the capital: our reputation in the market was already good, which opened doors for us quickly.

PwC: What do you think were Interpay's key success factors?

Saqib Nazir: Having a good product, a product that is useful! Understanding the ecosystem, working with partners and knowing that you cannot do it by yourself. Interpay's strategy is not to compete with banks but collaborate with them. Banks make it easier for us to acquire customers, and our solutions help banks adopt technology easily. It is a win-win. Also, having patient capital is important: this is a long term return, it will take you five to six years to become profitable and you won't turn around in one year. Of course, knowing how to navigate the complexities of a regulatory environment is essential!

PwC: What challenges did Interpay's team face / is facing?

Saqib Nazir: It takes time to build products and ecosystems so having the money to sustain your Fintech Company until you take off is an issue we had to grapple with. It is true that the whole region is moving towards electronic payments. However, we need good infrastructure that is not too expensive, so that Fintech Companies like ours can come in and boost the environment even more. Banks and telecom companies need to invest in a strong and sustainable base before we can come in and add to what is already in place. Another challenge is the education of potential customers on how to use phones and technology, especially for financial services. Not all people can read, write, or can understand a text message or follow instructions on how to enter a pin.

Insider insights

Zoom on Kaoun Tunisia

Anis Kallel is the CTO and Co-Founder of Kaoun. He agreed to talk to us about his experience co-leading Kaoun with Nebras Jemel and Rostom Bouazizi in Tunisia and navigating the Fintech ecosystem in the country. Below are some highlights from our interview.

https://www.kaoun.com/fr/about

PwC: What is Kaoun, what kind of products do you offer and why did you decide to launch it in Tunisia?

Anis Kallel: We consider Kaoun and all of its services as a pipeline for financial inclusion. We look at the entire journey of an unbanked or underbanked person and identify the different pain points and barriers to entry to formal banking system. Our goal is to then target these challenges and facilitate the access of the unbanked population to several financial services including but not limited to transfers, payments and credit.

Our products are inspired by the North African context but also by other African countries and countries in the Middle East. There is clearly a lack of developed infrastructure to make it easy to transfer money for example. There are also several regulatory constraints that making setting up the required infrastructure with technology a difficult task. We decided to adopt an approach where we looked at the existing regulations, and then identified ways to collaborate with established financial institutions in order to improve financial inclusion through building more reliable infrastructure. Our goal is to help unbanked people gain access all financial services in an optimized way over time.

Developed countries offer transfer and payment services a certain way. Countries in Africa and Asia are doing it differently, but not very effectively in my opinion. Most North Africans have good access to smartphones and internet and yet the banking rates are still very low. We wanted to find ways to start in a market that we know well, like Tunisia, and become pioneers. The idea is to understand the regulatory constraints, the difficulties of operating in a market where people are not necessarily used to technological solutions for financial services and to take the difficulties that go with all of this to open the door for other players to facilitate access to other services. Somebody has to do it first!

Our main solution is "Flouci." Which reimagines digital Know Your Customer regulations to facilitate the opening of bank accounts remotely. To give you an idea, there are 43 branches per 100 000 people in Tunis vs. 4.7 branches for 100 000 people in Sidi Bouzid. So even people who want to access financial services cannot because the physical presence a bank is not always there. Our team designed an entire process allowing people to open bank accounts remotely through a fully digitized and free process. We also built an infrastructure using distributed ledger technologies and data science, which allows interbank transactions to go through in under five seconds. Finally, Kaoun also aims to analyse the purchasing behaviour of the people that use Flouci and identify interesting banking products that the system will then suggest to them at the right prices and at the right time. All the data we will have access to will enable us to better collaborate with banks for instance through helping them build alternative credit scores. Our team considers this last point essential, as 90% of transactions that happen in Tunisia are mainly withdrawals from ATMs. Cash is king, which makes it extremely hard for banks to know much about their customers and what they do with their money. That factors in when people ask for a loan. Banks do not have enough data to build accurate credit scores and so reject many loan applications. Kaoun is trying to change that through helping banks understand their clients better.

PwC: What are the main challenges that you have had to face since the launch?

Anis Kallel: Regulation is big part of it, but we are mainly fighting cash and consumer behaviour, so once we are done with all regulation and administration, we need to encourage people not just to use technology for social media but also for banking – it is an interesting problem. For example, the concept of opening bank accounts remotely was never authorized before we lobbied for it. It took us over 12 and 13 months. Prior to our authorization, people needed to go to branches in order to open a bank account.

Also, the fact that we are a start-up ran by 23 year olds makes it difficult as our partners are not used to it. However, we are very aggressive in showing them our products and their potential impact on the entire economy.

PwC: What is Kaoun's approach to collaborating with banks and other national institutions?

Anis Kallel: As of today we still are not in market, we have been running internally and testing all our products. Things are sometimes moving slower than ideal in terms of administrative processing, which makes it difficult for our team to capitalize on our partnerships with banks quickly. We have a partnership with Attijari Wafa Bank in Tunisia, which is helping us navigate the process of registering with the Central Bank in Tunisia.

As we aim to enable people in Tunisia to open bank accounts remotely, we have started working with l'Agence Nationale de Certification Electronique (ANCE) in order to issue electronic signatures digitally. We are in fact going to be the first delegated authority to issue this signature and do it remotely. The process will be 100% digital, which will also help with access to lots of e-government services the government wants to launch.

Kaoun recently won the BCP Fintech Challenge in Morocco. We are considering collaboration options with them. However, for now, the team fully focuses on Tunisia, although we know that we will explore other markets soon as well!

We can summarize our approach to partnerships with banks as follows: "We identified some of your most pressing needs, here are some quick wins we can offer, and here is how we could do it!" We want to project the relationship to be ambitious and long term, we want to imagine how the relationship is going to evolve in the future to move quickly towards a real partnership instead of a "start-up selling a product to a bank" approach!

PwC: What do you think are Kaoun's key success factors?

Anis Kallel: "Patience!" We try to establish a certain culture that does not take into account how things were done in the past but rather how things should be done now. We design many products differently and hopefully come up with a better service level in general. Our team is also very aggressive in terms of building products quickly and approaching clients with a demo and a product rather than with an idea. It usually takes up to two years for a Fintech Company to launch a product in partnership with a commercial bank. Kaoun wanted to do this quicker. So we came up with demos, and instead of focusing on a conceptual idea during the first meetings with potential clients, we transform the initial meeting in a workshop. This approach helps us skip many steps and progress quickly in establishing a partnership.

Afterword

This joint publication of the Casablanca Finance City Authority and PwC combines two of my greatest areas of interest: Fintech Companies and Africa, and when you analyze both a bit more in detail, you realize that combining the two is actually very logic and complementary.

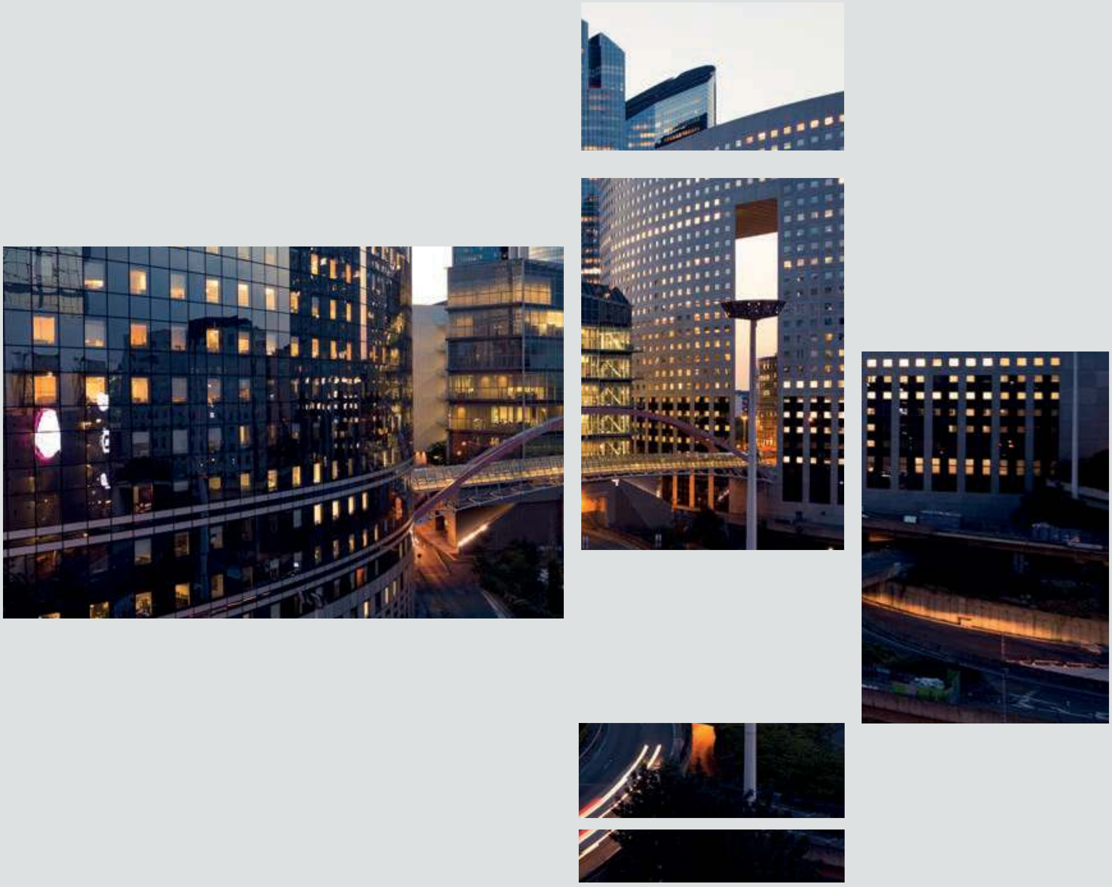
While I am very optimistic about the growth prospects of Africa, largely driven by its young, ambitious population, I am also very much aware of the major challenges and problems it faces. I work on a daily basis with my fellow PwC partners and their teams based in Africa to find suitable solutions to these problems. We often observe that the most practical and creative African solutions are based on using technologies in a way that had not been imagined before, designing real out-of-the-box solutions.

In my role as president of the Paris-based cluster FINANCE INNOVATION*, I try to stimulate all members to apply the same imagination and creativity that we can find in Africa when they work together on addressing difficulties in our financial ecosystem in France and abroad. Several members of our cluster do actually focus on Africa.

Contributing to this publication illustrates the ambition of PwC to realign business economy and society. I hope you have enjoyed reading this publication as much as I did. It has provided me with great new insights and ideas but above all, it has comforted me once again in my conviction that the combination of Fintech Companies and Africa will be the driving solution towards a brighter future for Africa.

Bernard Gainnier
Chairman of PwC France and Francophone Africa and President of FINANCE INNOVATION

* *With over 500 members (members are primarily innovative SMEs, banks and insurance companies but also major universities, research labs, public authorities), FINANCE INNOVATION seeks to address the key barriers and opportunities in the financial ecosystem*



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DIGITALIZING AFRICA :

THE RISE OF FINTECH COMPANIES

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