

A Work Project, presented as part of the requirements for the Award of a Master's degree in
Finance from the Nova School of Business and Economics.

FINTECH LANDSCAPE IN SUB-SAHARAN AFRICA - THE CASE OF MOZAMBIQUE
- HOW CAN A PEER-TO-PEER LENDING FINTECH SERVE MOZAMBITICAN
INVESTORS?

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Work project carried out under the supervision of:

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17-12-2021

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FINTECH LANDSCAPE IN SUB-SAHARAN AFRICA - THE CASE OF MOZAMBIQUE

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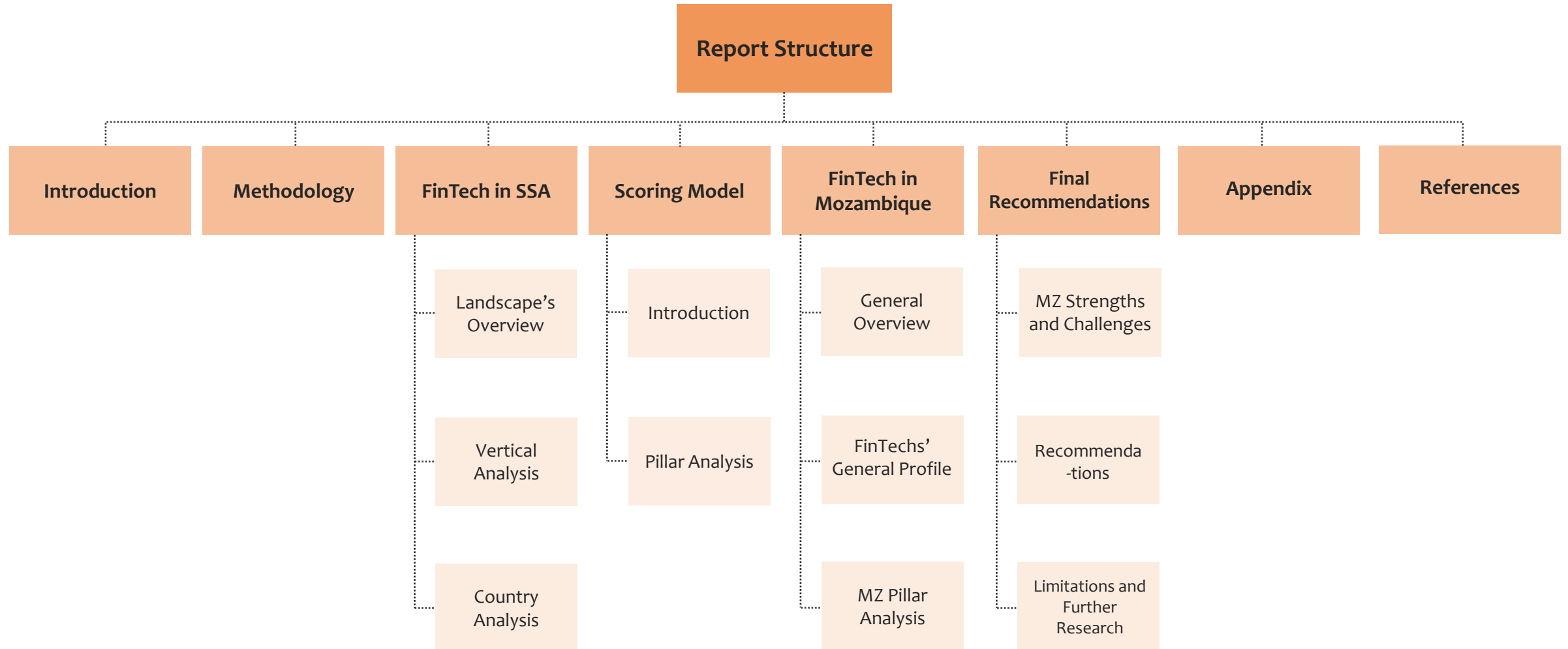
Abstract

The lack of access to traditional finance makes Sub-Saharan Africa an attractive market for the adoption of FinTech services. This report provides an overview of Sub-Saharan Africa's Fintech landscape, highlighting the case of Mozambique. By constructing a database of active fintechs in the region, the report identifies top Fintech verticals and countries. To assess the factors behind FinTech success, a scoring model covering five pillars – regulation, demand, talent, capital and feeling of community – is also designed. These results served as the basis to explore the opportunities and challenges of Mozambique's FinTech ecosystem and provide recommendations for its growth.

Keywords: Fintech, Sub-Saharan Africa, Mozambique

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

Agenda

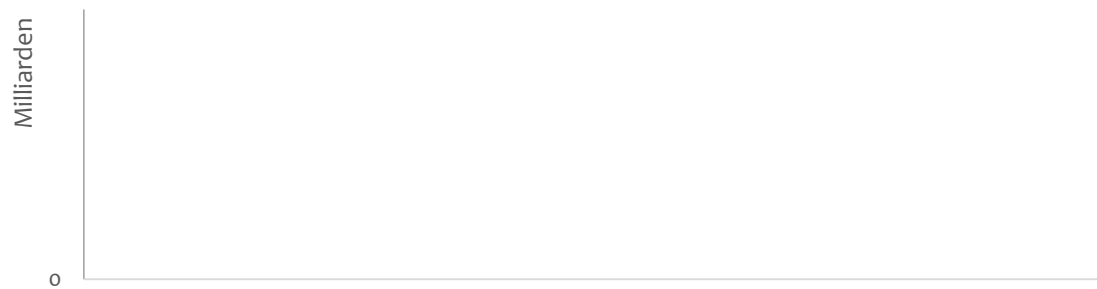


Introduction

The global FinTech phenomena: FinTech refers to **Financial Technology companies, particularly businesses that use technology seeking to improve and automate the delivery and use of financial services.** The introduction of FinTech has been capable of impacting the financial system by offering innovative and competitive products that can (i) reduce the costs of financial services, (ii) create market opportunities for new entrants, (iii) expand access to new customers and segments and (iv) affect the competitiveness of incumbents (IMF 2019). Over the past decade, the adoption of FinTech services has been rising fast across the globe. By 2025, an estimated 5.9 billion FinTech users are expected, a 50 % increase from 2020 (Figure 1).

FinTech in Sub-Saharan Africa: Currently, the **Sub-Saharan Africa region (SSA) still accounts for a limited proportion of global FinTech activity.** However, FinTech adoption amongst Africa is expected to increase rapidly in the upcoming years, reaching 10% of global users by 2025. With a largely underdeveloped financial sector, **SSA's market is particularly well-suited for the adoption of FinTech services.** Across the region, FinTech has the potential to promote **financial inclusion**, by providing access to vital financial services to a large share of unbanked population — according to the World Bank, over 59% of SSA's adult population does not have a bank account.

Figure 1: Evolution and projections for the number of FinTech users by region, 2017-2025



Source: Statista



The Case of M-Pesa: Despite the low access to traditional finance, SSA has become a leader in mobile money adoption. The 2007 **introduction of M-Pesa in Kenya marks FinTech's first large-scale impact in the region.** At the time, a large part of the population lacked safe and unexpensive means to transfer money across the country. Leveraging on the country's high phone penetration, M-Pesa enabled its users to exchange tokens via text messages, which in turn could be redeemed by regular money in agent networks that were spread across the country, hence overcoming challenges such as the lack of internet access. **The unprecedented adoption of M-Pesa helped raising Kenya's share of financial included population from 27% to 83%** (Central Bank of Kenya 2021). Today, the service is still active, having reached 48 million monthly active customers₁.

Despite M-Pesa's success in Kenya, **other countries, such as Tanzania and Uganda, have failed to gather the same level of adoption.** The low level of market infrastructure, tailored pricing strategy and regulatory openness were identified as factors behind the success of this service in Kenya (Mas & Radcliff 2011), which were harder to replicate in other countries. These conclusions reinforce the strong level of heterogeneity within SSA countries, which demands FinTech to be dynamically introduced. Particularly, it points to the importance of a welcoming regulatory landscape, and the need for pilot experimentation and adaptation of products to customer needs (Batista 2020), which must be done on a country-by-country basis.

Beyond Mobile Money: M-Pesa is not a “one hit wonder”, as currently the region has four unicorn fintechs² – mobile money services Opay, Wave and payment infrastructure providers Flutterwave and Interswitch. Following the success of mobile money, the range of FinTech services has been expanding to include online payments and transfers, micro-lending, saving and insurance services or crypto-based solutions. These fintechs are widening the reach of financial services, with applications across several fields, such as agriculture, e-commerce, healthcare, mobility or education.

¹Vodafone Annual Report – 2021

²Unicorn fintechs correspond to fintechs which have reached a valuation above 1 billion dollars

Introduction

Research topic: This report aims to provide an overview of the FinTech landscape in SSA, with a particular focus in the case of Mozambique. Specifically, it looks to assess the evolution of the FinTech phenomena in the region and identify the opportunities and potential challenges for the development of the FinTech sector.

To achieve this, a database of 432 fintech companies based in or operating in SSA was constructed. By leveraging on recent data and market activity, the report provides up-to-date conclusions on the current state and trends governing SSA's FinTech landscape – which startups are fuelling ecosystem growth, where they are based and what kind of services they offer.

Our findings suggest that levels of FinTech development are still largely different within SSA verticals and countries. The main results indicate that fintech in SSA is mostly driven by Payments & Transfers companies (variants of M-Pesa's business model) both in terms of funding and number of companies. Moreover, three FinTech Hubs – Nigeria, South Africa and Kenya – stand out as market leaders, both based on the number of operating companies and the amount of investment attracted. To enable other countries to replicate this success, an analysis of the main factors supporting FinTech development in these countries was conducted. |

While the high projected growth of SSA's young population and the widespread cell phone availability have been often pointed out as key fundamentals for the expansion of FinTech services, other factors – such as innovation-friendly regulation, internet penetration, support from local players and access to talent and capital – can be critical to fuel fintech growth, as seen by the different levels of adoption of M-Pesa. **To provide a comprehensive view on the factors enabling FinTech development in each Hub, a scoring model was designed,** assessing the attractiveness of a FinTech ecosystem across five pillars – regulation, demand, talent, capital and feeling of community.

The results of SSA's FinTech overview were then used to provide recommendations for the development of the Mozambican FinTech ecosystem. Despite being relatively recent, FinTech activity in Mozambique has been expanding. In a country where 79% of the adult population is unbanked and the penetration of mobile money services is increasing (Finscope 2019), the potential for FinTech adoption is significant.

Mozambique's FinTech ecosystem was chosen as the centre of our analysis given the opportunity to collaborate with local players, which was essential to provide a clear picture of the state of FinTech development in the country. Specifically, surveys were conducted amongst local members of FinTech.Mz – the country's association of FinTech companies - to better assess the key barriers preventing their growth. Moreover, interviews were conducted with FinTech startups, professors of the Computing and IT courses at “Universidade de Engenharia de Moçambique” (UEM) and Professor Esselina Macome, Executive Director of FSDMoç.

Although Mozambique has developed key financial and regulatory innovations, some challenges – such as overly restrictive regulations, lack of consumer trust and limited funding opportunities – can still limit FinTech growth. By leveraging on the identified best practices of FinTech leaders in SSA, **this report aims to provide actionable recommendations to policymakers, entrepreneurs, investors and associations looking to engage with the local FinTech sector.** The results of this analysis can be further applied to similar countries looking to develop their FinTech ecosystem.

The rest of the report is organized as follows: Section 2 looks into the methodology adopted, Section 3 explores the FinTech landscape in SSA, Section 4 presents the Hubs' scoring model, Section 5 focuses on Mozambique's ecosystem and Section 6 provides final recommendations.

Database Methodology

This report focuses on a quantitative analysis of the SSA FinTech ecosystem, which is based on a list of **432 companies and more than 15 parameters for each of the companies collected**. Most of the data was extracted from **Crunchbase**, initially by filtering it to Sub-Saharan African based companies, classified as FinTech or Insurtech by the platform. From this database, a case-by-case approach was applied to define which of them met the criteria to be further considered as an **active fintech startup, resulting in a total of 364 companies**.

Financial technology companies include any business that brings innovation to the financial sector through **tech-enabled solutions**, which generally come as a challenger to the traditional banking system. Actually, to answer the rapid changes in the banking industry, some incumbents are starting to integrate a fintech component to their services, which in this report will not be considered as a fintech startup. Even if it fulfils the fintech requirement, any product or service that is run by a bank, insurer or any kind of established corporation should not be accounted for as it does not classify as a **startup company**. Companies with over 1000 employees and founded before the year 2000 were also excluded for the same reason. Plus, company selection was not restricted to Sub-Saharan African headquartered fintechs. Instead, the database also considers **internationally headquartered** firms which currently hold active operations in SSA countries. Furthermore, the criteria used to define if the fintech startups in the sample were currently active was based on whether they presented an **operational website** or not – companies without one were considered to be closed.

For each of the companies that passed through all the criteria, specific data was collected from the Crunchbase platform, according to a list of relevant parameters for the subsequent analysis. These variables went from the founding dates to the funding amount collected, as well as specifics of each funding round, namely the dates, type of investor, name of the investor, etc.

Finally, by applying a case-by-case approach to each of the companies considered, the fintechs were associated with one of the **nine categories** that were defined for the purpose of this report, depending on the nature of its core business.

1. **Payments & Transfers** startups in SSA have primarily emerged to facilitate money transfers. The high costs and risks associated with transferring money in cash led the population to rapidly adopt the fintech alternatives, which allowed them to send remittances to their peers using mobile money. Progressively, businesses within this vertical started to integrate payment solutions, offering individuals new ways to pay their bills, together with an improved customer experience in accessing their finances (Digital Wallets). These include online and offline payments, as well as point-of-sale (POS) solutions, which allow small and medium enterprises to accept payments through different channels.
2. **Lending & Marketplaces** fintechs provide borrowing solutions to consumers through online platforms. Inside the SSA financial system, these alternative credit solutions are usually targeted to individuals who are not eligible to traditional credit applications, so most companies also care for assessing a borrower's credit worthiness using alternative data. This framework considers consumer and SME credit providers, Peer-to-Peer (P2P) lending and crowdfunding platforms.
3. **Digital Banking** includes all startups that offer banking services exclusively online and lack a physical branch of any kind. The services operated by these companies typically replicate the ones offered by a traditional bank, usually at a lower cost and with higher transparency. In general, digital banks offer savings accounts and wealth management tools along with credit solutions. Increasingly, more companies are providing digital infrastructure for banking services to third parties ("Banking as a Service").

Database Methodology

4. **InsurTech** comprises all firms related to the Insurance field, in order to cover the inefficiencies of the industry. In the case of SSA, most companies facilitate access to insurance, by providing tools for individuals to compare prices and choose the most adequate alternative. Nonetheless, other startups are actually operating as insurers and challenging the traditional sector by integrating tech-enabled tools in the definition of each client's premiums, thus offering a more efficient product.
5. **Business Administration** companies provide other businesses with a variety of solutions that help them to optimize operations. The services offered by this kind of startups go from facilitating invoicing processes to payroll and tax management through the use of online platforms.
6. **Blockchain & Cryptocurrency** includes two main concepts: Blockchain Technology and Cryptocurrency. The first one contemplates companies that provide solutions for the financial industry by leveraging on decentralized data storing systems (DLT). In SSA, blockchain companies focus on the improvement of the payment infrastructure, on identity verification and security of property rights. Regarding the latter, Cryptocurrency refers to new means of exchange that make use of blockchain technology. As for this vertical, companies that provide crypto-based transfers, access to these markets and exchange mechanisms will also be considered.
7. **Personal Finance** fintechs, also known as Personal Finance Management tools (PFMs), are platforms that provide managing and monitoring assistance to individuals' personal wealth, as their financial accounts, bills and credit. Within the African ecosystem, these kind of tools and services motivate individuals to set personal financial goals, while teaching them how to better govern their finances.

8. **RegTech** considers companies related to the supervisory sector. Within this vertical one should consider companies that can potentially increase the transparency of other companies' operations as well as their protection, complying with the regulatory guidelines of the financial industry. Furthermore, within the African FinTech environment, most RegTech companies focus on services related to risk management, identity management, Know Your Customer (KYC) / Anti-Money Laundering (AML) and transaction monitoring.
9. **InvestTech** startups relate to online platforms that provide access to trading solutions for a vast pool of investors, which go beyond high net worth individuals, allowing for more individuals to invest in local and global capital markets. Most of these companies include advisory and portfolio management services that leverage on technology to boost margins.

LIMITATIONS

Gaps on FinTechs Included: The database was based on Crunchbase's data, which comes from multiple sources, being dependent on voluntary disclosure.

Time lapses: T. Thus, the number of operating fintechs or funding rounds a past year can potentially increase over time.

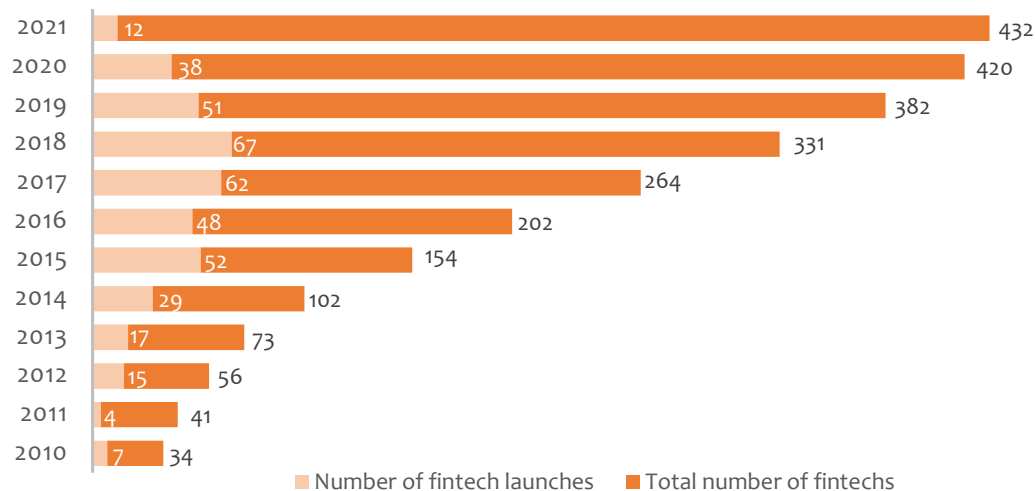
Time boundedness: Several of the insights mentioned contained an evolutive dimension. As time passes these become increasingly less accurate. Plus, some dimensions such as Regulation may suffer abrupt and non anticipated changes. Plus, the data relative to 2021 corresponds only up to November.

SSA's FinTech Landscape: General Overview

The FinTech landscape in SSA comprises 364 active fintechs and has attracted more than 3.45 billion dollars in funding from 201 companies since 2000. Following a 27% Compounded Average Growth Rate (CAGR) in the number of fintechs over the past 10 years, **SSA's FinTech ecosystem seems to be maturing**. After peaking in 2018, with 67 new fintechs, the number of new fintech launches has been decreasing (Figure 2). So far, only 12 fintech launches have been recorded in 2021. Note that the Covid-19 impact is also likely to have aggravated this trend, resulting in a significant drop in startup creation in 2020.

As the market consolidates, existing companies are also becoming more established: the average startup in our sample has been operating for more than 5 years. This has resulted in an increased offer of more robust and diversified FinTech solutions, spanning across multiple categories.

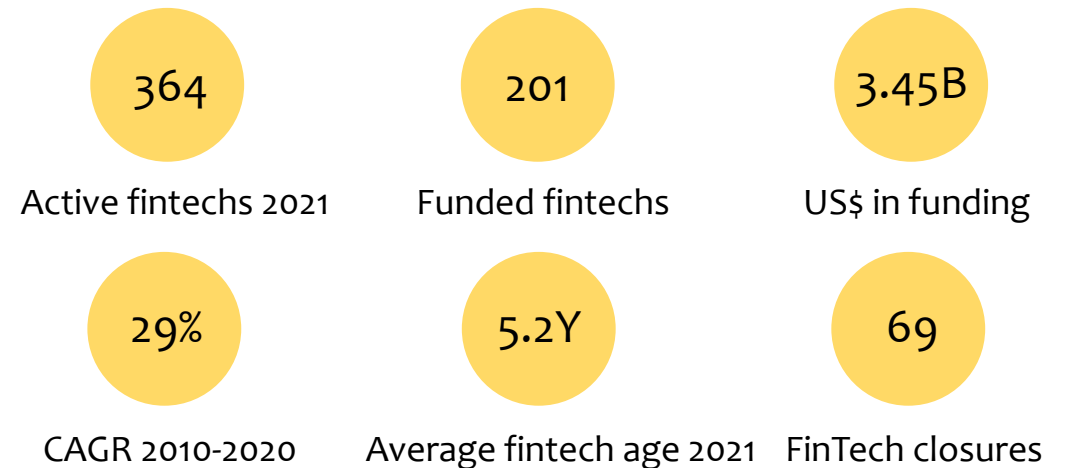
Figure 2: Total number of fintechs and new fintech launches, 2010-2021



Source: Own database

While a fintech boom has been experienced in the past few years (2015-2018), the **number of startup closures has also increased**. These years of FinTech growth in SSA saw the rise of many fintech companies offering relatively similar solutions, particularly in the Payments & Transfers space. While that has led to many success cases, it has also been reflected in the number of closures. In fact, 16% of the initially considered fintechs are no longer active. This proportion is even higher for companies created between 2016 and 2017. As the space become mores crowded and market leaders start to emerge, barriers to entry are increasing. Progressively, new startups are shifting their focus to unexplored FinTech areas and markets, with increasing opportunities for financial inclusion in the region.

SSA FINTECH LANDSCAPE IN NUMBERS, 2000-2021



Source: Own database

SSA's FinTech Landscape: Funding Evolution

The amount of funding attracted in SSA's FinTech ecosystem is reaching all-time records (Figure 3). 44% of fintechs in our sample have secured some form of formal investment, with 70% of these having attracted funding in the past three years. This number is likely to increase as investors keep on reinforcing their presence in this growing market.

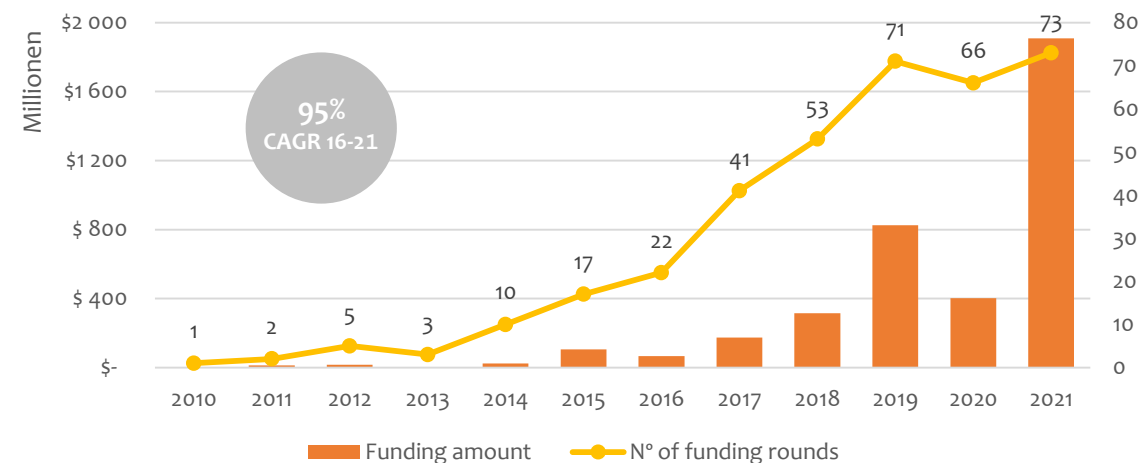
The impact of the Covid-19 pandemic in investor's activity led to a decrease in 2020's funding, following a striking growth in 2019. While the number of deals was not severely affected, there was a 50% drop in funding amounts. This was mainly due to a big fall in average ticket sizes (-90%), as investors became more wary of allocating their funds to riskier, international investments.

Funding amounts have since peaked in 2021, showing signs of a successful recovery of the sector. Total funding has largely surpassed 2019 values, with average ticket sizes reaching US\$26.1 million, a 125% increase from 2019. In fact, the reported \$US1.9 billion funding are close to matching the collective amount raised by fintech startups over the past decade, as global investment in FinTech continues to rise (KPMG 2021).

The biggest five rounds of the year alone account for more than half of the total capital raised (Table 1). As a result, 2021 saw the rise of three new SSA FinTech 'unicorns' – payment companies Opay, Wave and Flutterwave – following the steps of Nigeria's payments processor Interswitch, which was the first to achieve the status in 2019.

Mergers and Acquisitions (M&A) activity in SSA is also rising. In 2021, payments companies Mangwe, Wayaway and Digiduka were acquired, following five acquisitions in the previous year – most notably the \$US200 million acquisition of Nigeria's Paystack by US-based fintech Stripe. Interestingly, most acquisitions are being driven by SSA-based fintechs seeking to scale, supporting the market consolidation trend.

Figure 3: FinTech Investment in SSA, 2010-2021



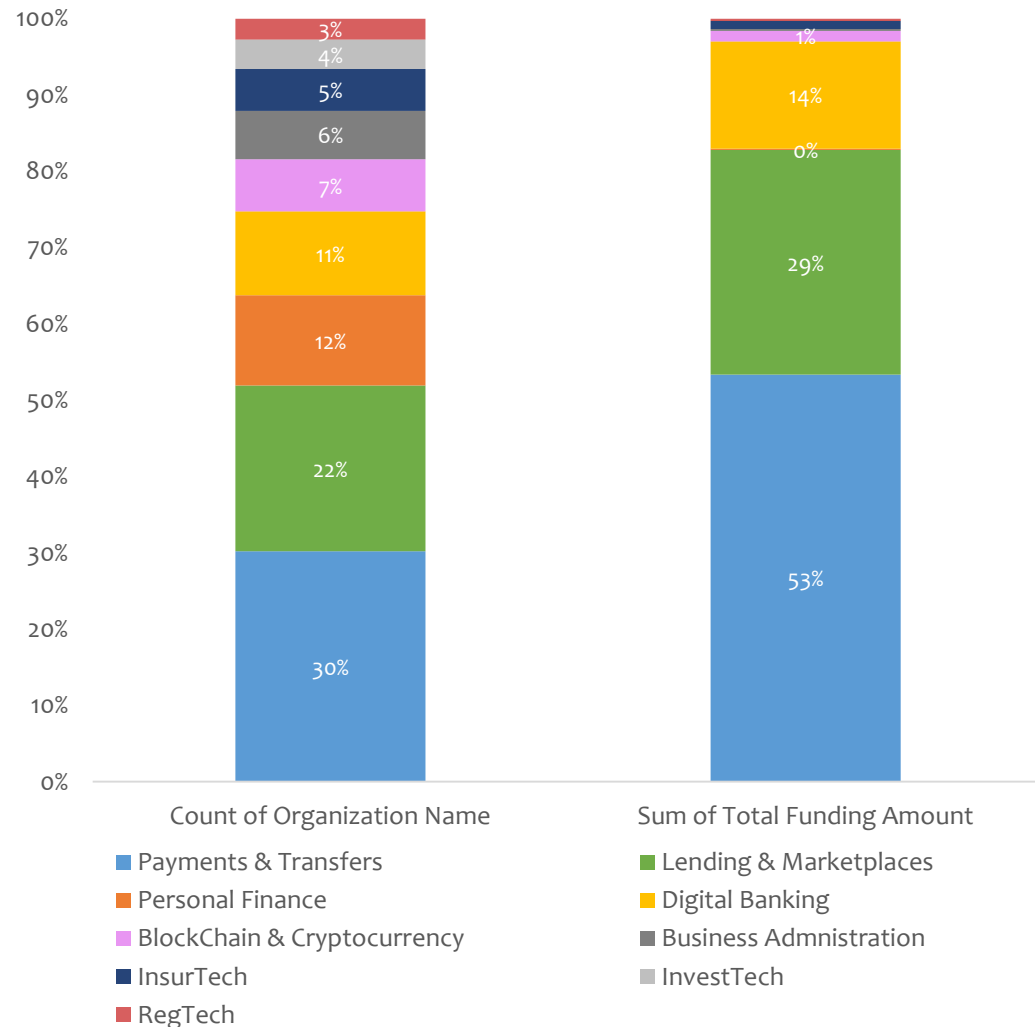
Source: Own database

Company	Year	HQ	Funding type	Money raised (US\$ million)	Main Investors
OPay	2018	Nigeria	Series C	400	Softbank Vision Fund, Sequoia Capital, 3W Capital
wave	2018	Senegal	Series A	200	Stripe, Sequoia Heritage, Founders Fund
Flutterwave	2016	International	Series C	170	Avenir Growth Capital, Tiger Global Management
Chipper	2018	International	Series C	150	FTX
TALA	2011	International	Series E	145	Upstart, IVP, Revoluton Growth, Lowercase Capital

Table 1: Top 5 SSA FinTech deals in 2021, by amount raised

Vertical Analysis: General Overview

Figure 4: Number of companies and total funding amount collected (2000-2021)



Source: Own database

When looking at the overall data sample, one can identify 3 top FinTech verticals in the SSA space, both in terms of size and in funding amount. These categories are: 1) **Payments & Transfers**, 2) **Lending & Marketplaces** and 3) **Digital Banking**.

From the 364 active fintech companies in the sample, 30% belong to the Payments & Transfers category, immediately followed by Lending & Marketplaces (22%). The third place is nearly shared between Personal Finance with 12% and Digital Banking with 11%. As for the other 26%, the market seems to be quite diversified among the remaining sectors, with RegTech and InvestTech somewhat behind with 3% and 4% of total companies, respectively.

The Payments & Transfers sector alone is responsible for more than 50% of the total funding. As the first vertical to emerge in SSA, the companies operating in this space are seen as more mature, attracting later stage investors willing to invest in concepts that have already proven its worth. Plus, it is more likely that these businesses become profitable, because the high acceptance of the population for payments and transfers solutions offers a higher potential for scalability and an overall larger customer base, thus generating higher revenue. Albeit at a lower scale, Lending & Marketplaces and Digital Banking have started to attract more funding than the other categories, accumulating 43% of the remaining total funding amount. However, there is little information on revenues and profits, limiting the scope of the analysis.

All other companies may be considered as part of emerging sectors. Entrepreneurs realized the need of the population for other services, as insurance or savings alternatives, while other tried to replicate trends that worked in more developed markets, as cryptocurrency. Over time, the market is diversifying away from the Payments & Transfers initial dominance towards other new and innovative fintech categories. However, the data in Figure 4 shows that most of these categories come down to 0% to 2% relative to total funding, revealing that investors might still be wary of getting involved in non-established FinTech areas.

Vertical Analysis: Payments & Transfers

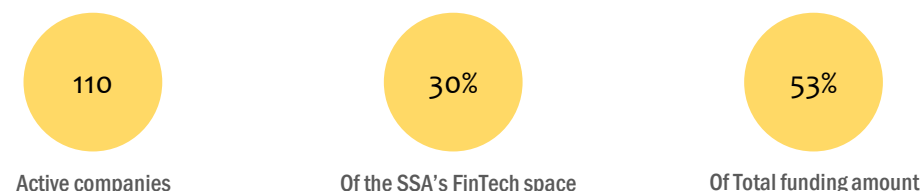
PAYMENTS & TRANSFERS

The Payments & Transfers vertical represents most of the SSA's fintech space, both in terms of size (number of companies) and amounts of funding. Companies within this vertical have been developed to tackle the need of the population to make secure, fast, and efficient transfers among them, solving for the inefficiencies left by incumbents. Most of these transfer solutions implied that people exchange physical money into mobile money in order to make transfers and ultimately, process payments through their mobile devices. The Kenyan M-Pesa's huge success has encouraged entrepreneurs to create similar solutions across the continent.

As of 2021, Payments and Transfers companies account for 30% of the active fintech startups, with 110 businesses operating. However, this percentage of the total number of companies constitutes a record low for the vertical, indicating that the market is diversifying towards other segments. Figure 5 shows that the proportion of Payments & Transfers new fintechs relative to the total number of fintech launches per year has been persistently decreasing in the past 5 years, except for 2021. One possible reason for the number of new companies to decrease throughout the years is the increase in competition, which leads to higher barriers to entry, thus indicating the market is becoming more saturated.

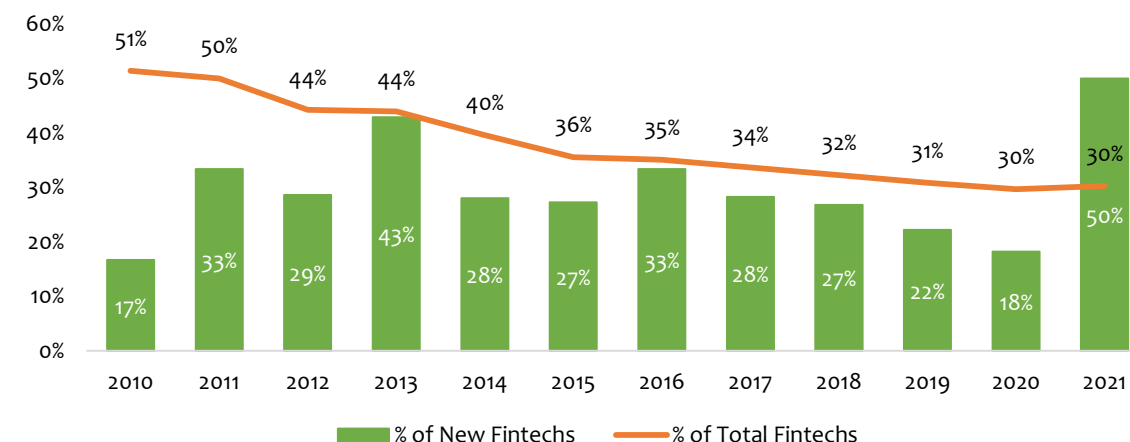
At the same time, the already established companies in this vertical have space to scale up and expand their businesses, thus attracting higher levels of funding throughout time, totalling more than US\$2 billion. Indeed, the diversification towards new segments is more visible in the number of fintechs than in funding amounts. As these businesses are still in its infancy, it is natural for the investment trends to react more slowly to innovation, while investors wait for them to mature and prove its value. Plus, as the companies in the Payments & Transfers space are becoming larger and expanding their businesses internationally, investment rounds tend to increase in value, thus accounting for a higher proportion of total funding in subsequent years.

Within this vertical, the top three success cases in terms of funding include **Opay** (29%) of total funding in Payments & Transfers), **Chipper Cash** (15%) and **Flutterwave** (12%). The first two are digital wallets, particularly focused on bill payments, quick and easy money transfers. The latter, on the other hand, mainly offers merchant services, guaranteeing that businesses are able to access payments from any customer and various payment channels.



Source: Own database, 2021.

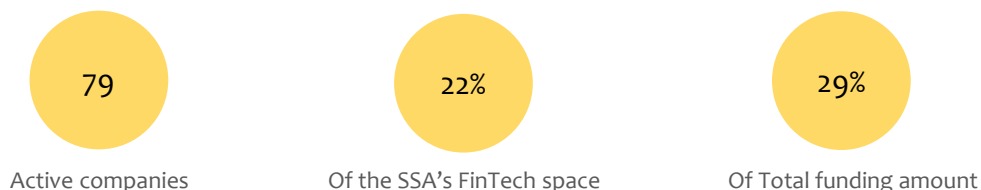
Figure 5: Percentage of Payments & Transfers companies relative to total number of companies and number of new fintechs , 2010-2021.



Source: Own database, 2021.

Vertical Analysis: Lending & Marketplaces and Digital Banking

LENDING & MARKETPLACES



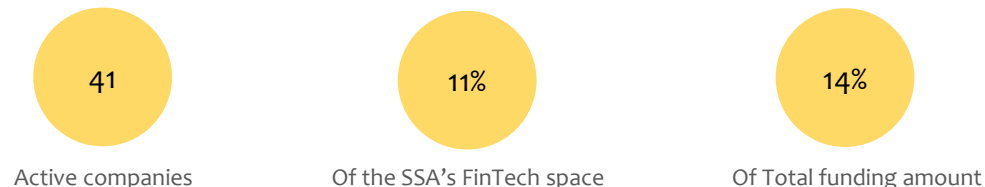
Source: Own database, 2021

Following the success of Payments & Transfers in SSA, other businesses saw an opportunity to meet the needs of a largely underbanked population. As a result, **Lending & Marketplaces** solutions started emerging to provide fast, unsecured, short-term loans to individuals and SMEs by relying on alternative data, like mobile phone usage and mobile transactions, to assess their creditworthiness.

As of 2021, this category counts with 79 active fintechs, representing 22% of SSA's FinTech space. The number of active companies grew steadily from 2010 to 2015 – on average, more than 50% per year - taking up some of the space previously dominated by Payments & Transfers. Though growth in fintech launches has slowed down in the past three years (31%), in line with the overall market, the high gap in credit access in SSA is likely to keep on fuelling growth for incumbents and the surge of local players in less developed FinTech markets.

The growth potential of this space has been reflected in the investment attracted. Since 2013, lending companies raised more than \$US1.1 billion in funding and represent 29% of total investment in SSA's FinTech. However, much of this funding is still concentrated in international companies with proven business cases. International players **Tala** (31% of total funding) and **Branch** (24%) and Kenya-based **Lendable** (13%) are the top three fintechs with the highest amounts of funding. It is expected that more local players will be able to access funding in the future, as investors and customers increase their confidence in the business model.

DIGITAL BANKING



Source: Own database, 2021

While much of the initial activity in SSA's FinTech space came from companies offering niche services, such as transfers or loans, fintech companies seem to be diversifying their product offerings. Increasingly, more startups are being created with the purpose of becoming fully digital banks, by integrating saving solutions, money transfers and credit, or providing banking infrastructures through their platforms ("Banking as a Service"). As a result, **Digital Banking** has emerged as a rising phenomena in SSA's FinTech landscape.

In 2021, this category counts with 41 active companies, representing 11% of companies in SSA's Fintech space. However, this number has been growing at a fast pace over the past three years (43%), driving much of the growth in overall FinTech count.

Investors have been receptive of this business model, which has gained popularity in more developed FinTech markets. Since 2014, 25 Digital Banking fintechs have secured more than \$US666 million in funding. Its biggest success cases include banking platform provider **Jumo** (41% of funding) and digital banks **TymeBank** (32%) and **Kuda** (17%).

As customers increase the adoption of "one stop-shop" solutions, it is expected that traditional players in other verticals, such as Payments & Transfers and Lending, continue to diversify their product offering and start expanding into this space. However, competition from incumbents, technological infrastructure requirements and stricter regulations are still challenges for the development of this vertical.

Vertical Analysis: Personal Finance and InsurTech

PERSONAL FINANCE

43

Active companies

12%

Of the SSA's FinTech space

54%

Growth in n° of active
fintechs 2019-2021

Source: Own database, 2021

Tapping into SSA's unbanked population, **Personal Finance** has grown as an instrument to ease the practice of savings and managing money. SSA's PF product range include solutions such as savings plans or other savings alternatives, credit and wealth management or products towards financial literacy. The launch of these solutions has helped and empowered a share of the population to better manage their financial reality, considering long-term financial plans.

In 2021, the Personal Finance category counts with 43 active companies, corresponding to 12% of total FinTech companies. This sector has more than doubled the number of companies operating since 2016 - on average, there were 6 new fintech launches per year. Indeed, personal finance solutions have only started to grow substantially after 2015. As a still growing segment, Personal Finance has shown one of the largest growth rates in the number of fintech companies in the past 3 years (54%), highly above the 32% of the overall SSA FinTech market.

Personal Finance is only responsible for **less than 1% of total SSA FinTech funding**. A possible reason behind this modest percentage is the fact that Personal Finance fintechs is oriented by financial inclusion, rather than pure financial returns. **Cowrywise** (47.6% of total PF funding), **TopCheck** (17%) and **Wala** (17%) can be found as the top three Personal Finance fintechs with the highest level of funding.

INSURTECH

20

Active companies

6%

Of the SSA's FinTech space

11%

Growth in n° of active
fintechs 2019-2021

Source: Own database, 2021

The phenomenon of **InsurTech** was introduced in SSA as a response to the low insurance penetration — the highest penetration rate accounts for only 17%¹ of the population (South Africa). Despite the raise of household income over the last 5 years, insurance is not considered as an essential product to a large share of the African population. All in all, startups have introduced more relatable and tech-based products that are aligned with the continent's reality — such as the high mobile phone penetration or the high percentage of agricultural activity.

The InsurTech space is composed by 20 active fintechs and adds up to 6% of SSA total number of fintechs. From 2004 to 2015, the launch of InsurTech companies exhibited a positive growth rate, reaching its peak in 2015 (with the launch of 5 fintechs). Since reaching its maximum point, annual growth rates have declined. Furthermore, the launch of InsurTech companies was more present in more developed and mature markets, namely South Africa (holding 65% of total Insurtech companies). This phenomenon is usually explained by a comparatively higher level of disposable income and financial literacy, thus a higher willingness to purchase insurance.

InsurTech corresponds to **1.02% of total SSA FinTech funding**, where **Naked Insurance** (37% of InsurTech funding), **Pineapple** (23%) and **Inclusivity Solutions** (14%) can be found as the main drivers behind this flow of funding. As investors seek scalability, the cultural barrier of low insurance adoption could be considered as a potential reason behind the low investment “appetite” for InsurTech.

¹Information directly retrieved from Statista 2017 data, “Rate of insurance penetration in Sub-Saharan Africa in 2017, by country.”

Vertical Analysis: Blockchain & Cryptocurrency and InvestTech

BLOCKCHAIN & CRYPTOCURRENCY

25

Active companies

7%

Of the SSA's FinTech space

39%

Growth in n° of active
fintechs 2019-2021

Source: Own database, 2021

The use of cryptocurrencies in SSA is increasing, as digital currencies are providing a cheaper, faster and more secure channel for remittances, payments or investments. This enables individuals and businesses to deal with the high costs of international and intra-region transfers and the risks of currency devaluation. As a result, **Blockchain & Cryptocurrency** solutions are increasingly being incorporated into other verticals, such as Payments & Transfers and InvestTech.

This category represents 7% of the fintech count in SSA, with 25 businesses actively operating. Although it ranks 5th in number of companies, this is the most recent phenomena in SSA. In fact, the first registered company in the sample – Kenyan BitPesa – was only launched in 2013. From 2017 onwards, the number of fintech launches boomed, in line with global trends - leading to an 8x increase in 5 years. Despite an above average growth in the number of active fintechs (39%) over the past 3 years, the high volatility of the sector, lack of proper regulation and high energy requirements still constitute barriers to its growth.

In line with the global crypto phenomena, Blockchain & Cryptocurrency fintechs are attracting more investment in the region. Since 2015, this vertical has secured a total of \$US52.3 million in funding. Crypto exchanges **BitPesa** (48% of total funding), **CoinFLEX** (22%) and **VALR** (9%) are the top three fintechs with the highest amounts of funding. The relevance of this vertical in SSA's FinTech space is likely to increase as its scope is expanded to include other uses, such as ID verification and property rights.

INVESTTECH

14

Active companies

4%

Of the SSA's FinTech space

56%

Growth in n° of active
fintechs 2019-2021

Source: Own database, 2021

InvestTech companies try to facilitate investing in African and global stock markets. These platforms, which ease the way for people to invest their money are growing by providing everyday investors with access to the financial markets. The recent growth in household income, paired with the lack of traditional investment options has opened the doors for InvestTech fintechs, particularly among the young population.

InvestTech companies account for 4% of the SSA fintech market, with a total of 21 active companies in 2021. The sector has been growing steadily throughout the years, with an average of 2 to 3 company launches being registered per year. Despite being one of the smallest fintech spaces in SSA, InvestTech has shown a 56% growth rate in the number of active companies over the previous 3 years, the highest one among all FinTech verticals.

Bamboo, a digital investment platform that provides real-time access to buy, hold or sell stocks is, the company with higher funding amounts (84% of InvestTech fundings), followed by **ProsperiProp** (11%).

In essence, despite the existing opportunities for InvestTech fintechs, the existent regulatory barriers, reduced internet penetration and limited financial literacy, amongst others, can still hinder the vertical's level of investment attractiveness.

Vertical Analysis: Business Administration and RegTech

BUSINESS ADMINISTRATION

23

Active companies

6%

Of the SSA's FinTech space

44%

Growth in n° of active
fintechs 2019-2021

Source: Own database, 2021

Business Administration fintechs aim at facilitating a company's management process. This becomes particularly valuable to SMES, which lack the resources or knowledge to perform tasks such as accounting, liquidity handling, customer data analysis, amongst others. In SSA, 80% of the jobs are provided by SMEs (CSIS 2021), hence highlighting the relevance of this fintech vertical to the region.

In 2021, there are 23 companies in the Business Administration space, corresponding to 6% of the overall FinTech space. While between 2010 and 2014 only 2 fintechs from this vertical were launched, the number of companies has been increasing progressively over the past 6 years. In fact, there has been 44% growth in the number of companies over the last 3 years, one of the biggest drivers of growth in SSA's FinTech count.

The recent growth of this vertical may be partially associated to the maturing Payment & Transfers solutions. In a way, as payments and transfers needs become satisfied, other business management challenges began to be tackled. Ultimately, raising expectations regarding the attraction of larger amounts of funding by fintechs in this vertical. The Kenyan based **MarketForce** is the fintech with the largest amount of funds raised, corresponding to 30% of the vertical's total funding. The company focuses on providing a robust framework for measuring and improving performance, customer experience, and financial KPI's.

REGTECH

10

Active companies

3%

Of the SSA's FinTech space

11%

Growth in n° of active
fintechs 2019-2021

Source: Own database, 2021

RegTech fintechs aim at facilitating a company's interaction with regulatory requirements, making it less expensive and time consuming. They also focus on the improvement of an enterprise's level of digital security. Essentially, providing services related to risk management, identity management, KYC or AML.

RegTech is the smallest SSA fintech vertical, with only 10 active companies and a modest share of 3% of the total number of fintechs. Still, there are two trends that positively affect the future relevance of RegTech in this FinTech landscape.

The first is the rising number of regulatory requirements, which are expected to accompany the growth of Fintech. Increasingly KYC and AML solutions are being used by Digital Banks and lending solutions. This is particularly important as companies expand their operations to more than one country, especially telecom and payment providers. The second is the adoption of RegTech solutions by many institutional bodies, as these can also benefit from RegTech as they also face compliance supervision which entails costs.

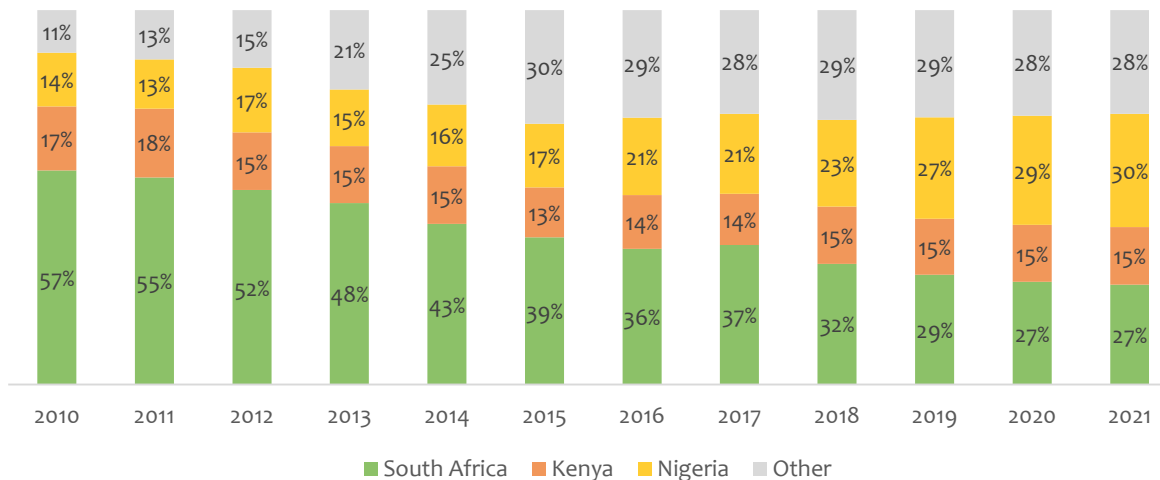
Within the SSA region, the Nigerian based **i.Sec** is the most prominent RegTech focused fintech, having secured 90% of the total funding attributed to this vertical. Essentially, the company provides identity management and access authorization services to banking institutions.

Country Analysis: Nigeria, South Africa and Kenya as main FinTech Hubs

Much of the growth in SSA's FinTech ecosystem has been driven by the activity in three major Hubs: Nigeria, South Africa and Kenya. These countries account for 72% of the total number of active fintechs and represent more than 58% of the total funding captured, making them impressive success cases in the region. The factors that dictate their success will be explored in detail throughout this report.

Though South Africa dominated the space until 2019, **Nigeria has since taken the spot as the region's major Hub**. For the past three years, the country has given room to more than half of the new fintech launches, followed distantly by Kenya (16%) and South Africa (10%). This trend is also reflected in the age of fintech companies: the average South African fintech has been operating for more than 7 years, in comparison with 5 in Kenya and less than 4 in Nigeria, showcasing the different maturities of these markets.

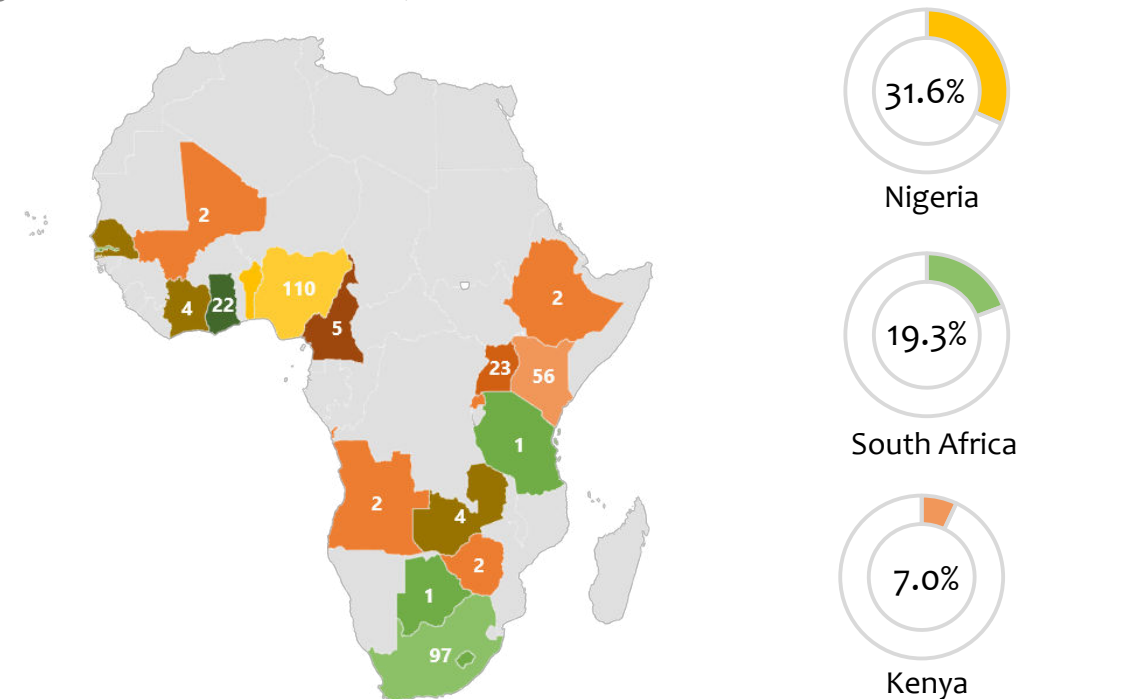
Figure 6: Share of active fintechs per country (%), 2010-2021



Source: Own database

Nigeria's growing importance in SSA's FinTech landscape is also reflected in the amount of funding attracted. As of 2021, Nigeria represents 30% of active fintechs and has been responsible for a proportional share of funding flows in the region. Despite accounting for a close number of companies, South African fintechs have contributed to less than 20% of funding. Similarly, Kenya, with 15% of active fintechs, accounts for only 7% of funding flows. The gap between fintech presence and the amount of investment attracted by each country is mostly explained by the presence of international players in the region, which will be further explored in greater detail.

Figure 7: Number of active fintechs in SSA, 2021



Source: Own database

Country Analysis: A Closer Look into Nigeria



Population

206 million people



Largest City

Lagos (12.8 million people)



GDP per capita

2,272 USD¹



Currency and Exchange Rate

1 Nigerian Naira = 0.002 UDS



Total Funding Raised

1.21 billion USD

Source: Statista

Nigeria is the **largest country in SSA in terms of population**, accounting for 206 million people in 2020. As of 2021, Nigeria is home for **111 fintechs**, having as its pioneer the company *Interswitch* — an integrated digital payment platform.

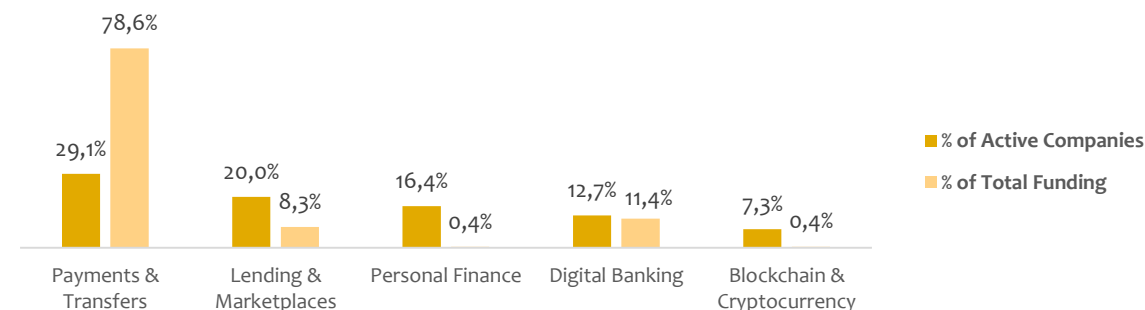
Vertical Distribution: If considering a segmentation of these fintechs by verticals, the sector of **Payments & Transfers accounts for 29%** (32 fintechs) of the total number of companies, followed by **Lending & Marketplaces (20%) and Personal Finance (16%)**, as illustrated in Figure 8. The rise of Personal Finance within the Nigerian market was linked to the national economic recession in 2016, where the national currency, the Naira, devaluated against the USD. As a response to the low interest rates provided by traditional banks, Nigerians turned into the fintech-based technologies to better save their money and potentially invest, leading to the launch and rise of platforms such as **Cowrywise** or **EvolveCredit**.

Funding Analysis: Regarding its magnitude of investments, Nigeria has attracted an amount of **1.21 billion dollars of funding as of 2021, corresponding to the country with the highest total funding in SSA**. However, a noticeable difference is perceived in the level of funding within its diverse range of verticals. Once again, **the vertical Payments & Transfers remains in #1**, accounting for nearly 80% of total funding, followed by **Digital Banking and Lending & Marketplaces, respectively**. This rise of funding within the vertical of Payments & Transfers was highly fuelled by the outstanding number of Nigeria's FinTech unicorns, namely **Opay** (47% of total funding) and **Interswitch** (17%), representing 2/4 SSA FinTech unicorns³

SPOTLIGHT ON Interswitch

Interswitch is not only Nigeria's pioneer fintech, but it also has become one of the very few companies to be considered an **African fintech unicorn**. As a **digital payment and e-commerce** provider, Interswitch has grown in significant scale over nearly two decades, achieving metrics such as: 1) a valuation of 1 billion dollars in its last round of funding or 2) 90% market share of all electronic transaction in Nigeria. The company has been able to support this vast growth through a successful set of **payment and financial service offerings**. Its range of products is clustered across three major segments: 1) **Transaction processing and enablement**; 2) **Card Network** (Verve) and 3) **Consumer Financial Services** (Quickteller). As its next step towards international expansion, the company has considered going public through an initial public offering (IPO), since 2016. Given this potential IPO, the company is expected to raise fresh financing through a lower cost of capital, comparatively to its cost of financing if it were to stay private.

Figure 8: Nigeria's distribution of number of companies and total funding per vertical (Top 5)



Source: Own database, 2021

¹ GDP per capita as of 2020, directly retrieved from Statista; ² Exchange rate as of January 2021, directly retrieved from Statista

³ Despite being based outside of Nigeria, Flutterwave can also be considered as a Nigerian fintech

Country Analysis: A Closer Look into South Africa



Population

60.5 million people



Largest City

Cape Town (3.4 million people)



GDP per capita

5,067 USD



Currency and Exchange Rate

1 SA Rand = 0.07 USD¹



Total Funding Raised

667 million USD

Source: Statista

South Africa remains the most developed economy when compared to its Sub-Saharan peers, accounting for the **largest GDP per capita and lowest poverty rate**. Due to its comparatively high degree of development, South Africa was the first established FinTech hub, launching its first fintech company in 2000. This hub is currently composed by a total of **97 FinTech companies**.

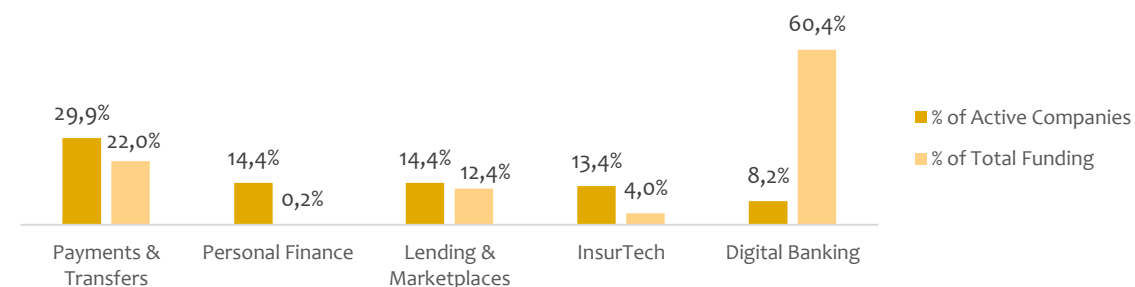
Vertical Distribution: When looking at South Africa's vertical distribution, there is a large presence of the Payments & Transfers vertical, accounting for nearly 30% of total companies. The second largest verticals are **Lending & Marketplaces** and **Personal Finance** (14% each). Furthermore, the South African pool of fintechs experiences a high presence of emerging verticals comparatively to the remaining hubs, as South Africa contains the highest number of **InsurTech**, **Business Administration** and **InvestTech** companies across SSA. All in all, the activity in these emerging spaces can be largely traced to this market's maturity.

Funding Analysis: Funding wise, South Africa captures a grand total of US\$ 667 million. Within this value, the single sector of **Digital Banking represents approximately 60% of total funding**, followed by Payments & Transfers (22%) and Lending & Marketplaces (12%). Furthermore, **JUMO** and **TymeBank**, the two largest Digital Banking platforms across SSA, are the main drivers behind this outstanding percentage of funding (51% of total). As South Africa's digital and financial infrastructure present a relatively higher development, investors might show a higher attraction to this market when investing in Digital Banking solutions — given that this infrastructure can better support the activity of these more “complete” platforms, when compared to other SSA markets.

SPOTLIGHT ON JUMO

JUMO is one of the largest growing fintechs in SSA, catching significant attention from players in the market with its **latest \$55M funding round**, from **Goldman Sachs**. Since its founding in 2015, JUMO has provided a Platform-as-a-Service (PaaS) for partner banks (B2B), enabling them to offer loans and mobile savings to individuals and SMEs that have limited or no access to essential financial services. Overall, the company has achieved large cross-border operations, establishing itself in Kenya, Uganda, Tanzania, Rwanda, Ghana, Zambia and the United Kingdom, with additional future expansion plans in Asia. The company has been able to sustain this vast expansion based on the **singularity of its service, more specifically, its platform capabilities**. Its platform utilizes behavioral data from mobile usage to create financial identities for consumers, linking them to specific financial products³. All in all, by observing the successful case of JUMO, we can witness the possible scalability of Sub-Saharan fintechs beyond the borders of the African ecosystem.

Figure 9: South Africa's distribution of number of companies and total funding per vertical (Top 5)



Source: Own database, 2021

¹ GDP per capita as of 2020, directly retrieved from Statista

² Exchange rate as of January 2021, directly retrieved from Statista

Country Analysis: A Closer Look into Kenya



Population
40.9 million people



Largest City
Nairobi (2.75 million people)



GDP per capita
2,103 USD¹



Currency and Exchange Rate
1 Kenyan Shilling = 0.009 USD²



Total Funding Raised
238 million USD

Source: Statista

With one of the fastest growing digital economies, Kenya has been established among one of the world's leaders in mobile money penetration and the most successful adopter of mobile wallets (FT Partners 2019). Within its 40.9 million population, Kenya is home for **56 fintech companies since 2004**.

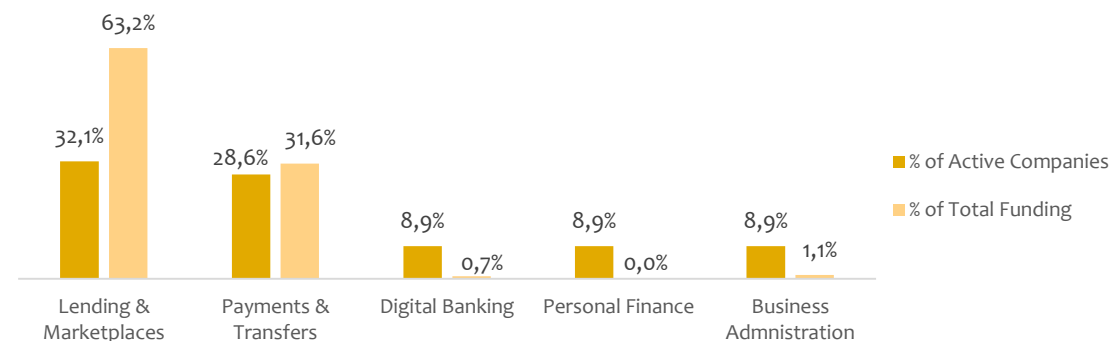
Vertical Distribution: When compared to the three main SSA hubs, Kenya is the only market that is **not led by the Payments & Transfers when considering the number of fintechs**. In contrast, **Lending & Marketplaces presents the highest number of active companies**, with a corresponding percentage of 32% of total number of national fintechs, followed by Payments & Transfers (29%). A wide gap is found between the second and third largest verticals regarding the number of fintechs. Digital Banking, Personal Finance and Business Administration share the third place (9% each, as illustrated in Figure 10). The rise of the number of companies within the Kenyan Lending & Marketplaces is highly linked to the increasing demand for alternative mobile and digital lending solutions, as many individuals with capital needs were not satisfied by formal lenders (FSD Kenya 2017).

Funding Analysis: A total value of \$US238 million was raised by Kenyan fintechs as of 2021. Furthermore, the largest share of funding was led by the **Lending & Marketplaces** vertical, which captured over 50% of all investment. The sector of **Payments** was left in #2, accounting for an overall of 32%. Remaining verticals such as **Blockchain and Cryptocurrency** or **InsurTech** accounted for less than 10% each. The main contributor to Kenyan funding was **Lendable**, a Lending & Marketplaces fintech, which accounts for more than 60% of total Kenya's funding (achieving funding rounds as large as \$140M).

SPOTLIGHT ON cellulant

Since 2004 Cellulant enables users to make and receive payments using a single digital platform. This program provides an **integrated financial ecosystem of consumers, retailers, banks, mobile network operators and governments**. This integrated financial ecosystem was achieved through a large **input of product development**. In its founding years, Cellulant was composed by **Mula**, a secure payment method for people and businesses. In 2015, the company expanded its product offering creating the venture **Tingg**, an integrated hub of digital services that empower commerce within ecosystems. Finally, **Agrikore**, a blockchain based smart contracting and payments system, was introduced in 2017 to ensure that all agents in the agricultural sector could do business in a trusted and transparent environment. Cellulant raised approximately \$47.5M in a Series C funding round in 2018, **further helping its Pan-African expansion**.

Figure 10: Kenya's distribution of number of companies and total funding per vertical (Top 5)



Source: Own database, 2021

¹ GDP per capita as of 2020, directly retrieved from Statista

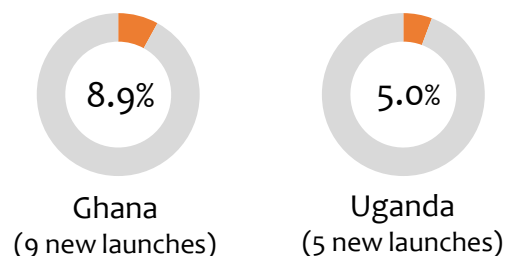
² Exchange rate as of January 2021, directly retrieved from Statista

Country Analysis: Other players are gaining share in the market

OTHER RISING COUNTRIES

The share of active fintechs originated outside of the three major countries increased considerably throughout the earlier Fintech years, remaining stable at around 30% since 2015. **Much of the growth from other players has been driven by increased FinTech activity in two countries: Ghana and Uganda.** Together, these countries represent 45 active fintechs (12% of SSA's total). As well-known FinTech Hubs start to mature, these ecosystems have the opportunity to expand and reinforce their presence in the region. Despite the positive outlook, these countries have yet to attract significant funding rounds, which can pose some challenges for their future growth.

FINTECH LAUNCHES 2019-2021



Source: Own database

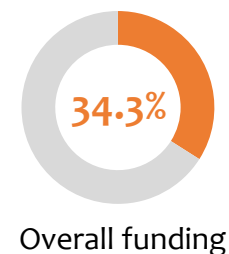
Other success cases have also been emerging from relatively smaller FinTech ecosystems, such as Seychelles, Mauritius, Cameroon, Cote d'Ivoire, Rwanda, Senegal, Zambia or Zimbabwe. Though their contribution to overall SSA funding is still minimal in most cases, these countries are likely to expand their relevance as more success cases emerge. Interestingly, Senegal's Wave \$US 200 million Series A in 2021, the biggest ever recorded in SSA, turned it into the fourth country with the highest amount of FinTech investment in SSA, right after Kenya.

INTERNATIONAL PLAYERS

As previously mentioned, the gap between the number of companies in SSA's FinTech ecosystem and the amount of funding attracted can be explained by the presence of international players. These are companies that operate mainly in SSA's countries, but have their headquarters located elsewhere. Most of the players identified (80%) originate from the US, with the remaining being from the UK and the EU, and tend to have African members in their founding team.

International companies are responsible for 34% of all funding flows, more than any individual country, despite accounting for less than 3% of active fintechs.

This success can be attributed to the proximity of international investors. Admittedly, all companies considered have attracted international funding. This has also been reflected in larger ticket sizes, with international fintechs securing an average funding of \$US27.3 million, five times more than local companies (Table 2).



Source: Own database

Company	Year	HQ	Primary market	Total funding (US\$ million)
TALA	2011	US	Kenya	349.4
Chipper	2018	US	Various	302.2
branch	2015	US	Kenya	274.3
Flutterwave	2016	US	Nigeria	234.7

Table 2: Top 4 international companies operating in SSA, by total funding

Introduction to the Scoring Model

The leading hubs – Nigeria, South Africa, Kenya – distinguish themselves through its **relatively more advanced FinTech ecosystems** when compared to the remaining SSA markets.

Any ecosystem is driven by a set of pillars that influence its overall strength and evolution. In the case of SSA FinTech, we consider that this ecosystem includes the following pillars: Regulation, Demand, Feeling of Community, Talent and Capital. Each individual pillar will be explained in further detailed and analysed in the following section (“Pillar Analysis”). Furthermore, Figure 11 illustrates the relationship between different pillars and corresponding stakeholders.

In order to better understand the development of each hub, an analysis was conducted looking at **each individual pillar and corresponding dimensions** (what we considered as “ecosystem framework”). By providing a score from 1 to 5 (being 1 the least favourable and 5 the most favourable), this scoring model tries to recognize the **indicators that drive the largest positive impact within each hub**. All in all, this framework and scoring model can be valuable from a learning perspective, **as growing FinTech companies and markets can observe the best practices being applied within each pillar based on the reality of the SSA landscape**.

Figure 12: Illustration of the analysis structure

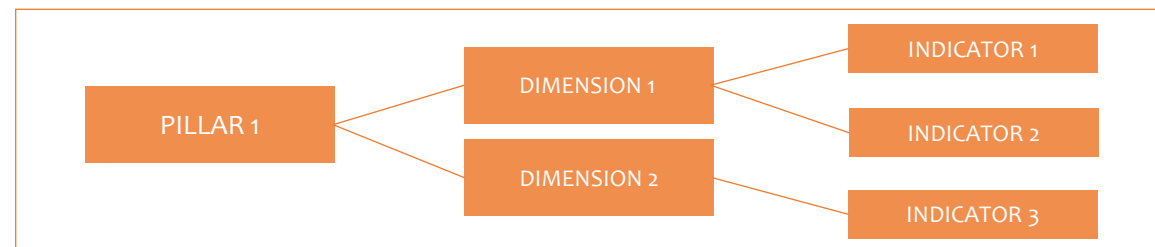
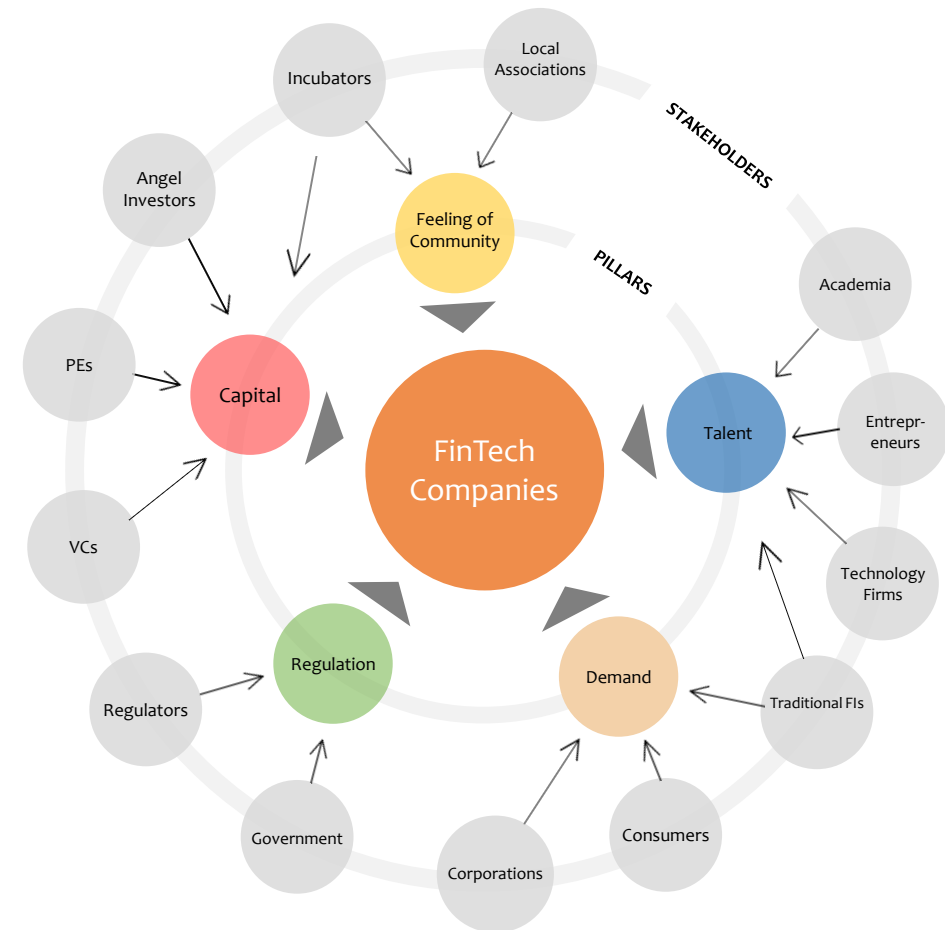


Figure 11: Relationship between stakeholders and pillars inside the FinTech ecosystem



Source: Adaptation of the Ecosystem Framework (FinTech in Sub-Saharan Africa: An Overview of Market Developments and Opportunities, EY, 2019) c

Pillar Analysis: Regulation

The fast growth experienced within SSA’s FinTech landscape has created challenges for regulators across the region, which are struggling to keep up with the fast pace of innovation. The absence of specific “FinTech laws” in most countries requires multiple regulators to continuously adapt existent frameworks, often resulting in **unclear and overlapping rules for FinTech businesses** (Afriwise 2021).

High compliance requirements also represent a major regulatory burden for SSA fintechs. On the one hand, the costs and time needed to attain a license constitute high entry barriers in the space. On the other, regulators have been rolling out KYC and AML rules, with high penalties for non-compliance.

Conflicting and fragmented national regimes have made it difficult for companies to expand cross-border operations, mainly in the payments space. This has led to a surge in **calls for regulatory convergence** across the continent (Africa Forum 2021). The African Continental Free Trade Area Agreement (ACFTA), which came into force in 2021, is expected to drive regulatory alignment between 54 African countries.

Despite this, we have been witnessing **a rise in pro-innovation regulation** in the SSA FinTech ecosystem, through the widespread adoption of innovation facilitators.

Considering this, four dimensions were selected to assess the strength of this pillar: **(i) Robustness, (ii) Fragmentation, (iii) Compliance requirements and (iv) Innovation support.**

To properly score each dimension, comparable indicators were chosen (Table 3). A favorable regulatory ecosystem is thus characterized as having high robustness, low fragmentation, suitable compliance requirements and support of innovation. Overall, it should balance the need to ensure stability and protect consumers with the desire to support innovation and promote financial inclusion, through a proportional assessment of the risks represented by fintech businesses.

Dimensions	Indicators
Robustness	Incomplete / lack of clear regulation
	Sudden changes in regulation
Fragmentation	N° of regulating entities
Compliance requirements	Costs of attaining a license
	Time to attain a license
	Complexity of KYC/AML rules
Innovation Support	N° of innovation facilitators

Table 3: Regulation scoring framework

CLOSER LOOK INTO INNOVATION FACILITATORS²

Regulatory Sandboxes	Regulatory sandboxes have been adopted by regulators globally to provide innovators with a controlled environment to test out new financial products and services, usually under alleviated regulatory restrictions. This concept has taken the interest of regulators in SSA, with more than eight sandboxes having been established in the region to date.
Innovation Offices	Innovation offices act as central contact points to answer questions and offer guidance to companies, helping them navigate regulatory requirements.
Innovation Accelerators	Regulatory/innovation accelerators are responsible for enabling partnerships between fintech firms and regulators, helping companies understand the policymaker’s needs and support them in gaining understanding of emerging technologies.

¹ According to World Bank definitions (2020)

Pillar Analysis: Regulation

1. NIGERIA



Robustness: Though Nigeria's regulatory ecosystem is still not robust, the rise of diversified fintech solutions has forced regulators to expand their scope. In 2021, regulatory frameworks were issued for equity crowdfunding and open banking, two unregulated areas. Regardless, sudden changes in regulation still represent a major hurdle for Nigerian fintechs. The recent ban on crypto assets by the Central Bank of Nigeria (CBN) or the Securities Exchange Commission (SEC) decision to forbid the offer of foreign stocks to Nigerian investors are examples of regulatory instability.

Fragmentation: Nigeria's ecosystem is particularly fragmented, lacking a unified approach to regulation. Besides the CBN and the SEC, the two main regulatory entities, there are nine other regulators¹. This often results in a regulatory overlap, as the mandates of each entity are not properly defined. In fact, the crypto ban by the CBN came after the SEC announced that it was already working on a regulatory framework and a sandbox for cryptocurrencies.

Compliance requirements: Both the cost and time associated with the licensing process are considered challenges for Nigeria's fintechs. This is often aggravated by the fragmentation of the system, as companies can be required to attain multiple licenses to operate. Though KYC/AML rules have not represented a big barrier to fintechs, compliance with data protection and cybersecurity rules has been considered costly. To mitigate these risks, the CBN has announced the introduction of a 4-tier licensing model enabling fintechs to enter the market with lighter conditions.

Innovation support: Despite the challenges still faced, Nigeria's regulators have been supportive of innovation. In 2019, the FSI² launched an industry sandbox with the support of the CBN. Following its success, the latter decided to launch its own regulatory sandbox in 2021 and the SEC has announced the roll out of the Regulatory Incubation Program for companies in the capital markets. Additionally, both the SEC and the Nigeria Deposit Insurance Corporation (NDIC) have set up innovation Offices.

2. SOUTH AFRICA



Robustness: Being one of the first movers in the FinTech space in SSA, South Africa's regulatory ecosystem started developing early on. Nonetheless, there are generally no FinTech-specific laws in place, forcing regulators to encompass fintech activities within existent frameworks. This often results in lack of clarity for fintech firms, which find themselves unaware of which laws they need to comply with. For instance, while equity crowdfunding and P2P lending may fall under 6 different jurisdictions, there is no specific regulations for these areas. Likewise, crypto assets remain an unregulated area, though a regulatory framework covering this category is being developed.

Fragmentation: The existence of multiple regulators has resulted in a somewhat fragmented regulatory ecosystem. However, the establishment of the Twin Peaks regulatory system, which defines the mandates of some regulators, has led to some consolidation. Similarly, the creation of the Intergovernmental FinTech Working Group (IFWG), in 2016, has managed to alleviate part of this problem. The IFWG brings together the seven South African regulatory bodies¹ and works as a "one-stop shop" to engage with fintech firms.

Compliance requirements: Costs of attaining a license are not considered to be overly impeditive to the activity of fintech businesses, neither are KYC/AML rules in place. On the contrary, the time required to attain a license stands out as one of the biggest regulatory hurdles of South African firms, more than in the remaining Hubs.

Innovation support: In 2020, the IFWG set up an Innovation Hub to assist innovators through three different avenues: a Regulatory Guidance Unit, aimed at providing answers to regulatory enquiries, an Innovation Accelerator, responsible for organizing workshops, hackathons and other policy-driven initiatives and a Regulatory Sandbox, which has since then welcomed its first cohort of 8 innovators, including crypto-based transfer solutions, crowdfunding platforms, InsurTechs and even an incumbent bank.

¹ These include the NDIC, NAICOM, FCCPC, NCC, NITDA, NOTAP, Corporate Affairs Commission, FRC and NIBSS in Nigeria and the SARB, Prudential Authority (PA), FSCA, NCR, FIC, PASA, FSOC and FSIC in South Africa; ² Financial Services Innovators

Pillar Analysis: Regulation

3. KENYA



Robustness: Since the launch of M-Pesa, in 2007, Kenya has followed a “test and learn” approach to FinTech regulation. The Central Bank of Kenya’s (CBK) issuance of a “letter of no objection” to Safaricom to develop the mobile money service is an example of this. In fact, specific payments frameworks were only introduced in the country four years later. While this strategy ensures that fintech firms are not subject to overly restrictive requirements, it can also be seen as granting less protection, resulting in a less robust regulatory ecosystem. Admittedly, the lack of formal fintech frameworks has led to regulatory gaps. Although not prohibited, the areas of digital credit, cryptocurrencies, equity crowdfunding and P2P lending remain unregulated.

Fragmentation: Besides the CBK and the Competition Authority of Kenya (CAK), there are four other regulatory entities¹. The nature of Kenya’s regulatory approach, which is institution rather than activity-based, poses concern for several fintech categories, whose legal “umbrella” is not properly defined. Nonetheless, attempts of consolidation have taken place with the 2018 Financial Markets Conduct Bill, which proposed the establishment of a regulator to oversee fintech activities.

Compliance requirements: Licensing costs are generally not overly impeditive for firms, neither are the KYC/AML rules in place. However, the time it takes to attain a license is still seen as a major hurdle.

Innovation support: Kenyan regulators have also led the way in promoting innovation initiatives. In 2019, the Capital Markets Authority (CMA) launched a Regulatory Sandbox, which has since received 24 applications from various innovation areas, including crowdfunding, blockchain-based platforms and robot advisors. Additionally, the Insurance Regulatory Authority (IRA) has launched a regulatory sandbox (“Bimabox”) focused on insurance innovations and an Innovation Accelerator (“BimaLab”) to promote collaboration on insurance products and services.

OVERALL ASSESSMENT

Dimension	Indicator	Nigeria	South Africa	Kenya
Robustness	Incomplete / lack of clear regulation	3	2	2
	Sudden changes in regulation	3	5	4
	Score	3.0	3.5	3.0
Fragmentation	N° of regulating entities	2	4	3.5
	Score	2.0	4.0	3.5
Compliance requirements	Costs of attaining a license	3	5	4
	Time to attain a license	3	2	3
	Complexity of KYC/AML rules	4	5	4
	Score	3.3	4.0	3.7
Innovation Support	N° of innovation facilitators	5	4	4
	Score	5.0	4.0	4.0
Total Score		3.3	3.9	3.6

Table 4: Regulation scores per country

METHODOLOGY FOR INDICATORS

Source To perform a quantitative evaluation of the Robustness and Compliance requirements indicators, data from the 2021 Africa FinTech Radar was used. This joint initiative from Findexable and UK Tech for Growth surveyed 200 fintechs to identify areas that presented biggest regulatory burdens. Updated information on regulatory entities and innovation facilitators was collected by the Catalyst Fund.

Score Based on the data available, numeric intervals were defined for each indicator, which were later converted to a scale of 1 to 5. Given that the data matched the qualitative assessment, there was not much need to adjust scores. The score of each dimension represents a weighted average of each indicator’s score. Similarly, the final score corresponds to a weighted average of each dimension, as all dimensions were considered equally important.²

¹ These include the Communications Authority of Kenya (CA), CMA, IRA and Retirement Benefits Authority in Kenya

² A detailed description of the survey’s results and the criteria used for scoring can be found in Appendix 2-3.

Pillar Analysis: Demand

In every market the demand plays a structural role, and the FinTech market is no exception. Currently, the demand for FinTech services in SSA can be thought of a combination of two different perspectives: **potential demand** and **existent demand**.

Potential Demand corresponds to a fintech whose business model is based on SSA’s lack of financial inclusion and reflects an earlier stage of such landscape, with M-pesa replicating this perspective. Within such perception, a fintech will typically look for isolated populations with willingness and capacity to absorb FinTech services. The following indicators measures these two conditions:

- a) Rural Population

b) Bank Agencies per 100 000 citizens,

c) Phone Penetration

d) Young Population in 2030

e) Internet Access

}

}

Population Isolation

Willingness/Capacity of absorption

Existent Demand corresponds to a fintech that aims at providing services to citizens already financially included and reflects a more mature stage of the SSA FinTech Landscape. Within such perspective, a fintech will typically look for signs of FinTech services adoption. The following indicators measure such adoption:

- a) Population that made Digital Payments in the last year

b) Sent/Received Remittances through a mobile phone

c) Mobile Money account

d) Borrowed from a financial institution/used a credit card

→

→

→

→

Payments

Remittances

Digital Wallet

Lending

Dimensions	Indicators
Potential Demand	Rural Population
	Bank Agencies per 100 000 citizens
	Phone Penetration
	Young Population in 2030
	Internet Access
Existent Demand	Made Digital Payments
	Sent/Received Remittances Digitally
	Mobile Money Account
	Borrowed from a financial institution/used a credit card

Table 5: Demand scoring framework

METHODOLOGY FOR INDICATORS¹

Source The indicators mentioned, and their values were extracted from the Global Financial Inclusion Databank by the World Bank, from the most recent year available. The indicators relative to the Existent Demand were available in percentage of total population, having then been multiplied by the total population of the relative year.

Benchmark The indicators were also extracted from the remaining SSA countries, to act as a benchmark. Based on that data, different intervals were defined for each indicator, with each interval having a score associated.

Perspective Relevance Although two different perspectives were identified, given SSA still fragile levels of financial inclusion, potential demand was deemed more relevant when attributing a score – equivalent to a 75% weight on the overall demand score.

¹The interval range for each indicator, the SSA countries used as benchmark and the performance of each country per indicator can be found in Annex 4, 5 and 6 respectively

Pillar Analysis: Demand

1. NIGERIA



Potential Demand: Nigeria is indisputably the country with the strongest potential demand for FinTech services in SSA. In fact, it achieves the highest score on current rural population, expected young population and internet access, thus ensuring willingness and capacity of absorption of the services. Also, it has the largest amount of mobile phone penetration and a low level of bank agencies per 100 000 inhabitants, hence exhibiting a high degree of population isolation, ultimately scoring 4.75/5 from this perspective.

Existent Demand: This demand perspective contrasts with the previous one, which leads to a worse performance compared with Kenya and South Africa. The demand for digital wallet and borrowing services are the lowest, leading to a score of 1.75/5 and bringing the overall score down to 4.

2. SOUTH AFRICA¹



Potential Demand: South Africa exhibits low levels of population isolation as its rural population is reduced and comparatively has more bank agencies per 100 000 citizens, thus negatively impacting this demand perspective. However, the country displays a medium degree of willingness/capacity of absorption of fintech services due to medium phone penetration, high expected young population and the high level of internet access, ultimately scoring 2.5/5 from this perspective.

Existent Demand: This perspective achieves the same score as the previous one - 2.5/5 - with medium demand for both payments and lending services, and low demand for remittances and digital wallet services. This results in an overall score of 3/5. South Africa ends up having a more mature demand than Nigeria but less relative to Kenya.

3. KENYA¹



Potential Demand: Kenya represents a medium level of demand regarding willingness/capacity of fintech services (3.25/5), which can be justified by the fact that its FinTech landscape has become more mature. Regarding the level of isolation, the impact of its rural population on the demand is medium, however the lack of bank agencies strongly contributes to such demand, setting a score of 3.25/5.

Existent Demand: Kenya's ecosystem fares particularly well in this dimension, 5/5. In every demand indicator, the country achieves the highest score possible. Thus, illustrating how its FinTech Landscape has matured, which can be attributed to the success of M-Pesa, ultimately increasing the overall score to 3.5/5.

OVERALL ASSESSMENT

Dimensions		Indicators	Nigeria	South Africa	Kenya
Potential Demand		Rural Population	5	1	2
		Bank Agencies per 100 000 citizens	4	2	5
		Phone Penetration	5	3	2
		Young Population in 2030	5	4	4
		Internet Access	5	4	1
		Score	4.75	2.8	3.25
Existent Demand		Made Digital Payments	2	3	5
		Sent/Received Remittances Digitally	3	2	5
		Mobile Money Account	1	2	5
		Borrowed from a FI/used a credit card	1	3	5
		Score	1.75	2.5	5
Total Score			4	3	3.5

Table 6: Demand scores per country

¹Despite these two countries have less than half of Nigeria's population they still surpass it in various indicators in absolute number, hence support an evaluation of those indicators from an absolute value perspective.

Pillar Analysis: Talent

The African fintech market growth is compromised by the lack of talent, specifically related to the required technological skills and resources. The demand for **talented people is increasing** by day, especially for competencies in specific areas such as data science, software engineering and business development (Findexable 2021).

Naturally, the pool of talent that has the potential to contribute for the development of the fintech sector depends on the number of tech-related universities and programs, and of course, on its quality. In fact, **the continent still presents an underdeveloped education system**. Among the main essential people for the fintech sector development, research conducted by Findexabe shows that the matter of qualified employees is more concerning regarding Data Scientists than in other categories, being Software Engineers the more favourable area.

The limited traditional job opportunities can generate a more creative entrepreneurial environment where young people try to reach and develop new and innovative solutions. Nonetheless, there are major barriers in finding the right skill to further develop and scale-up fintech businesses.

To better score this pillar across the three previous hubs, the **quantity and quality of talent** were considered as main dimensions.

From a **quantity** standpoint the main indicators considered include:

- 1) **Number of relevant programs**
- 2) **Capacity to retain local talent and attract foreign talent**

As for the **quality** dimension, it is assessed by observing the following:

- 1) **Quality of Data Scientists**
- 2) **Quality of Computer Science Universities**

Dimensions	Indicators
Quantity	Number of Relevant Programs ¹
	Capacity to retain local and attract foreign talent ²
Quality	Quality of Data Scientists ³
	Quality of Computer Science Universities ⁴

Table 7: Talent scoring framework

METHODOLOGY FOR INDICATORS

The methodology for the score of the **number of relevant courses and the capacity to retain local and attract foreign talent** was similar. The first step was to identify the SSA country with the highest level for each indicator, attributing it a score of 5. Then, the score of each hub was defined as proportion between its indicator value and the maximum value.

Quality of Data Scientists: The 2021 Findexable report presents a survey conducted to domestic fintechs in each hub to classify the pool of data scientists. The percentage of fintechs in each hub that classified it as weak is used to determine the score – the lower the percentage, the higher the hub will score in this indicator.

Quality of Computer Science Universities: The 2021 top-30 ranked universities are based in 11 different countries. To each country, the respective number of universities included in the top-30 was associated. Then, the larger the number, the better the score for this indicator.

¹(Free Apply 2021) ²(World Bank Data 2017) ³(Findexable 2021)

⁴(Scimago Institutions Ranking 2021)

Pillar Analysis: Talent

1. NIGERIA



Overall, Nigeria represents the second position in the Talent pillar among the three hubs. Its main strength is related to **quantity**, specifically to the number of relevant programs in the country. In fact, it is the country in SSA that offers the highest amount of courses in Computer Science, Technology, Finance & Banking, IT, and Programming, with a total number of 304 programs. For this reason, the hub presents the highest score for the quantity of talent.

Regarding **quality**, Nigeria's pool of talent scores relatively low. The main reason why is that according to *Findexable* (2021), 58% of fintechs classified data scientists in the country as of weak quality - more than half of the surveyed fintechs is not satisfied with available data scientists. On top of this, most computer science universities in Nigeria rank below the SSA's top 30 – there are limited universities of top quality in Nigeria, especially when compared to South Africa.

2. SOUTH AFRICA



South Africa is the hub that scores the highest relatively to its talent pool. This is mainly a result of the quality of computer science universities – leader in SSA's top 30 ranking. Moreover, it is the country in which the lowest share of domestic fintechs considered the country's data scientists talent pool weak. For these reasons, the country is able to reach the highest score relatively to **quality**.

As for **quantity**, although it presents a lower score relative to the other hubs, South Africa is still the second country in SSA with the largest number of fintech-related programs, with a total of 224. Moreover, the country compares to Nigeria in its capacity to retain and attract talent, but it is below Kenya. Due to its international exposure, it is likely that the country has a higher ability to attract foreign talent, but more difficulties in retaining local one.

3. KENYA



Generally speaking, Kenya classifies as the hub with the lowest overall score relative to talent. This result is mainly driven by the relative lower **quality** of the available pool of talent, which is mostly negatively affected by the quality of data scientists - 70% of its domestic fintechs classify the country's data scientists as having a weak quality. Simultaneously, SSA's top 30 universities include a lower amount of Kenyan schools than South African ones, as in the case of Nigeria.

Relatively to **quantity**, although the offer of fintech-related programs is lower than in the other hubs, the country leads in its capacity to retain local and attract foreign talent.

OVERALL ASSESSMENT

Dimensions	Indicators	Nigeria	South Africa	Kenya
Quantity	Number of Relevant Programs	5	3.75	3.5
	Capacity to retain local and attract foreign talent	3.5	3.5	4
	Score	4.25	3.6	3.75
Quality	Quality of Data Scientists	2.5	3.5	2
	Quality of Computer Science Universities	3	5	3
	Score	2.75	4.25	2.5
Total Score		3.5	4	3

Table 8: Talent scores per country

Pillar Analysis: Capital

When analyzing any FinTech market, a share of its growth and strength must be traced back to investment flows. For that reason, this model will contemplate the capital ecosystem, evaluating the following dimensions:

- a) Access to Capital
- b) Investment Attractiveness

Consistently, a fintech market with large access to capital, joined by attractive investment opportunities, will naturally have a higher number of companies being able to secure financial resources.

Within the dimension of the **access to capital**, the indicators presented in Table 9 were observed based on historical data. Overall, we considered the trend of these indicators as an illustration of the market’s connection to investors — meaning that a stronger investment network (better access to capital) will take place as more deals are driven to the market. In addition, as this network expands beyond domestic capital communities, fintech companies will be able to connect to a larger pool of investors, thus enhancing its access to financial resources.

Furthermore, within the dimension of the **investment attractiveness**, this scoring model considers that an attractive market could be derived from: 1) a sufficient market size, 2) diversification in investment choices (regarding stage of development), and 3) long-term prospects of growth from national businesses (for example, international expansion).

Moreover, it is important to consider that the capital ecosystem is **directly affected by the presented pillars**, meaning that a favorable capital ecosystem is normally accompanied by a positive juncture of regulation, demand, talent and feeling of community.

Dimensions	Indicators
Access to Capital	Number of Funding Rounds since 2011
	Average growth rate of funding rounds over the last 3 years
	Percentage of International Investors
Investment Attractiveness	Number of FinTech companies
	Average growth rate of the creation of FinTech companies over the last 5 years
	Percentage of companies that achieved cross-border operations
	Percentage of companies in late stages of funding

Table 9: Capital scoring framework

CLOSER LOOK INTO INVESTMENT ATTRACTIVENESS

Market Size Within the conducted research, it was found that a country may attract more FDI if it has a sufficient and growing market size (Dunning 1998). Consistently, a market with a growing number of companies will naturally have more opportunities to attract funding rounds, in absolute terms.

Development Stage As the stage of development plays a large role in the decision-making process of VC and PE firms (Gompers 2016) , the percentage of “mature” businesses¹ from a diversification point of view was considered. A relatively high percentage of mature business along with a growing market, provides investors with a larger pool of investment opportunities regardless of their investment focus.

International Expansion The trend of international fintechs² was considered as a metric of potential scalability of businesses. As companies continue to have the long-term prospect of growing internationally, more capital will be required — potentially increasing investment opportunities.

¹ The term mature businesses consider all fintechs in mid-late rounds of funding, including PE and Acquisitions.

² This model consider all fintech companies with cross-border operations as “international fintechs”

Pillar Analysis: Capital

1. NIGERIA



Access to Capital: Nigeria presents the most favorable investment network based on the evaluated data, achieving the highest score in the 3 indicators. As of 2021, Nigeria presents a grand total of 181 funding rounds¹ and 170 investors, placing the highest values in all SSA markets. With an average of 1.06 investors per funding round and an upward trend of the annual number of rounds (with 55% growth rate over the last 3 years), one would expect that Nigeria's investment network would continue to provide a favorable access to capital to its fintech companies. In addition, this network presents 72% presence of international investors from 23 different nationalities. Following the trend of this metric, the network is expected to further expand beyond domestic capital communities over the next years.

Investment Attractiveness: Nigeria is composed by a total number of 110 fintech companies with an average growth rate of 26%, achieving what one believes to be a sufficient market size within the SSA outline. As the fastest growing market in SSA, one could observe that 88% of funded companies since 2011 are still in early stages of development, while only 12% were considered in mid-late stages. From a diversification perspective, a value of 12% was scored within the lower side of the range, as investors with a late-stage focus would be provided with a relatively small universe of companies (7 fintechs). Nonetheless, it is important to consider that as the market continues to grow, more companies will continue to develop, thus expanding the pool of mature businesses. Finally, Nigeria exhibits the lowest percentage of companies with cross-border operations (9%). While some of this companies grew across more than two countries attracting large rounds of funding (e.g., Paystack), it is expected that this comparatively low number of success cases would not stimulate as much interest from investors as other factors (e.g., market size).

2. SOUTH AFRICA



Access to Capital: The South African fintech market presents a grand total of 134 funding rounds since 2011, placing second within the top three countries with the highest percentage of SSA's rounds (37%). Despite a more stabilized average growth rate of rounds, South Africa exhibits one of the largest and most established investors network, showcasing above-average values for ticket size (\$6.9M) and average investors per funding round (1.32 investors). Furthermore, South Africa comprises 74% of international investors. Even though SA presents a comparatively lower growth rate of international investors coming to the market, this metric should not be considered as strictly negative. This value is a result of the growth of national investors and the consolidation of this domestic capital network. Overall, based on this consolidated network, this model foresees a favorable access to capital.

Investment Attractiveness: South Africa was the pioneer regarding fintech creation, presenting the most mature market in SSA. Based on this fact, one can observe a steadier average growth rate of companies (13%), when compared to the previous hubs. As mentioned, currently the country accounts for the second largest market size within the SSA outline. Consistent with its maturity, South Africa demonstrates the most elevated percentage of funded companies in mid-late stages of development (22%), providing a grand total of 14 fintechs. This percentage is considered within the highest interval of this scoring range, as investors with a late-stage focus contemplate the largest universe of mature businesses across SSA. Moreover, companies with cross-border operations, such as JUMO or Adumo, account for 11% of the number of fintechs, taking the second place of the largest group of international companies. Overall, South Africa's main factors of investment attractiveness are its sufficient market size and corresponding market maturity.

Pillar Analysis: Capital

3. KENYA



Access to Capital: Despite having a smaller number of investors and funding rounds when compared to the remaining hubs (grand total of 74 investors and 74 funding rounds), this market has exhibited a strong annual growth rate of funding over the last 3 years (40%). As expected by the upward trend of funded companies, this model foresees that Kenya would continue to provide a favorable access to capital through a growing investment network. Overall, the presence of international investors constitutes 85% of totality, accounting for 16 different nationalities. Within our scoring range, this percentage was considered as a favorable factor to Kenya's access to financial resources, as fintechs companies can connect to a vaster pool of investors when compared to the universe of domestic capital communities.

Investment Attractiveness: Regarding Kenya's investment attractiveness, one could observe that this market differentiated itself by having the highest percentage of companies with cross-border operations (25%). Taking the case of Cellulant or DPO, these fintechs were able to support its pan-African growth through big international investments. As these number of success cases continues to expand within the Kenyan fintech scenario, we would expect that more interest from international investors would be driven to the market. Regarding market size, Kenya presents a smallest number of companies when compared to remaining hubs, with an average growth rate of 18%. Despite having a lower magnitude of companies — similarly to the number of funding rounds — this model still considers this market as having a sufficient size when compared to the SAA average. Finally, as a growing market, Kenya comprises 86% of funded companies in early stages of development, while only 14% in mid-late stages. For similar reason as for the Nigerian market (diversification standpoint), we have scored this percentage within the lower side of the range.

OVERALL ASSESSMENT

Dimensions		Indicators	Nigeria	South Africa	Kenya
Access	Number of Funding Rounds since 2011		5	5	4
	Average growth rate of funded companies over the last 5 years		5	3	4
	Percentage of International Investors		5	4	4
	Score		5.0	4.0	4.0
Attractiveness	Number of FinTech companies		5	5	4
	Historical average growth rate of the number of FinTech companies (last 5 years)		5	2	3
	Number of companies that achieved cross-boarder operations		3	4	5
	Percentage of companies in late stages of funding (maturity)		3	5	4
	Score		4.0	4.0	4.0
Total Score			4.5	4.0	4.0

Table 10: Capital scores per country

METHODOLOGY FOR INDICATORS

Source Indicators were based on the **historical information** retrieved from our **constituted data base**, focusing on fintech's general activities, funding rounds and corresponding date, and investors and corresponding nationalities.

Score Each indicators was scored through a scale of 1 to 5 based on the lowest and highest observed values. The overall score for each dimension was calculated by an equal average of all indicators. Consequently, as this model values both dimension equally, the pillar's overall score was also considered as the equal average of the dimensions.

Pillar Analysis: Feeling of Community

The FinTech ecosystem onboards a group of key players whose interactions with each other will influence the overall strength of the system. **These players include startups, regulators, incumbents, accelerators/incubators, consumers, academia, and investors.** As part of the same community, the way these stakeholders connect to each other must be attended as a pillar of the local fintech ecosystem, which is defined as **“Feeling of community”**.

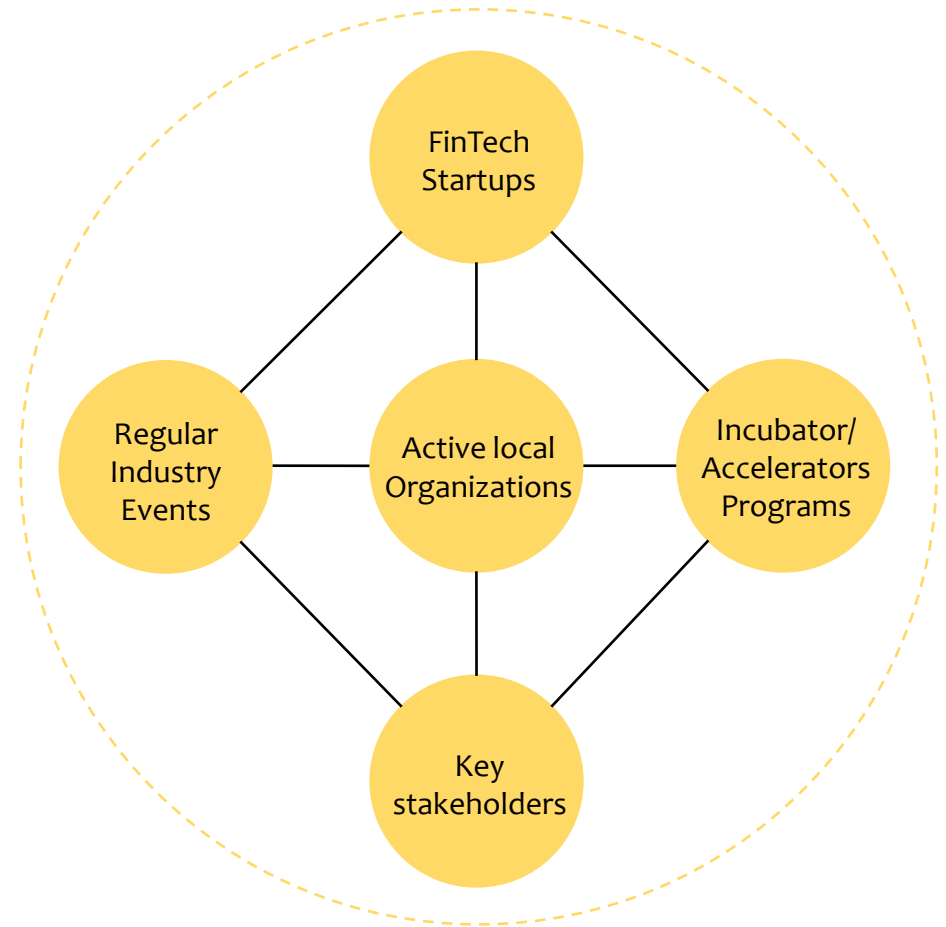
Overall, this pillar is assessed by observing how the local fintech associations in each hub promote the fintech phenomena and the entrepreneurs’ relationships with the remaining players. These organizations typically bring members together by **organizing events, challenges, networking sessions on a regular basis, enabling the community to grow their relations.** Such events may go from pitch sessions for investors, regulatory discussions, challenges for incubators, etc.

Moreover, it is also to consider that local associations make the bridge with larger, **global associations, whose mission is to expand this feeling of community across and beyond Africa**, thus transforming the local ecosystems into an African consolidated one. That is the case of the **African FinTech Network**, which was created in Lagos (Nigeria) in 2018, with the purpose of turning the African fintech space more robust, while encouraging countries to coordinate activities and partner with each other. Its ultimate goal is to “Connect Africa and the global community for open dialogue, to build synergies and creation of various opportunities in fintech” ¹. AFN currently counts with 32 member countries, including all the three hubs being analyzed.

All above considered, this pillar should be scored according to the strength of each of three dimensions:

- a) **Local associations**
- b) **Industry events**
- c) **Incubators/Accelerators.**

Strong community



Due to its nature, these dimensions must be classified in a qualitative way, relatively to both the scope and impact of each of these factors.

Pillar Analysis: Feeling of Community

1. NIGERIA



Local Associations: Besides being a founding member of the African FinTech Network, Nigeria is a pioneer in creating a local fintech association, which currently counts with 247 members. The FinTech Association of Nigeria (2017) maintains a stable partnership with the Central Bank of Nigeria (CBN) and it has been responsible for much of the development in the Nigerian regulatory system towards a fintech-friendly environment. Additionally, it has been carrying out several initiatives for students, introducing new technologies and thus preparing them for the future of the fintech phenomena. The association has been distinguished as the number 1 success story in Africa by the African FinTech Network.

Industry Events: The most established event in Nigeria is the Nigeria FinTech Week, which held its 5th edition this year (2021), hosting close to 1 million people from 80 different countries, allowing startups to pitch their businesses to most of the stakeholders in the industry. This is one of the biggest fintech events in Africa, contributing for the growth of the space and positively impacting the ecosystem by bringing to the table the elements for successful collaboration between stakeholders. Of the same nature, the Lagos FinTech Week has also been impactful for the ecosystem, as well as The FinTech and Blockchain Summit.

Incubators/Accelerators: Nigeria has a very strong network of incubators and accelerators that have been driving growth in the fintech community. Among these, one should highlight the Co-Creation Hub, founded in 2010, which provides tech entrepreneurs with the ingredients to grow their businesses in a sustainable way, through their pre-incubation and incubation programs. Other big names in this space include the 440.ng, Leadpath Nigeria and Starpreneurs.

2. SOUTH AFRICA



Local Associations: Although being a member country of the African FinTech Network, there is no evidence of an active South African local association as in the previous hubs. A website for this association was not found, which is generally one of the main gateways for fintech startups to get in touch with the rest of the community and find upcoming events that may be of their interest. One should also mention the Africa Women In FinTech & Payment, which empowers women to integrate the fintech and payments world, though this is an association of a more restrict nature. For this reason, SA should not be considered as much of a success case when it comes to strong associations which support the relationships of the fintech startups with the rest of the community.

Industry Events: One of the main industry events is the South African Innovation Summit, which counted with the participation of 600 companies, 1340 entrepreneurs and 150 investors in the last edition of 2021. Moreover, the country held editions of the Egypt-based Seamless Africa and the Finnovation South Africa in 2019.

Incubators/Accelerators: The main incubators in the South African FinTech Ecosystem include Cape Innovation & Technology Initiative, Alpha Code, and Rand Merchant Investment Holdings, which usually helps startups in seed stage by providing them with services that may go from office spaces to mentorship, in exchange for a relevant portion of the companies' equity. Plus, the South African fintech startups can count with several accelerator programs, as is the case of The Founders Institute, Grindstone, SW7, etc. Most of these programs are designed for startups in a later stage than what incubators usually do. Overall, South Africa counts with a sound network of incubators and accelerators.

Pillar Analysis: Feeling of Community

3. KENYA



Local Associations: It is less clear than in the case of Nigeria that FinTech Association of Kenya has been driving growth and success for the fintech space, as it seems to behave not so actively to support startups in their main difficulties. As of 2021, a new association - Association of FinTechs in Kenya - was created, aiming at the same purpose as the latter, possibly indicating there was still a need for a stronger presence of a stable and impactful association. Nonetheless, although this space is more fragmented, Kenyan alternative lenders have the support of The Digital Lenders Association of Kenya, founded in 2019 by 11 members which has been growing for the past few years.

Industry Events: The capital of Kenya, Nairobi, has served the stage for Seamless East Africa events for the past few editions, where the future of payments, banking and fintech as a whole has been brought to discussion by regulators, major banks, and fintech startups. This event is one of Africa's most important fintech events. Besides, Kenyan startups count with the Kenyan Innovation Week and the African Tech Summit Nairobi, which hold several conferences and webinars, as well as smaller, more local pre-events of the same nature. Overall, the Kenyan fintech ecosystem is boosted by these events, which is reflected in its success as an African hub.

Incubators/Accelerators: Much of the growth in the Kenyan FinTech ecosystem has also been supported by several incubator and accelerator programs which allowed entrepreneurs to overcome the environment's challenges. The top incubators in Kenya are the Catalyst Fund, SC Ventures, Mastercard Financial Inclusion Lab and the Nairobi-based NaiLab, among an extensive list of more than 20 available programs. So, it is no wonder that the Kenyan fintech space has been growing at such a fast pace.

OVERALL ASSESSMENT

Dimension	Indicator	Nigeria	South Africa	Kenya
Local Associations	Scope	5	2	4
	Impact	5	2	3
	Score	5.0	2.0	3.5
Industry Events	Scope	4	3	5
	Impact	5	4	4
	Score	4.5	3.5	4.5
Incubators/Accelerators	Scope	4	4	5
	Impact	4	5	5
	Score	4.0	4.5	5
Total Score		4.5	3.3	4.3

Table 11: Feeling of community scores per country

METHODOLOGY FOR INDICATORS

Source Most of the information used to score each dimension according to its scope and impact was taken from the local associations' and incubators' websites, as well as from The Global FinTech Index 2020, from Findexable.

Score The scoring of each dimension depended on two indicators: scope and impact. The first indicator was classified according to the number of associations, events, or incubators, balanced with the number of members or participants it may have today or in the past. Secondly, impact was measured according to the achievements of each dimension, be it in terms of growth, successful programs or events (number of guests).

FinTech in Mozambique: General Overview

Among the Portuguese-speaking African countries, Mozambique has been a pioneer of innovation in driving financial inclusion, although it still lags behind most SSA countries. However, there have been several developments in most recent years, creating opportunities for fintech solutions to cover the inefficiencies of the traditional financial sector – 46% of the Mozambican population is financially excluded¹. Overall, **FinTech in Mozambique is still considered as a relatively recent concept, which still presents a series of barriers to development.**

Following our analysis of the three largest SSA FinTech hubs, this section of the report will focus on the **Mozambican FinTech ecosystem**. Particularly, a similar framework will be applied – focusing on the pillars of regulation, demand, talent, capital and feeling of community. By leveraging on the best practices of top SSA FinTech hubs and assessing the current state of Mozambique’s FinTech ecosystem, this section aims to provide actionable recommendations on how to support FinTech development in the country. The following conclusions should be relevant for Mozambican regulators, financial institutions, entrepreneurs, associations and potential investors looking to engage with Mozambique’s FinTech market.

To conduct this analysis, we had the opportunity to engage with several member companies of the FinTech Association of Mozambique (FinTech.MZ) – a local association responsible for providing support to fintech startups² -, as well as with the responsible professors of the Computing and IT courses at “Universidade de Engenharia de Moçambique” (UEM). From the meetings and interviews conducted, we were able to collect relevant data that enabled us to understand the main opportunities and challenges for the success of fintech in Mozambique. The interactions with these parties will be discussed throughout this section. Additionally, a survey was conducted among FinTech companies to assess the key challenges for the development of their business. The results will be presented in the next section.

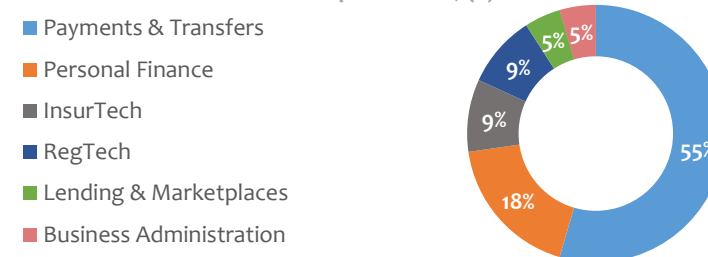
MOZAMBIQUE



Mozambique’s FinTech ecosystem comprises 22 active fintechs, based on the current members of FinTech.Mz. A detailed description of each active fintech can be found in the Appendix 13.

The FinTech sector is largely dominated by Payments & Transfers solutions, reflecting the earlier stages of market development. However, new FinTech categories are starting to arise. Given the low levels of financial inclusion and access to traditional financial services, particularly among rural population, Personal Finance solutions like SOMA and ROSCAS have been gaining popularity. Generally, these solutions try to leverage digital tools to expand the more traditional practice of saving groups. Other emerging fintechs include Tabech, which provides mobile-based funerary insurances, Pertence, a crowdfunding platform or Papersoft, an eKYC platform. A general profile of Mozambican FinTech companies will be provided in the next section.

Figure 12: Mozambican fintechs distribution per vertical, (%)



Source: Own analysis

¹ Information retrieved from FinScope Mozambique 2019; ² The scope of FinTech.MZ will be explained in more detail in the next section of the report; ³ While this list may not include all existent FinTechs in Mozambique, it reflects the best efforts of FinTech.Mz in mapping the local FinTech activity.

FinTech in Mozambique: Profile of Surveyed Companies

SURVEY'S METHODOLOGY

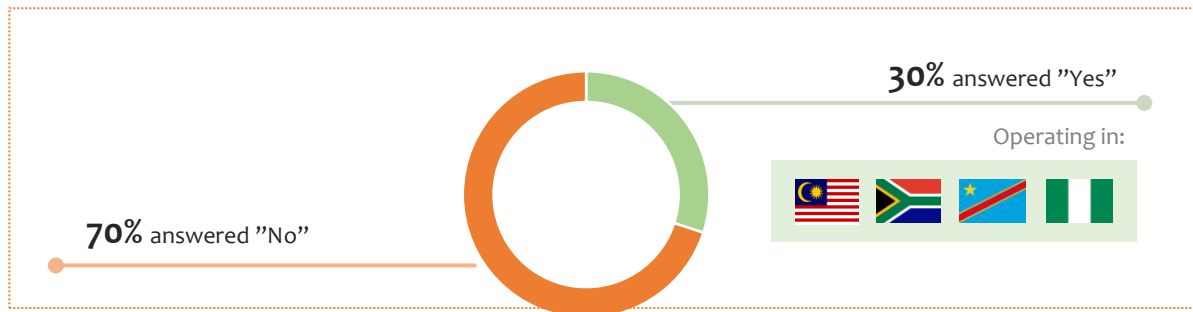
This survey was conducted from **October to November 2021**. Sent to a total of **25 FinTech companies** (total number of members of the FinTech.MZ association), a number of **9 responses were obtained**. Questions regarding **companies' general activities and operations** were considered, as well as the **respondent's opinion regarding the five pillar considered in the previous Ecosystem Framework**.

In the following section a general description of the surveyed companies will be presented:

HEADQUARTERS' LOCATION & CROSS-BORDER OPERATIONS

Amongst surveyed fintechs, **100% of companies are based in Mozambique's capital, Maputo**. Furthermore, 30% of companies were able to scale its operations internationally, namely to South Africa, Nigeria, Malaysia and Democratic Republic of Congo, while 70% maintained strictly national business activities — as presented in Figure 13.

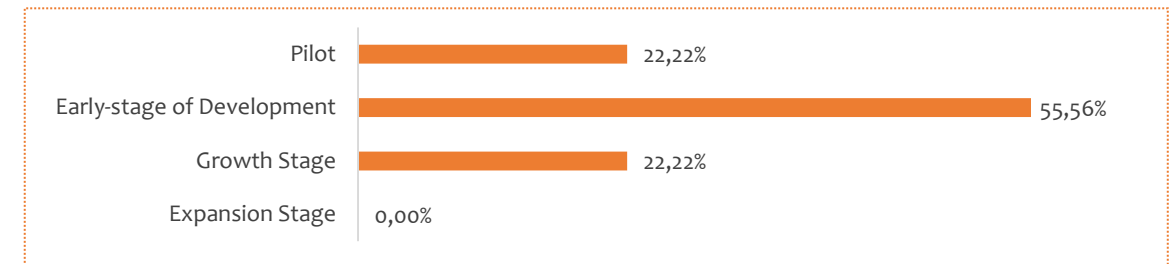
Figure 13: Does your company operate outside Mozambique?



STAGE OF DEVELOPMENT

22.2% of respondents claim to be in the “Pilot/Product Development” Stage, while **55.5% are in an “Early-Stage”** and **22.2% in a “Growing Business Stage”**. From the criteria considered in scoring model, 100% of respondents would fall under the categorization of “seed” or “early-stage”, and 0% under “mid-late stages”.

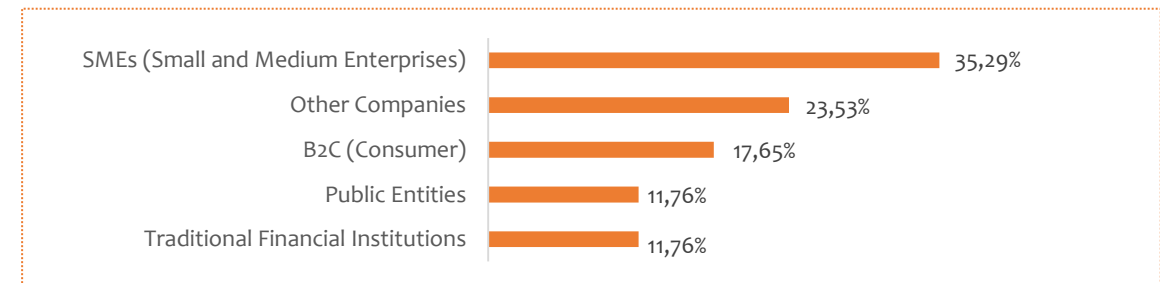
Figure 14: Does your company operate outside Mozambique?



CONSUMERS

As observed in Figure 15, **35.3% of fintechs provide services to SME's** and **23.5% to other companies**. **FinTechs that are exclusively B2C account for 17.65% of total companies**, while Public Entities and TFI each capture 11.76% of surveyed demand.

Figure 15: Who are your company's main consumers?



General Profile of Mozambique's FinTech Companies

REVENUES & PROFIT

All in all, from a revenue/profit analysis, data exhibited that **33% of companies do not generate revenue, with the majority (55%) generating less than \$US500K per year** (Figure 16). Moreover, **only 22% of companies with revenues can generate any profit** (Figure 17).

Figure 16: What is your volume of annual revenues? (USD)

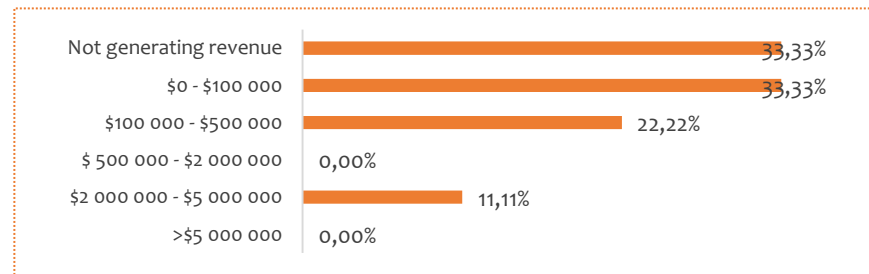
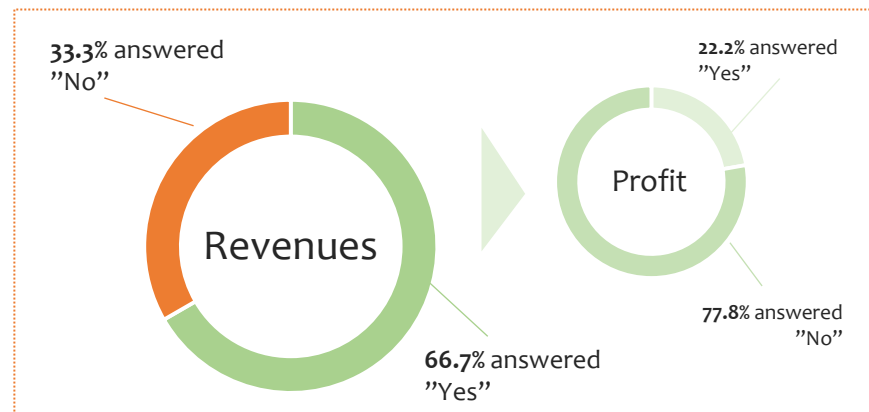


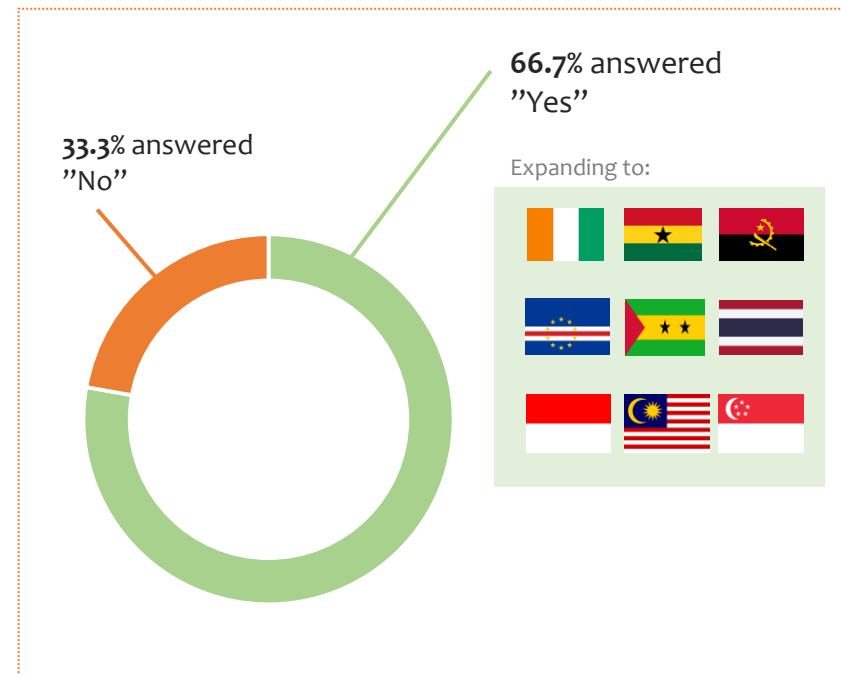
Figure 17: From the chosen level of revenue, has your company been able to generate profit?



INTERNATIONAL EXPANSION

Survey results demonstrated that **78% of total fintechs plan to expand** (or further expand) internationally over the near future. The main expansionary targets remain within the PALOP (Portuguese Speaking African Countries), such as Angola or Cabo Verde. Plans to operate in South East Asia were also identified.

Figure 18: Do you have plans of international expansions in the future? If yes, to where?



MZ's FINTECHS GENERAL PROFILE

When looking at the overall results, one could observe that an **average profile of a Mozambican FinTech company** could be characterized by the following factors:

Location

Maputo, Mozambique

Cross Border Operations

Only national operations

Number of Employees

8.2 (average)

Revenues and Profits

Average revenue of 265K USD.
No profit.

International Expansion

Yes, with plans to expand to a PALOP nation

FinTech in Mozambique: Regulation

89%

of surveyed fintechs classify **inadequate regulation** as having a **very negative impact** on the development of their business.

Robustness: Mozambique's fintech regulatory ecosystem is still in its infancy. Like most countries in SSA, it lacks specific fintech regulations, while existing regulation is tailored towards conventional financial services. As a result, there are several regulatory gaps, and key areas, such as Insurtech, still have no adequate legal instruments regulating them. Accordingly, 78% of respondents identified "Incomplete / lack of clear regulation" as one of their top three regulatory barriers (Figure 19). However, progresses are being made on this dimension. A Decree on Payment Service Providers has been approved by the Council of Ministers, enabling fintech companies in the payments space to be licensed and operate autonomously, in an integrated and interoperable way. Though frameworks are still limited to payments solutions, more regulation is expected to be developed. Moreover, Mozambique's regulatory ecosystem appears to be relatively stable, with none of the respondents identifying sudden changes of regulation as one of their main regulatory barriers.

Fragmentation: Fragmentation of the regulatory framework was not considered to be a key barrier for fintechs operating in Mozambique, with only 11% respondents placing it within their three biggest regulatory hurdles. The FinTech regulatory landscape is mainly regulated by three entities: the Bank of Mozambique (BM), the Insurance Institute of Mozambique and the National Communications Institute of Mozambique.

Compliance requirements (1/2): License requirements constitute a key barrier for fintechs operating in Mozambique, with 56% of the respondents placing the costs of attaining a license as a one of their top three regulatory barriers, followed by the time needed to attain it (44%). In fact, there is still no fintech company with a permanent license operating in Mozambique. Only 11% of the respondents operate under a temporary license, with added restrictions, while 44% did not apply or are still waiting for approval (Figure 20).

SURVEY RESULTS

Figure 19: What are the top three regulatory barriers that negatively impact your business the most?

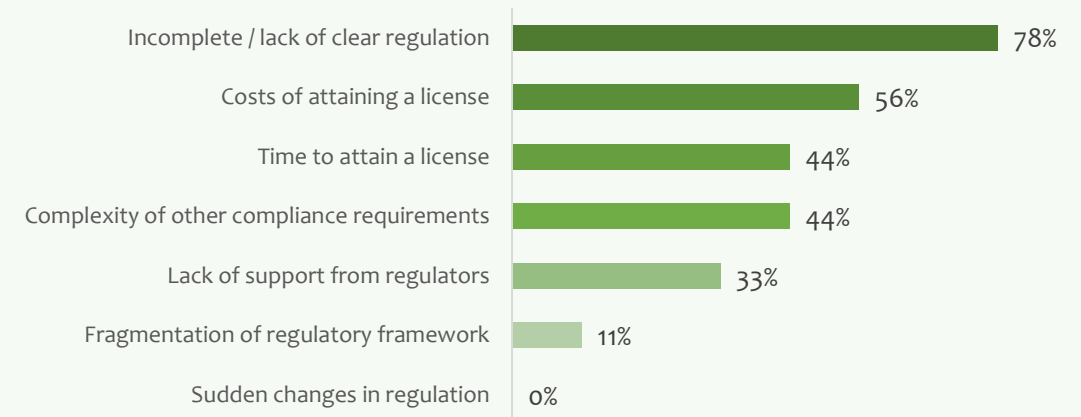


Figure 20: In which stage of the licensing process are you?

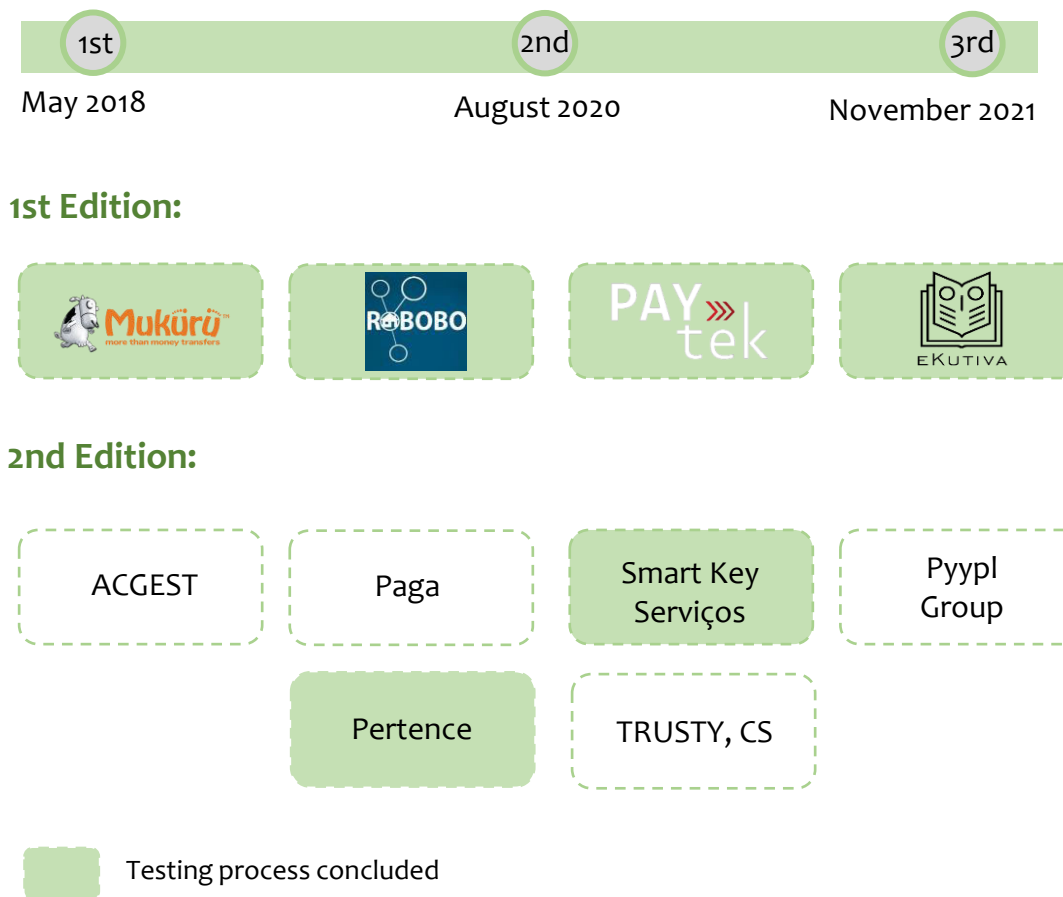


FinTech in Mozambique: Regulation

Compliance requirements (2/2): The complexity of other compliance requirements (including KYC/AML rules, data protection or cybersecurity) has also a negative impact on the development of fintechs in the country, with 44% of respondents identifying it as one of their top 3 regulatory barriers. More specifically, data protection requirements are a pain point for many companies. There is still no legal instrument that enables transactions to be carried out from Mozambique to other countries¹, effectively limiting their use for international transfers. Similarly, no data from Mozambican citizens can be stored outside of the country, which restricts the possibilities for cross-border expansion. Infrastructure requirements have also raised concerns among fintechs, as companies are required to build their own infrastructure to attain a license, which is not always feasible for smaller startups. Despite limited rules on KYC/AML, Mozambique's National Strategy for Financial Inclusion has set the definition of a tiered KYC regime as a top priority.

Innovation support: Though Mozambique's fintech ecosystem is still nascent, the country has been one of the first movers in the promotion of innovation facilitators. In May 2018, the BM launched its first Regulatory Sandbox, in partnership with the Financial Sector Deepening Mozambique (FSDMoç). For the first cohort, five companies were selected, out of more than 20 candidates, and four completed the testing process: Mukuru, a fund remittance company and account aggregators Robobo, Paytek and Ekutiva. A second edition of the Regulatory Sandbox is already in place, including the presence of a new cohort of 6 fintechs, ranging from payments (Paga or Pyypl Group) to crowdfunding (Pertence) and RegTech solutions (ACGEST). A third edition has since started in November 2021. On top of this, BM has also promoted an innovation hub² that brings together fintechs, regulators, providers and other specialists to discuss possible regulatory frameworks. Despite these initiatives, 33% of respondents have pointed to the lack of support from regulators as one of their top regulatory barriers.

CLOSER LOOK INTO THE SANDBOX COHORTS



¹Based on interviews to fintechs included in FinTechs Report.mz, FSDMoç (2020)

² While this has been referred to as an Innovation Hub, it fits better into the Regulatory Accelerator criteria presented in the previous framework

FinTech in Mozambique: Demand

57%

of surveyed fintechs classify **low demand for FinTech services** as having a **somewhat negative impact** on the development of their business.

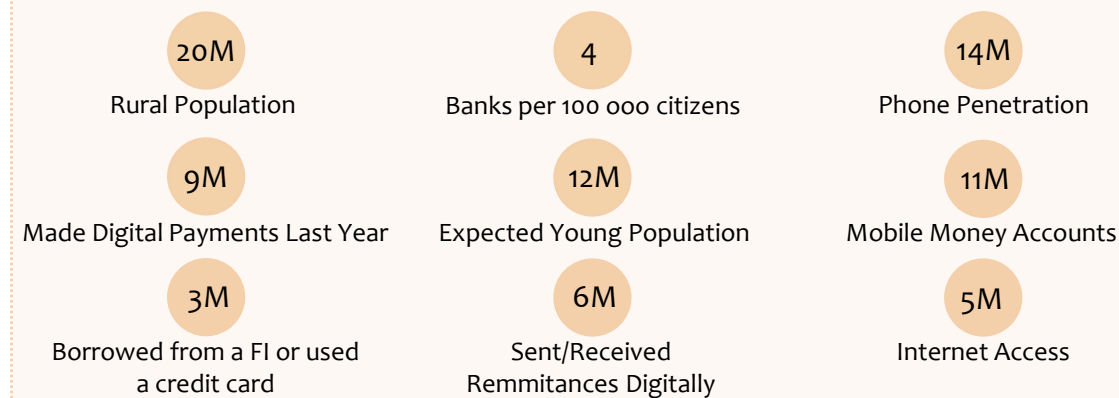
Potential Demand²: From this perspective, Mozambique has a lower score than the other three hubs, as one would expect. Relatively to the hubs, excluding the reduced number of bank branches per 100 000 citizens, Mozambique exhibits weaker fundamentals supporting a potential demand for FinTech services - namely a lower number of rural population, expected young population, phone penetration and level of internet access.

Existent Demand²: From this perspective, Mozambique only achieves a higher score compared only to one hub, namely Nigeria. Thus, implying that the first has more mature demand relative to the second. This conclusion is motivated by the fact that the Mozambican demand for both digital wallet and lending services outpaces the one of Nigeria.

Demand from Surveyed FinTechs Perspective: The three main challenges which are currently affecting the demand for fintech services are the lack of trust on fintech provided solutions (56%), limited financial literacy (44%) and limited digital literacy (33%) (Figure 21).

Trusting FinTech solutions and a minimum level of financial literacy are, to some extent, necessary conditions to adopt FinTech services. However, the supply of these services can be more easily adapted to the lack of digital literacy. FinTech services which do not require internet access are an example of such adoption. Nevertheless, this can strongly limit innovation and usability of FinTech services. Hence, digital literacy should remain a priority to promote the demand for such services.

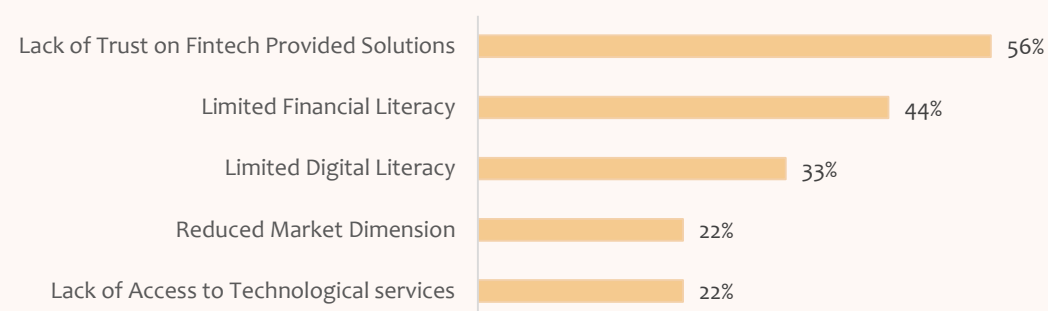
MOZAMBIQUE INDICATOR'S PERFORMANCE¹



Source: World Bank (2017); Digital Portal Mozambique; Bank of Mozambique

SURVEY RESULTS

Figure 21: Challenges affecting the demand for FinTech services



¹Some of these indicators are the most recent available, namely Internet Access, Mobile Money Accounts and Phone Penetration. The remaining are from the World Bank 2017 database

²The indicators for the application of these methodology to Mozambique's case can be found in Appendix 2.

FinTech in Mozambique: Demand

As mentioned, the three main challenges faced by the demand for FinTech services in Mozambique are the lack of trust on fintech solutions, reduced financial literacy and reduced digital literacy. Several initiatives have been taken to tackle these challenges. Below, some examples of those initiatives are described.

LACK OF TRUST IN FINTECH SOLUTIONS



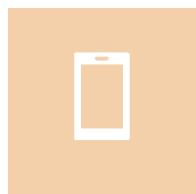
The lack of trust in fintech solutions is partially driven by a reduced financial and digital literacy. In fact, citizens with a lower financial and digital knowledge are prone to fall victim to frauds, thus frequently avoiding fintech solutions despite their potential benefit. Relative to traditional financial institutions, by nature, fintechs lack the institutional weight or brand recognition. To promote trust despite the lack of financial or digital literacy, several mechanisms have been used. For instance, actively presenting existent partnerships with traditional financial institutions. Moreover, marketing campaigns sharing the stories of those benefited by fintech solutions can also enhance the acceptance of these services.

FINANCIAL LITERACY



Mozambique Leaf Tobacco's (MLT) case is an example on how private initiative can contribute to higher levels of financial literacy, thus contributing to a stronger demand for FinTech services. Its tobacco growing fields are set in rural and isolated areas, employing a large number of people who do not have access to banking facilities, making them eligible to FinTech services. However, the employees' lack of financial literacy prevents them from realizing its potential demand. In 2014, the company introduced a program of financial literacy. This course reached 75 000 people and led to the deposit of 13 000 dollars in accounts that remain active (Universal Leaf Mozambique 2015). Moreover, MLT is looking at extending its financial literacy courses to include E-wallet services, thus further reinforcing the FinTech demand.

DIGITAL LITERACY



Tablet Comunitário is a member of the FinTech MZ association whose mission is to “promote digital inclusion to all rural communities” of Mozambique. Since its inception in 2015, it is estimated to have helped educating more than 1 million Mozambican citizens. It does so through a vehicle equipped with several solar powered large LCD screens, which share important messages with the communities, based on a gamification approach. Ultimately, this vehicle exposes isolated communities to a digital interaction, thus contributing to higher levels of digital literacy while instructing themes such as health and even financial literacy.

FinTech in Mozambique: Talent

67%

of surveyed fintechs classify **lack of talent** as having a **somewhat negative impact** on the development of their business.

Generally, Mozambican fintechs have difficulties accessing talent. In fact, only 13% of surveyed fintechs claim not experiencing talent shortages.

Quantity: The fact that Mozambican talent opts for more established companies is pointed as the biggest challenge faced by fintechs when it comes to attracting human capital (as identified by 47% of respondents). This can be attributed to the fact that potential employees perceive more established companies as being capable of providing larger job security.

Potentially, the lack of access to Mozambican talent could be compensated by attracting foreign talent. However, that is not the case. As pointed by the surveyed companies, Mozambique is not attractive to foreign talent. Besides cultural and linguistic barriers, the reasons preventing foreign talent to come to Mozambique consist mainly of poor health care, infrastructure limitations (Maputo Reallocation Solutions 2020).

Quality: Following informal interviews, it was stated by most Mozambican fintechs that the country's educational system does not fully provide its students the necessary skills. However, only 13% of surveyed fintechs have identified this as a barrier to access talent. Compared to the limitations of attracting foreign talent, improving the quality of educational programs is easier to achieve. To understand the current status of these programs, an interview with two academic members of **Eduardo Mondlane University (UEM)**, Mozambique's highest ranked university for computer science in the Scimago Institutions Ranking 2021, will be presented.

SURVEY RESULTS

Figure 22: What are the main barriers to access talent?



MOZAMBICAN UNIVERSITIES WITH TECHNOLOGIC-RELATED COURSES



Universidade Eduardo Mondlane



ISCTEM



Universidade Católica de Moçambique



Universidade Zambeze



Universidade Lúrioc



Instituto Superior Politécnico de Tete

FinTech in Mozambique: Talent

Lúcia Ginger is a professor and director the UEM's engineering school of and **Carlos Cumbana** is the school's director of the computer science program. Below, the most prominent topics discussed regarding the role of Mozambican universities in providing talent for the FinTech ecosystem are presented.

Main Takeaways		Description
UEM graduates are mostly employed in established sectors	➔	Despite not keeping a record of the student's labour placement, Carlos pointed that most students usually start working in established sectors such as banking, utilities, large industries (such as the oil industry).
The university is taking efforts to update the curriculum to meet market needs	➔	"The courses are designed with the needs of the labor market in mind. The university makes occasional revisions in order to fit in the courses the technologies that are being developed". The university recognizes that currently they are not a newly designed course. Still, the faculty has been careful, as far possible, to bring students up to date.
The computer science program tries to expose students to FinTech through practical projects, but there is still no courses on FinTech	➔	"The university has encouraged students to include mechanisms for implementing financial inclusion in their projects. E.g.: When students develop some application for payment services, they are encouraged to work with mechanisms that can be within the reach of a larger part of the population Currently there is a lack of content directly targeting FinTech."
There are still no formal mechanisms to connect students with the labour market, however Steps have been taken in this direction	➔	There are ongoing processes for formal internships, but official regulations by the university are still in production. Students are free to request a credential from the university to present to the employers and these have contacted the university to request students for internships. However, there is no formal mechanism for bringing students and employers together, only initiatives like careers fairs, end up being the exception to this lack of formal mechanisms."

FinTech in Mozambique: Capital

56%

of surveyed fintechs classified **lack of access to capital** as having a **very negative impact** on the development of their business.

Access to Capital: When looking at this dimension within the Mozambican FinTech scenario, a different view must be applied relative to the aforementioned Capital model. Given that 100% of Mozambican fintechs are within very early development stages, the access to traditional investors (Venture Capitalists or Private Equity Funds) is conditioned — the “*truth is risk appetite for early-stage funding remain a challenge for Mozambican fintechs*” (Matteo Rizzi’s² interview to the FSDMo in 2020). Based on this fact, Mozambican fintechs should consider other funding alternatives, such as private or public grants. **Despite 23% of surveyed companies being funded through this type of capital, 69% still rely on own funds or family and friends to support their organizations.** This large percentage of personal capital is highly driven by the “**lack of a developed investment network**” and the corresponding “**struggle when finding investors with an aligned vision**”, as 36% of respondents pointed to these two factors as the main barriers to access capital. Other factors, such as the lack of knowledge regarding funding alternatives also seem to further hamper these fintechs’ funding. Overall, this low level of investment is not due to a lack of “eagerness” for funding, as 89% of respondents stated having plans to raise external funding in the next two years. In conclusion, Mozambican fintechs present high needs of external funding, however there are large barriers when it comes to finding and realising suitable funding options — such as private grants.

Investment Attractiveness: In addition to these low attraction for early-stage, there is still needs for developing the skills that increase the quality and the preparation of the entrepreneurs³, illustrated by 9% of respondents pointing to the lack of organized financial statements when trying to raise funds.

SURVEY RESULTS

Figure 23: What are the three main barriers when considering your access to capital?

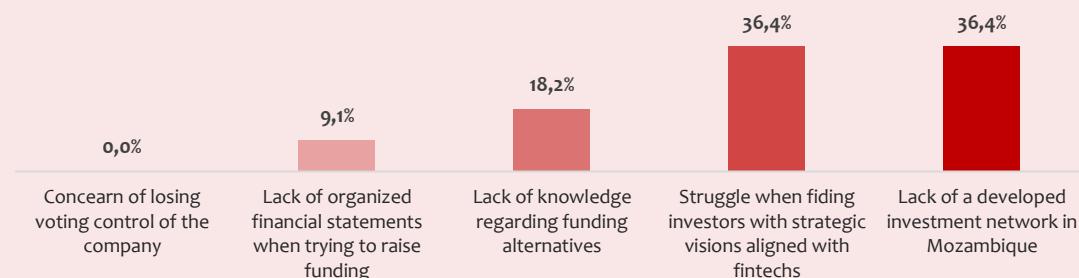


Figure 24: What is your company’s main source of funding?

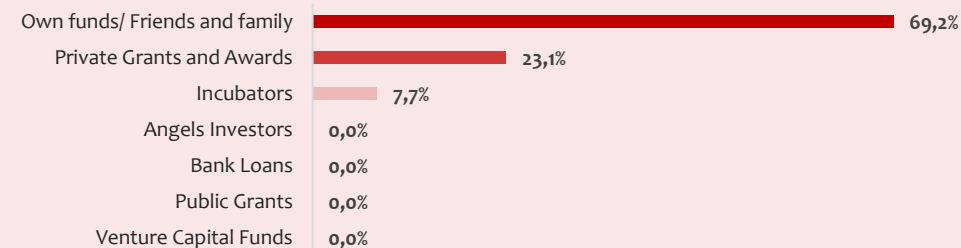


Figure 25: Does your company plan to raise external funding in the next two years?



^{1,3 and 4} Citation directly retrieved from FinTechs Report.MZ, FSDMo, 2020

² Matteo Rizzi is the co-founder of Innor Tribe and is considered one of the “40 most influential fintech executives in Europe” by Financial News.

FinTech in Mozambique: Feeling of Community

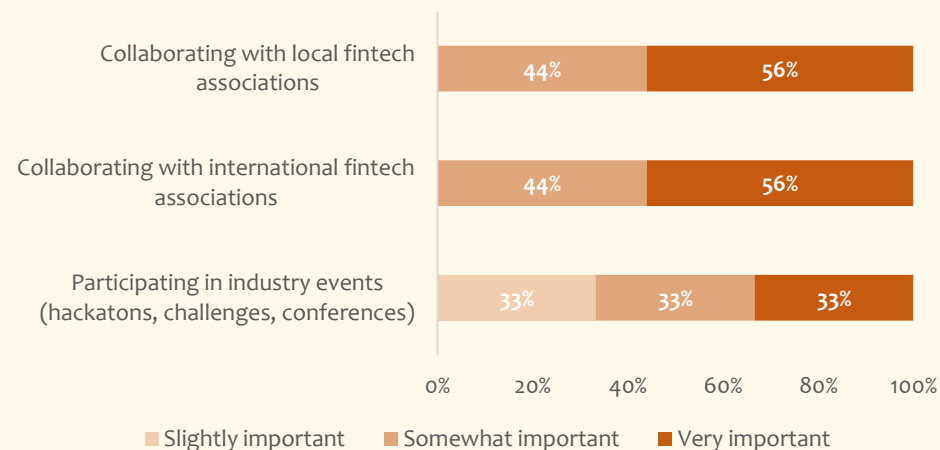
68% of surveyed fintechs classified a **weak relationship with the ecosystem** as having **some negative impact** on the development of their business.

Local Associations: The **FinTech Association of Mozambique (FINTECH.MZ)** was recently launched in 2019 and it has been a major milestone for the country's fintech ecosystem so far. Having started with 12 founding members, the association currently counts with around 20 member companies and collaborates with FSDMoç and Digital Frontiers Institute (DFI) in the development of their upcoming initiatives. Plus, Mozambique is already a member country of the African FinTech Network, which is one of the biggest achievements of its local association since launch. Nonetheless, it is somewhat inactive on the continent level, meaning that it does not participate in the major international industry events and discussions – something that its member companies pointed out as highly valuable for the success of their business (Figure 26). Having financial inclusion in Mozambique as an ultimate goal, the association intends to bring the community players together (from national to global ones) for the development of their local businesses. The first step would be to dynamically support the fintech sector in approaching the regulatory challenges - still the biggest drawback in the Mozambican environment.

Industry Events: The **FinTech Week** has served as a launching gateway for the FinTech Association of Mozambique, bringing the member companies together with national and international key players of the fintech environment. In its last edition, it counted with the participation of CPLP countries, which turned it into a success. This initiative is to occur every year which would be essential to keep this dynamism for the next few years. On the other hand, small initiatives as Hackatons, MozTech, and business challenges have an extremely important role in promoting the fintech phenomenon in the long-term, although they count with the participation of a small number of companies at each time. In fact, fintechs do not classify these events as having such an impact in their business, as they have a more short-run oriented vision (Figure 26).

SURVEY RESULTS

Figure 26: How do you evaluate the importance of the following initiatives for the success of your business?



Survey results indicate that fintech companies highly value the interaction with local and international associations – 56% of surveyed fintechs classify it as having high importance to both these factors. Indeed, most of these fintech companies have been collaborating with FinTech.MZ to develop and scale-up their businesses. Ultimately, Mozambique's fintech environment in itself presents lots of barriers for product implementation, so it is critical that fintechs leverage on the community to learn their best practices. As mentioned, the main issue is still the lack of engagement with the international players, which should be a responsibility of FinTech.MZ, rather than from the companies themselves. Actually, FinTech.MZ should become more active in the long-term.

FinTech in Mozambique: Feeling of Community

Incubators/Accelerators: There are 4 main incubator programs in Mozambique:

Supported by the Bank of Mozambique and FSDMoç, the **Regulatory Sandbox** allows Mozambican startups to work together as part of an innovative hub, where they are invited to share their best ideas and practices. This program allows fintechs to adjust their products within the regulatory framework. However, the impact of this incubator over the success of the fintech companies is very hard to measure as it depends on acquiring a license at the end of the program. The conducted survey indicates that 3 out of 9 companies already participated in the program but none has acquired a permanent license since then.

Founded in 2010, **IdeiaLab** focuses on accelerating the growth of SMEs by encouraging innovation. The company's main role is to educate young entrepreneurs the skills to bring innovation into the market, while fostering financial inclusion in Mozambique.

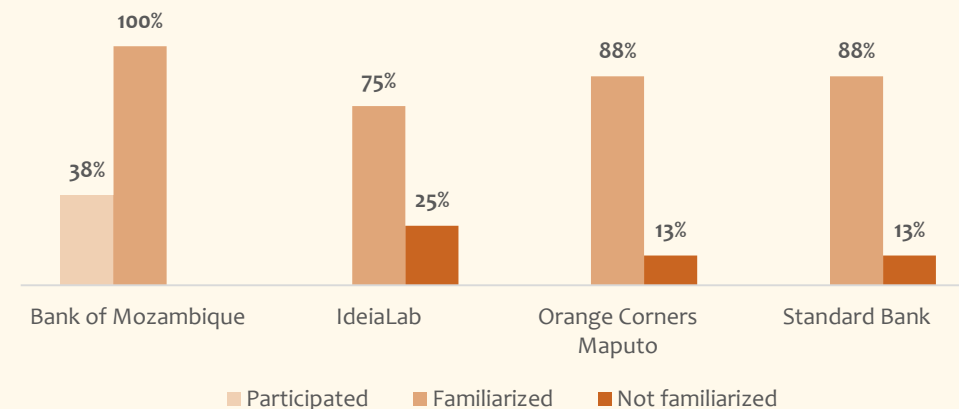
Orange Corners has several initiatives in different countries. Launched in 2017 by IdeiaLab in Mozambique, it aims at helping graduates to develop their businesses from an early stage. Until 2020, 66 graduates participated in the program, which involves business training and resources provision. The company is confident that 76% of those businesses is still in place, which are encouraging results for the program.¹

Standard Bank incubator emerged in 2017 and it has carried out several successful programs since then – the most successful one in collaboration with IdeiaLab. The bank intends to help entrepreneurs in building their capacities, as well as to understand where the real market opportunities lie. Plus, while recognizing that it may be hard for small businesses to comply with the requirements of a bank loan, the bank tries to provide alternative funding sources to allow for a higher flexibility.

All in all, although most companies are familiarized with the available programs, none has ever participated in one besides the regulatory sandbox, which could serve as a preparation for the latter, as most have difficulties in getting in the program (Figure 27)

SURVEY RESULTS

Figure 27: Are you familiarized with the existence and/or have participated in any of the following incubation programs?



SPOTLIGHT ON FSDMoç

FSD (Financial Sector Deepening) is an international association which has been driving economic prosperity across Africa. As part of it, FSDMoç promotes the development of the Mozambican financial sector, ultimately aiming at giving excluded people access to basic financial services. Of course, it has been contributing very positively for the progress and growth of the fintech space so far, by participating in the most relevant discussions on the topic and supporting FinTech.MZ in achieving its main goals. Actually, most of the achievements made by now (the regulatory sandbox as an example) have been carried out together with FSDMoç.

¹ Information was retrieved from FinTechs.MZ Report, by FSDMoç, 2020.

FinTech in Mozambique: Ecosystem Strengths and Challenges

OVERVIEW

While Mozambique's FinTech Ecosystem is taking its first steps, several factors – such as the promotion of innovation facilitators and strong presence of local associations - highlight the potential for the development of FinTech in the country. Still, key challenges still remain. An underdeveloped regulatory framework, the low levels of trust and financial/digital literacy and the limited access to talent and funding opportunities still hinder the growth of Mozambique's FinTech ecosystem.

The next section will provide actionable recommendations to tackle some of these challenges. These recommendations are targeted at different actors of the ecosystem, including fintechs, FinTech.Mz, FSDMoç, regulators, universities and the private sector. Although different levels of feasibility were identified, these recommendations should be effective in partially mitigating some of the current challenges.

ECOSYSTEM STRENGTHS ▲

1. **Regulatory sandboxes** and accelerators have been used to promote the introduction of FinTech solutions in the market;
2. **The introduction of a specific law for fintechs in the Payments space** has provided fintech companies with more regulatory coverage and possibility to operate in the market with less restrictions;
3. **The existent penetration of some FinTech services**, namely mobile money, creates a considerable market for FinTech adoption.
4. **Current initiatives to include the FinTech topics** in university's curriculums.
5. **The creation of FinTech.MZ** has been driving substantial results for the community on a country level – specifically, through the FinTech Week and collaborations with FSDMoç, fintech companies are able to connect with a larger base of stakeholders.

▼ MAIN CHALLENGES

1. Despite the adoption of innovation-friendly policies, **the lack of appropriate and clear legal frameworks** still hinders the development of FinTech companies. High costs/time to attain a license, other compliance requirements and lack of regulatory support were also identified as regulatory barriers;
2. The current **lack of trust on FinTech provided services**.
3. **Low levels of financial literacy** which compromise the demand for FinTech services.
4. **Low levels of digital literacy** which compromise the demand for FinTech services.
5. Despite efforts, the **academic curriculums are still not adapted to the needs of FinTech**.
6. **Lack of official mechanisms** to connect students with fintech companies.
7. Mozambican fintechs' **unawareness of funding alternatives** that are more appropriate to their current stages of development or operating scenario.
8. FinTech entrepreneurs need to develop stronger preparation skills to engage with potential investors
9. FinTech.MZ shows **little presence in the international community**.
10. There is **limited adoption of incubator/ accelerator's alternatives** to the Regulatory Sandbox.

Final Recommendations

Pillar	Challenge	Recommendation	Description
REGULATION	Lack of clear regulation/ regulatory support	1 Set up a regulatory repository	Innovation Offices have been used by main Hubs to help innovators navigate through regulatory requirements. By creating a user-friendly, online repository , Mozambican entrepreneurs could access relevant regulation and frequently asked questions split by regulatory topic or submit enquiries to regulators. This office could be set in partnership with FSDMoç to offer support to innovators beyond the Sandbox.
	High compliance requirements / unregulated areas	2 Introduce a tiered licensing regime for unregulated fintechs	The Central Bank of Nigeria has introduced a tiered licensing regime for fintechs, with South Africa following suit. Given the high costs and stringent licensing requirements identified by fintechs, Mozambican regulators could expand on their Payments' law and develop a risk-based licensing framework covering unregulated fintech areas, with the goal of reducing barriers for new market entrants.
DEMAND	Low trust on fintech provided solutions	3 Create a best practice book to promote trust on FinTech provided solutions	As mentioned, some mechanisms have been used by different fintechs to promote trust on FinTech solutions. For instance, actively presenting existent partnerships with traditional financial institutions. To further developed the trust level, a best practices book for these mechanisms based on fintech's individual experience could be created under FinTech.MZ coordination and later distributed amongst other fintechs.
	Lack of digital and financial literacy	4 Engage with large employers to promote financial/digital literacy teaching programs	Like MLT, many companies operating in the primary sector and in rural areas end up employing many citizens with low levels of digital and financial literacy. Thus, similarly to what MLT has done, teaching programs can be introduced to raise these two types of literacy . These programs could be developed and taught by fintechs and based on the respective use of the fintech's services.

Final Recommendations

Pillar	Challenge	Recommendation	Description
TALENT	Academic curriculums are still not adapted to the needs of fintechs	5 Further develop the integration of FinTech related topics in universities	This can be done by introducing short-term courses focused on fintech related skills (Eg; applied data analysis, blockchain technologies), which can both be integrated in the curriculum's program or expanded to interested parties (former students, industry professionals). Ultimately, these initiatives can be introduced without compromising pre-existent programs.
	Lack of official mechanisms to connect students with fintech companies	6 Establish partnerships between universities and fintechs to promote internship programs	Potentially, these partnerships could be developed with the aid of organizations such as Fintech.Mz. Through this program students would acquire a strong contact with the Fintech sector and the fintechs could improve their access to talent.
CAPITAL	Unawareness of funding alternatives	7 Create a mapping of available funding options (list of suitable grants and investors)	The introduction of the mapping of suitable grants and investors (that are aligned with these fintechs' development stages and limited profits) potentially provided by FSD.Moç would largely improve Mozambique's investment network. This list would specially focus on private grants, including names such as FSD Africa or UNICEF VC, governmental grants and impact driven investors, as MZ fintechs walk towards financial inclusion.
	Need for a higher preparation of entrepreneurs	8 Create workshops towards a better preparation of entrepreneurs	As grant applications or investment pitches can be considered as a timely and challenging process, workshops towards the training and familiarization with this procedures could be conducted by associations such as FSD.Moç. Workshops could be specialized in concepts such as "how to fill applications" or to "how to maintain your financial statements organized".

Final Recommendations

Pillar	Challenge	Recommendation	Description
FEELING OF COMMUNITY	Lack of international presence	9 Focus on expanding the community internationally, both on a continent level and CPLP (Community of Portuguese Language Countries).	As a member of the African FinTech Network , FinTech.MZ should leverage on the opportunity to engage with a larger network of companies and investors . This would allow member companies to participate in the major industry events and learn the best practices on a continent level. For a more global perspective, Mozambique should invite its CPLP peers to participate in its future events and discussions - namely Brazil, Portugal, and Cape Verde.
	Limited participation in private incubator programs	10 Promote fintechs' participation in incubator and/or accelerator programs prior to regulatory sandbox.	It would be interesting to see regulators engage with some of the incubator private initiatives to promote the rejected candidates for their programs . Incubators should thus create a network that could work as graduation steps until getting into the regulatory sandbox.

IMPLEMENTATION FRAMEWORK

Based on the feasibility and time needed to implement the previous recommendations, an implementation framework was designed. It divides recommendations into those that could be implemented easily by local players like FinTech.Mz and FSDMoç (“quick-wins”), those that require engaging with external partners like private sector companies, banks, universities or regulators (“Medium-Term”) and those that require a more active change to be implemented by regulators, universities or other international agents (“Long-Term strategies”).

Quick-wins



Medium-Term



Long-Term strategies



Final Remarks

The aim of this report was to provide an overview of SSA's FinTech landscape, reflecting on current market trends. When analysing the market as a whole, variables such as funding amount, number of fintechs or average fintech age were considered. Complementary indicators of fintech activity, such as revenues and profits generated would add valuable information, particularly to explain recent trends in funding and number of fintechs launched. However, this information was not publicly available at the time of the analysis, thus limiting its scope.

The report also sought to identify the key pillars behind a strong FinTech ecosystem. While the chosen pillars were selected to provide a comprehensive view on the state of development of a FinTech ecosystem, other relevant factors, such as the existent technological infrastructure or the relationships with incumbents in the financial sector could provide a broader picture. All in all, the framework serves as a starting point that could be adjusted to fit the needs of various FinTech markets. Although the scores attributed are not meant to provide an independent evaluation of the performance of each country, they are useful to assess relative performance in comparison with other FinTech ecosystems. These results should also be updated in further analyses, to take into account changes in regulatory frameworks or other FinTech initiatives.

Identified best practices from top FinTech Hubs were used to provide recommendations for Mozambique's FinTech ecosystem. The selected countries were chosen due to their position as FinTech market leaders. However, this analysis could be expanded to cover other countries with less developed FinTech markets that can be used as a more similar benchmark to Mozambique. Moreover, a thorough mapping of the local Mozambican players could also help provide further recommendations. Associations and policymakers should leverage these results to explore potential partnerships within the wider ecosystem – such as private companies, commercial banks and development funds.

Overall, this report provides a comprehensive view on SSA's FinTech activity with a particular focus on Mozambique. It paints the picture of a maturing SSA FinTech ecosystem, where new solutions are arising and expanding the potential for wider financial inclusion. Investors seem to be backing up this success, with funding amounts reaching all-time records. **Albeit at a earlier stage of development, Mozambique is seeing the rise of innovative FinTech solutions adjusted to the needs of a still largely rural and underbanked population.** The potential of FinTech to promote wider economic impact has been vastly identified. While our research focused mostly on the current market dynamics, it could be interesting to assess the overall contribution of FinTech companies to economic development, considering the potential to create jobs, generate income, promote entrepreneurial endeavors and strengthen the private sector through efficient payments systems.

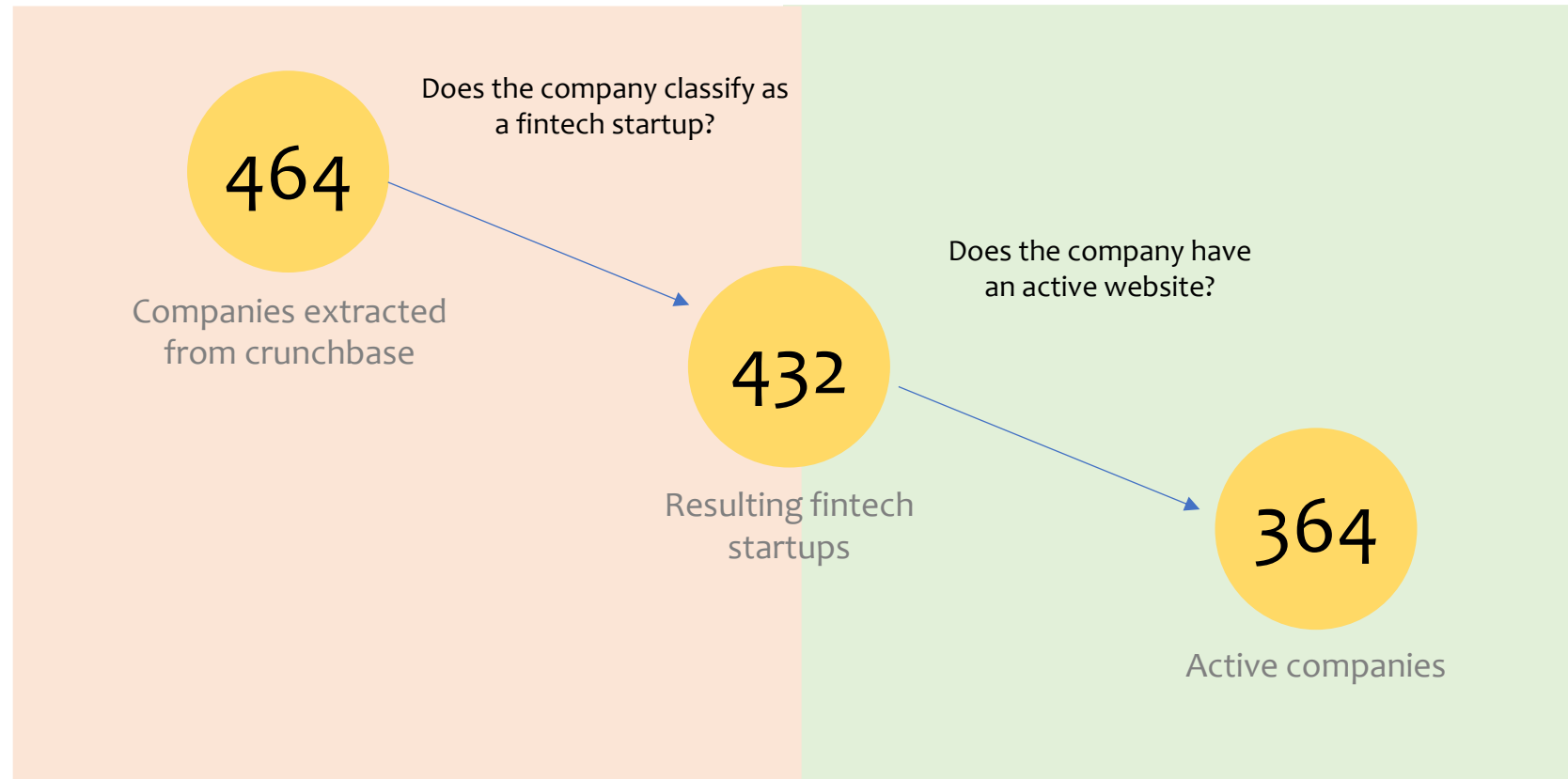
Although much needs to be done to provide an ecosystem where all fintechs can thrive – through robust regulatory frameworks and investment in infrastructures, to name a few – we conclude that the future of the FinTech in SSA is showing promising signs.

FINAL ACKNOWLEDGMENTS

We would like to thank all individuals and entities that supported us in the preparation of this report, namely our advisor Cátia Batista; the Chairman of the Board of Directors of FinTech.Mz João Gaspar; Tiago Borges, from UX Technologies; Ian Zaqueu, Igor Domingos and Maira Mussa, from Pertence; the investor Matteo Rizzi; Lúcia Ginger and Carlos Cumbana, from University Eduardo Mondlane and all the Mozambican fintechs that engaged with us in the process of making this report. A special acknowledgment is directed to Professor Esselina Macome, Executive Director of FSDMoç, that served as our bridge to the Mozambican FinTech ecosystem and whose contributions were highly appreciated throughout the project.

Appendix

Appendix 1: Framework for the final list of SSA active fintechs



Appendix

Appendix 2: Regulation Evaluation

Dimension	Indicator	Nigeria	Kenya	South Africa
Robustness	Incomplete / lack of clear regulation	10%	4%	7%
	Sudden changes in regulation	12%	33%	55%
Fragmentation	N° of regulating entities	11	6	7
Compliance requirements	Costs of attaining a license	12%	35%	57%
	Time to attain a license	12%	22%	8%
	Complexity of KYC/AML rules	38%	33%	57%
Innovation Support	N° of innovation facilitators	4	3	3

Results for the Robustness and Compliance Requirements dimensions are based on the Africa FinTech Radar 2020 and constitute a Net Promoter Score (lower values represent a higher negative impact of the indicator to the development of the business)

Appendix 3: Scoring Criteria for Regulation

Score	Robustness & Compliance requirements	Fragmentation	Innovation support
1	<=0	>=12	0
2	1-9	9-11	1
3	10-24	6-8	2
4	25-39	4-5	3
5	>=40	1-3	>=4

The criteria for Robust & Compliance requirements was based on the distribution of Africa's FinTech Radar survey results and Fragmentation and Innovation support scores were defined based on the possible number of regulators and initiatives. Though South Africa's n° of regulators is equivalent to a 3, an extra point was added to reflect the fact that they are aggregated under the IFWG. An extra 0.5 was also added to Kenya's fragmentation score to reflect its consolidation efforts.

Appendix

Appendix 4: Interval Range per Demand Indicator

Indicator	1 Point		2 Points		3 Points		4 Points		5 Points	
Rural Population	218 K	20.1 M	20.1 M	40M	40M	60M	60M	80m	80m	99.M
Phone Penetration	1M	41.8M	41.8M	82.4M	82.4M	123M	123M	164m	164m	20.4M
Young Population 2030	242K	15M	15M	29.8M	29.8M	44.5M	44.5M	59M	59M	74.1M
Sent/Received domestic remittances: through a mobile phone	235K	6.5M	6.5M	12.8M	12.8M	19M	19M	25.4M	25.4M	31.7M
Internet Access	288 K	9.1M	9.1M	18M	18M	27M	27M	36M	36M	53M
Paid utility bills: using a mobile phone	32K	3.8M	3.8M	7.5M	7.5M	11.2M	11.2M	14.9M	14.9M	18.6M
Borrowed from a financial institution or used a credit card	480K	1.7M	1.7M	3M	3M	4.3M	4.3M	5.6M	5.6M	6.8M
Made digital payments in the past year	669K	5M	5M	9.5M	9.5M	13.9M	13.9M	18.4M	18.4M	22.8M
Used a mobile phone or the internet to access a financial institution account in the past year	367K	3.7M	3.7M	7M	7M	10.4M	10.4M	13.4M	13.4M	17M
Mobile money account	94K	4.4M	4.4M	8.8M	8.8M	13.1M	13.1M	17.4M	17.4M	21.7M
	5 Points		4 Points		3 Points		2 Points		1 Point	
Banks per 100k citizens	1	4	4	7	7	10	10	13	13	15

Intervals used to attribute a score per variable. Contrary to others, the indicator **Banks per 100k citizens** achieves a higher score with a lower value. The amplitude of each interval corresponds to the sample range divided by 5, the number of categories.

Appendix 5: Countries used for Sub-Saharan Benchmark

Angola	Benin	Botswana	Burkina Faso	Burundi	Botswana	Cameroon	Central Africa Republic	Chad
Condo, Dem. Rep	Cote d'Ivoire	Ethiopia	Gabon	Ghana	Guinea	Kenya	Lesotho	Liberia
Madagascar	Malawi	Mali	Mauritania	Mauritius	Mozambique	Namibia	Niger	Nigeria
Rwanda	Senegal	Sierra Leone	Somalia	South Africa	South Sudan	Tanzania	Togo	Uganda
Zambia	Zimbabwe							

List of countries used to act as the SSA benchmark for each indicator

Appendix

Appendix 6: Performance per country and per indicator

Indicators	Nigeria	Kenya	South Africa	Mozambique
Rural Population	99.9M	39.3	19.3	20M
Phone Penetration	204.2M	61.4	96M	11.9M
Young Population 2030	74.1	19.5	16.4	12M
Banks per 100k citizens	4.9	4.7	9.2	4
Sent/Received domestic remittances: through a mobile phone	14M	31.7M	10.9M	5.6M
Internet Access	53M	9M	32M	2M
Paid utility bills: using a mobile phone	2.5M	18.6M	3.8M	3M
Borrowed from a financial institution or used a credit card	1.6M	5.7M	4M	3.3M
Made digital payments in the past year	7.1M	22.8M	12.8M	8.8M
Used a mobile phone or the internet to access a financial institution account in the past year	5.3M	17M	7.4M	9M
Mobile money account	1.6M	21.7M	5.7M	6.5M

Countries Analyzed and their respective population per indicator

Appendix

Appendix 7: Talent Evaluation and Scoring Criteria

Dimensions	Indicators	Nigeria	South Africa	Kenya
Quantity	Number of Relevant Programs	304	224	204
	Capacity to retain local and attract foreign talent	3.39	3.25	3.38
Quality	Quality of Data Scientists	58%	40%	70%
	Quality of Computer Science Universities	2	10	2

Appendix 8: Talent Evaluation and Scoring Criteria

Score	Number of relevant programs	Capacity to retain local and attract talent	Quality of Data Scientists	Quality of Computer Science Universities
1	1 - 62	<1.9	80% - 100%	<1
2	62 - 122	1.9 - 2.9	60% - 80%	1
3	122 - 183	2.9 - 3.9	40% - 60%	2 - 5
4	183 - 243	3.8 - 4.9	20% - 40%	5 - 8
5	243 - 304	>4.9	0% - 20%	> 8

Appendix

Appendix 9: Capital Evaluation and final values

Dimensions	Indicators	Nigeria	Kenya	South Africa
Access	Number of Funding Rounds since 2011	193	79	140
	Average growth rate of funded companies over the last 5 years	55%	40%	37%
	Percentage of International Investors	72.94%	70.27%	70.25%
Attractiveness	Number of Fintech companies	110	56	97
	Historical average growth rate of the number of Fintech companies (last 5 years)	25.83%	17.57%	13.27%
	Number of companies that achieved cross-border operations	9.09%	25.00%	11.34%
	Percentage of companies in late stages of funding	4.55%	8.93%	11.34%

Appendix 10: Capital model scoring criteria

Score	1	2	3	4	5
Indicators	Max within interval	Max within interval	Max within interval	Max within interval	Max within interval
Ticket size (total funding amount/ #fintech companies)	1	20	50	100	200
Average growth rate of funded companies over the last 5 years	20%	30%	40%	50%	60%
Percentage of International Investors	50%	55%	60%	71%	90%
Number of Fintech companies	5	15	30	80	150
Historical average growth rate of the number of Fintech companies (last 5 years)	9%	14%	19%	24%	29%
Number of companies that achieved cross-border operations	2%	5%	10%	20%	30%
Percentage of companies in late stages of funding	1%	4%	7%	10%	13%

Appendix

Appendix 11: Feeling of Community Evaluation

Dimension	Indicator	Nigeria	Kenya	South Africa
Local Associations	Scope	High	Medium/ High	Medium/ Low
	Impact	High	Medium	Medium/ Low
Industry Events	Scope	Medium/ High	High	Medium
	Impact	High	Medium/ High	Medium/ High
Incubators/Accelerators	Scope	Medium/ High	High	Medium/ High
	Impact	Medium/ High	High	High

Appendix 12: Score Criteria

Score	Scope
1	Low
2	Medium/ Low
3	Medium
4	Medium/ High
5	High

Appendix

Appendix 13: Fintech.MZ current members (1/2)

Name of Organization	Short Description	Category	Year of Foundation
ACGEST	KYC Database. Multi-entity e-KYC registration and management platform	RegTech	2006
Ekutiva/Quick-e-Pay	Payment Service Provider – Payment Gateway HTTPS e USSD.	Payments & Transfers	2017
Flutterwave	Make and accept payments from customers anywhere in the world.	Payments & Transfers	2016
HOWARD JOHNSON CALL CENTER/DIGIPAY	National distributor / agent network for selling all types of digital services and paying bills.	Payments & Transfers	2007
Kamaleon Events/Tablet Comunitário	Product and service announcement and internet access on community tablets.	Personal Finance	2015
Mobile África Lda	Mobile Wallet and System integration	Payments & Transfers	-
Mukuru/Mukuru	Payment Service Provider – International remittances	Payments & Transfers	2013
NextPay/Teke Tehla	Payment Service Provider - Teke Tehla, payments with QRCode without physical contact (contactless payment solution)	Payments & Transfers	-
Ologa /Sure Talk	Technological solutions for social and economic development.	Business Administration	2010

Appendix

Appendix 13: Fintech.MZ current members

Name of Organization	Short Description	Category	Year of Foundation
Papersoft LDA/Onboarding eKYC	Platform's modules for ID Verification and onboarding procedures with KYC and biometric data capture. Used for: Onboarding & KYC Biometrics Module, Agent Management System and Financial Services & Marketplace.	RegTech	2011
Paytek / I.Mali	Payment Service Provider – Aggregator and Digital Payment Account based on QRCode. API for third party integration.	Payments & Transfers	2008
Paytek / Risk31	Risk management Platform ISO 31000	Payments & Transfers	2008
Pertence	Crowdfunding Platform	Lending & Marketplaces	2021
PREMIO MALI TECNOLOGY	Microcredit, Insurance and Payment services	InsurTech	-
Robobo/Pagalu	Payment Service Provider – Payment Portal	Payments & Transfers	2011
Sislog/Multipay	Multipay - payments and receipts with a universal reference	Payments & Transfers	-
Tabech Serviços/MovelCare	MobileCare is a funerary insurance platform that can be subscribed for and paid via mobile phone and mobile wallet services, which is accessible to low and middle class people, guaranteeing the coverage of funeral services and food.	InsurTech	2016
Tablutech/ROSCAS	Savings group management	Personal Finance	-
Tablutech/TEAM APP	Customized APP creation platform for groups.	Personal Finance	-

Appendix

Appendix 13: Fintech.MZ current members

Name of Organization	Short Description	Category	Year of Foundation
UX / Biscate	Biscate - Platform for contracting informal services	Payments & Transfers	-
UX / SOMAS	SOMA product for management of savings and credit groups.	Personal Finance	-
VolletAPP	SuperAPP e-Commerce	Payments & Transfers	-

Appendix

Appendix 14: Eduardo Mondlane University Interview

EDUARDO MONDLANE UNIVERSITY INTERVIEW – LÚCIA GINGER

1. Give us a brief introduction of the course: if it is recent, reason for being introduced, etc.

”The course at a private university was created in the last 10-13 years. In its genesis, the computer science course only trained students in the area of information technologies and systems (information systems). This happened due to major limitations in terms of laboratories and other factors at the time, the course was very much geared towards the theoretical part of computer science.

A revision of the course was made in 2014 and an introduction to a second version of the same course was also made. The course was divided in two: 1) Course directed to system analysis and computer networks; 2) Development of software systems. This version is currently being applied and offered by the university.”

2. How many students have attended the course, increase in demand, etc.

“The tendency is to increase the number of students. When we started the course, the student base was made up of 2 classes and over the years it has increased. There was a boom in demand in 2003, slowing down slowly in the following years (the university has no specific reason to explain this phenomenon). In the last two years the number of students has been increasing again, similar to the demand in 2003. With the arrival of the pandemic things got "shaky", but the university finds that it is in better shape/conditions compared to periods of more concern (demand slowing down after 2003).”

3. How many students do you have at the moment? Has the number of students increased? What is the Employability rate? And what are the most common outputs (entities)?

“Students have a certain acceptance in the job market, but it is worth mentioning that at some point, both university and employers feel that students could offer a little more (empower the student to be far beyond what is the professional quality they carry when they leave college). We have no concrete information if students are employed abroad. However, the university has students who work within international or even multinational entities/companies. We assume that, within the limitations mentioned above, there is a certain international employability, looking at international companies operating within Mozambique. There are some students who study outside of Mozambique and may work abroad, but there is no formal record of the number of these students.”

5. Regarding technological areas of expertise, what kind of technologies are students capable of operating when they leave university?

“The courses are designed with the needs of the labor market in mind. The university makes occasional revisions in order to fit in the courses the technologies that are being developed. The university recognizes that "they are not at the time of what is a newly designed course". The revisions are not made at the level of the course plan, but at the level of the themes that are discussed. The faculty has been careful, as far as possible, to bring the students up to date (students are introduced to recent topics, not the topics that were covered when the curriculum was designed in the past). Many teachers are also employers so the course also benefits from this point of view to meet the possible needs of the market. To some extent, but not completely, the university believes that the course responds in some way to the updates/needs introduced by the market”

Appendix

EDUARDO MONDLANE UNIVERSITY INTERVIEW – CARLOS CUMBANA (1/2)

1. Tell us about the development and history of the Computer Science degree.

“The tradition of the informatics course comes from the mathematics course (1980's), but in the 90's there was a need for the branching of what was divided into: mathematics, statistics, computer science and information science (mapping). The first computer science course, after the first curricular revision, resulted in some improvement, including not only mathematics, but also a great weight in the programming area. In the second curricular revision, the course was then divided into three different tracks: 1) Software Development, 2) Computer Engineering and 3) Electronics (telecommunications area). After this revision, disciplines/content that had to do with the "thinking" of technologies were also introduced (disciplines of technology analysis and design, software engineering, application development). The last revision reinforced the spec of placing disciplines that respond to the current context. For example: disciplines related to the creation of specific projects, where the student makes use of all the knowledge and skills he or she has had throughout the course and grants a project that he or she must develop until the conclusion.”

2. Regarding technological areas of expertise, what kind of technologies are students capable of operating when they leave university?

“Employability depends on the offer and mentoring that the university has given to the students. Students tend to have a specialization in a specific area defined throughout their projects. Areas: 1) Infrastructure (network administration, small number); 2) Application development (mobile devices); 3) Consulting (limited to the area of system design and policies in the technology area). Graduate students are employed in almost all areas. The university (specifically me) acts as a bridge between the companies' requests for recommendation of students and the candidates themselves. Students between their third and final year (fourth) usually already start working. "That student who finishes the course and is not working, is because he is a bad student". There are students working in banking, utilities, large industries (such as the oil industry); including FinTech.

Appendix

EDUARDO MONDLANE UNIVERSITY INTERVIEW – CARLOS CUMBANA (2/2)

3. How is your relationship with fintechs? If students have knowledge or interest in the area?

”The university has encouraged students to include mechanisms for implementing financial inclusion in their projects. E.g.: When students develop some application for payment services, they are encouraged to work with mechanisms that can be within the reach of a larger part of the population (comparison between credit cards and mobile money: mobile money makes more sense than credit cards, since they are more used within the Mozambican context). At the moment there is a lack of content directly targeting FinTech, however, together with Professor Esselina, there has been a lot of discussion around the introduction of option courses based on the FinTech concept. ”We are falling behind, the FinTech concept from 5 years ago is not the same as it is now, so we are having this effort in order not to fall behind.”

4. What about the bridge between students and labor market?

“There are no specific courses that deal with the trends of the industrial revolution, but it has a discipline where it has brought in to some extent the topics of artificial intelligence, internet, entrepreneurship, etc. The entrepreneurship course has brought in many current topics so that the students are familiar with these topics before they are “thrown” into the job market. Students are expected to be able to think on their own and find solutions on their own given these trends in technologies. Ongoing process for formal internships, but regulations for these internships by the university are still in production. Students are free to make contacts and request a credential from the university to present to the employer. In many cases, students stay in the companies where they did their internships. Employers themselves contact the university to request students for internships, but there is no formal mechanism for bringing students and employers together. However, small initiatives (careers fairs, etc.) may be the exception to this lack of formal mechanisms.”

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Abstract

This work project was done in partnership with the Mozambican crowdfunding platform "Pertence". The main objective was to understand if the project available on Pertence's platform will be successful and if not, what can be done to counteract it, providing the necessary suggestions for it to run in the best way and thus, serve the Mozambican investors the best possible way. For this purpose, several analyses were performed to understand the projections for Pertence's single available project. An introduction about the other projects that are expected to become active in the Pertence's platform in the near future was also made.

Keywords: Fintech, Sub-Saharan Africa, Mozambique, Crowdfunding Platform

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

Agenda

1. Pertence Profile

2. Crowdfunding Overview

3. Honey Cicle

3.1. Description

3.2. Market Valuation

3.3. Strategic Positioning

3.4. Financial Projections

3.5. Financial Risk Assessment

3.6. Return on Investment

3.7. Valuation Overview

4. Caveats

5. SWOT Analysis

6. Next Steps

7. Concluding Remarks

8. Final Acknowledgments

9. Appendix

10. Bibliography

Pertence

PROFILE

Pertence is a **Mozambican FinTech** that operates the country's first crowdfunding platform. The platform seeks to connect Mozambican SMEs and entrepreneurs with national and international investors. The platform acts as a marketplace where individuals can list their projects that need funding, so that other individuals can invest in them. Pertence aims to position itself as the most modern and innovative crowdfunding company in Mozambique, targeting young people in particular.

Pertence participated in the incubation contest launched in 2020 by the Bank of Mozambique, aiming to bring innovative solutions to the financial market. From 2020 to 2021, Pertence was working on its Crowdfunding platform that only came to fruition in 2021, with the first project being the Honey Cycle, the project this paper will focus on. During this time, Pertence worked with the Bank of Mozambique having monthly meetings about the activities that were developed. The Bank of Mozambique gave Pertence the space and helped them with the legislation of the area. The money invested during this phase came from the founders of the company. In November of 2021, the company passed the testing phase of the Bank of Mozambique and received its certificate.

Pertence's **vision** is to be the leading financial institution chosen by all Mozambican SMEs to obtain financing. Pertence's **mission** is to provide an accessible and innovative financing mechanism, aimed at a more dynamic Mozambican financial sector. Thus, the **main objectives** of Pertence are: to promote the **participation of Mozambicans in investment projects**, to provide an **accessible and secure financing platform ABC**, to **support access to and use of financial services**, to create a **new and modern financing mechanism** and to **promote financial inclusion**.



CLIENT DEMOGRAPHICS OBJECTIVES



Reach the population between 24 and 34 years of age.



Expand to Maputo, Nampula, Beira or Tete.



Reach the population with post-graduate education, working in the private sector or self-employed, single or engaged/unmarried and with children up to 4 years old.

Quick note: Regarding the last client demographic objectives, these are the potential backers, meaning, the potential helpers and supporters of the project.

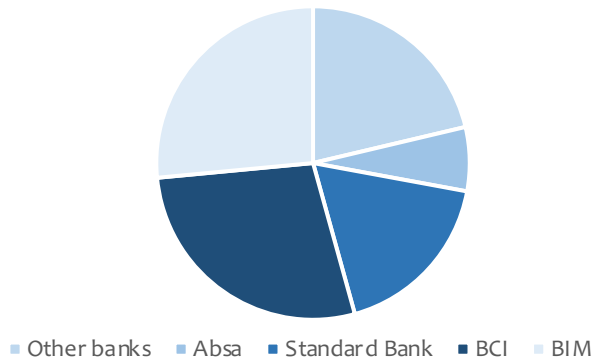
Pertence has already done some research and arrived at some important figures: of the total number of registered businesses in Mozambique, which is 98,8% SMEs contributing 28% of Mozambican GDP. SMEs account for 44% of private investment in the country. 39.3% of this investment comes from micro and small enterprises.

Pertence

PROFILE

Among the leading banks in Mozambique, (presented in Figure 1)¹, the lending rate per year, considering the volume of deposits, averages 18.65%. This value is the **prime rate of the Mozambican financial system**. The average interest rate on deposits is 2.60%. The Central Bank discount rate is 10.25%. Mozambique is a country where the cost of capital is very high. The interest rate (without spread) is 18%, with spread it can easily reach 20-30 %.

Figure 1: Leading banks in Mozambique



There are **3 types of collective financing that Pertence wants to focus on**. The first is **collective financing by loan**, where investors can buy bonds from the companies that list their projects and make loans to individual project owners. The second type is **equity crowdfunding**, where investors can buy shares issued by the companies trying to raise capital. This investment option will include a buyback option for certain listed projects. Third, **collective grant funding**. The platform will host social projects that seek to promote a specific cause. This type of projects do not aim to make a profit or generate a return.



In terms of desired impact, Pertence introduced its KPI, which stands for Key Performance Indicator. These allow companies, organizations or individuals to measure what progress has been made over time and whether everything is on track to achieve the company's goals. These are extremely useful for evaluating overall performance and setting goals. **Pertence's objectives** are to provide a **reliable platform**, with security and risk management requirements that prevent misuse of the platform; to provide a new and modern financing mechanism, to **encourage Mozambicans to participate in investment projects and boost national investment**. Finally, Pertence's objective is to **increase the credibility of entrepreneurs and the associated investor confidence**.

How does it work?

The way it works is very simple. First, Pertence develops the crowdfunding platform. Then, entrepreneurs sign up on the platform to register projects that need funding. Pertence approves the project (due diligence/risk assessment/compliance with the prevention and combating of money laundering and terrorism financing act). Then the entrepreneurs present the project on the platform. Investors evaluate the projects and invest in the ones they are interested in. Pertence collects the funds and allocates them to the selected projects. The entrepreneurs deploy the funds they received. And finally, Pertence monitors the use of the invested funds.

Crowdfunding

DESCRIPTION

It is well known that investing in emerging markets can be challenging. Investing in emerging markets in Africa can be even more challenging. Crowdfunding is a form of **collective financing** in which an idea, project, initiative or business can receive multiple small packages of money from various investors or donors, over the internet, to enable the implementation of a goal.

Crowdfunding as it is known today is presented on online platforms. The first official crowdfunding platform, the website Indiegogo¹, was founded in 2007 and focused on independent filmmaking. However, it was not until the website Kickstarter, in 2009, that crowdfunding became the model we know today, with projects from various fields, and even consumer-focused projects having their place. The platforms gained greater notoriety and popularity in 2008 when several people donated small amounts of money to then-candidate Barack Obama presidential campaign², totaling \$272 million. It's worth noting that the idea of crowdfunding dates back at least as far as 1713, when Pope Alexander enlisted the support of 750 investors to complete and manuscript the translating of Homer's Iliad from Greek into English. Globally, crowdfunding platforms were valued at \$84 billion in 2018, and this is expected to reach \$114 billion by 2021.

There are **4 types of crowdfunding**³: equity/share in capital stock; debt/loan; reward and donation.

1. Equity/participation in capital stock is when investors provide funds to a company and receive a portion of them in the form of equity or convertible debt that can be converted into equity in the invested company in the future.

2. Loan is the granting of loans or the underwriting of tranches of loans for the benefit of consumers or businesses, usually start-ups or small and medium enterprises.

3. Reward means purchasing advance or reserving, at a special discount the product or service for the production of which the financing is granted

4. Donation is the making of contributions with the aim of receiving symbolic consideration.

Pertence only implements on its platform, **equity-funding** and **debt-funding**

Crowdfunding in Africa is a snapshot in time. The outbreak of Covid-19 led to lower agricultural productivity, increased trade tensions, unbalanced supply chains, fewer jobs and also regulatory uncertainty. And that is where it gets interesting. While many will wait for international help, there are brave startups that will take the risk and step in. The only question is, where will these startups get their capital? When traditional financial instruments are out of reach, crowdfunding is the answer.

With this in mind, it is important to look at who is regulating crowdfunding in Africa. There are countries that are already taking steps to implement financial inclusion to create a safe ecosystem. However, African crowdfunding regulations are still difficult and confusing despite the African Crowdfunding Association (ACfA), a self-regulatory organization, increasing transparency and promoting industry best practices in Africa.

As it is already known, the crowdfunding environment is getting bigger and better. However, launching a crowdfunding company, especially a startup, comes with some obstacles⁴. These include the fact that it must endure temporary regulatory uncertainty and develop a sustainable monetization strategy. On the other hand, the initial investment in crowdfunding for more established companies may change depending on the level of engagement in the market.

¹: Information was retrieved from Indiegogo website.

²: Information was retrieved from ObamaWhiteHouse archives, 2016

³: Information was retrieved from Business News Daily, 2021,

⁴: Information was retrieved from Forbes, 2019

Pertence's Project

HONEY CICLE

Developed by Mathária Empreendimentos, Lda. and financed by the collective financing platform Pertence, Lda. The honey cycle project aims to **produce honey on organic fields where other crops such as moringa are already grown**. Mathária Empreendimentos, Lda is a Mozambican company operating in the agro-processing industry, based in the province of Nampula, district of Ribáue and in the administrative district of Iapala.



In Mozambique, honey production is of very low quality, as most beekeepers use traditional methods to harvest honey which affects the quality of the product. In addition, there are few companies in the country that can guarantee the quality, packaging (bottling and labelling) and brand of the product. For this reason, the local formal market is dominated by imports, while much of the local production reaches only the informal market channels.

Mathária brings to the market a solution to overcome the difficulties of the market, trying to boost the production of beekeepers in the municipality where it is located, while bringing to the market a national product of excellence quality for commercialization. With this Project, the company aims not only to increase the income of the people directly involved in production, mostly women, but also to improve the environment in this region through the pollination function of bees.

MARKET VALUATION

As healthier eating becomes the new norm, industries like food and beverage are promoting products with greater health benefits. Honey is one such product, as it contains vitamins, minerals, calcium and antioxidants - natural medicinal properties that can boost consumers' immune systems and metabolism, as well as reduce high blood pressure and diabetes.

In Mozambique, about 70% of the honey market is held by informal beekeepers. The product proposed in this project is considered organic because the production process is 100% free of chemicals used by the company, mainly because there is a lack of resources to process the honey better.

The formal market in Mozambique consists of very few local brands. The largest identified competitor is 'Mozambique Honey Company (MCH) which competes with imported honey brands on the shelves of local supermarket such as SPAR, ShopRite and others. Domestic honey production is estimated at 38,068,000.00 MT / year, with an annual production of 614,000 KG. In addition, the total retail market in Mozambique is estimated at about \$800,000.00.

Table 1: Computations regarding Wholesale Market and Retail Market

Type of Market	Production	Price (MT/kg)	Market Value (MT)	Matharia Production Capacity	Market Share	Matharia Market Value
Wholesale Market	614000	70,00	42980000	1500	0,244%	105000
Retail Market	184200	700,00	128940000	1500	0,814%	1050000

Pertence's Project

STRATEGIC POSITIONING

The average price¹ of honey in the Mozambican market is 370.72 MT. This price includes domestic and foreign brands available on the shelves of major outlets in Mozambique's cities for products ranging from 365 g per piece to 500 g per piece. Mathária intends to offer its product in two different units, one with 250 g at a price of 310.00 MT and one with 500 g at a price of 585.00 MT.

Mathária will adopt the premium pricing strategy and offer its product at a price above the competitor's offering. The company intends to **position its offer in a specific niche of the Mozambican market**, which has **greater purchasing power** and is driven more by a **conscious brand**. However, it is important to note that the commercial honey market in Mozambique is quite small compared to the national population. Assuming that the demographics of the target market are concentrated in the urban areas (Greater Maputo, Beira, Nampula, Tete, etc.), which represents around 37% of the total population², the market will focus in almost 12,000,000 people³. Looking at the current market structure, it can be seen that the honey market in Mozambique is an **oligopoly**, led by Mozambique Honey Company, Gourmet and other foreign producers.

The main aspects that make the **product competitive in the market** are: price, quality, health benefits, packaging, etc. Since it is an **oligopoly market**, any price below the equilibrium price is subject to inelastic demand.

Mathária will use the packaging of the product as a competitive point and differentiate its product from the competition by using differentiated packaging. The company will use glass jars that are clearly differentiated from competitor's products that are packaged in plastic. The use of plastic is associated with practicality, ease of use, quick consumer goods for everyday tasks and for non special occasions. The use of glass, on

the other hand, is more likely to be thought of as a high-end, durable and higher quality product, a reliable and durable product. Using glass as a primary material also appeals to consumers who (as mentioned above) are moving towards the Green Economy, consumers who want to consume healthier and more ethical products consequently reducing their carbon footprint and improving their health.

It is important to note that these consumers fall into a special niche in Mozambique, as a full transition to the Green Economy is very costly and excludes many Mozambicans from full participation in the economy due to high operating costs. Therefore, Mathária would only offer its product in outlets that cater exclusively to the aforementioned niche market so that the company can maximize its sales. These outlets are supermarkets such as Lokal, Woolworth, Spar Premier and DiViNo, which are not part of Mathária distribution channel. If Mathária is not able to access the right outlets, there is a possibility that the company will not achieve the desired sales forecast, which could jeopardize the company's ability to meet its obligations to investors due to a lack of liquidity.

¹: Information retrieved from Pertence's analysts

²: Information retrieved from The World Bank Data, 2020

³: Information retrieved from World Meter, 2021

Pertence's Project

FINANCIAL ANALYSIS

FINANCIAL PROJECTIONS

The company will use the value of the initial investment made to purchase the equipment necessary to start production and will produce in subsequent periods, bearing the fixed costs of wages, rent, water, energy and other inputs necessary for production, with the prospect that the profits generated by marketing the product in the first three years will be used entirely to remunerate the investor.



Since the company bears all the costs associated with production itself, there is a risk that the company's liquidity will be jeopardised, since funds from other sources of income could be used to cover these expenses, leading to a collapse in the company's finances.

Mathária's projections indicate that the company intends to market all of its production during the year, which is overly optimistic for the domestic market and could jeopardise the company's expected liquidity. In order to achieve the desired level of sales, the company will need to invest in marketing and advertising for the product, which could exceed the reported projections and thus impact the company's costs. However, the company claims to have secured marketing channels that can guarantee the entire production flow.

FINANCIAL RISK ASSESSMENT

Made in two different ways: 1) assessment of two risk indicators, namely the **level of liquidity the company** has to meet its short-term obligations (short-term liquidity ratio) and its long-term obligations (financial leverage ratio), and the break-even level (to determine the level of the margin of safety); 2) assessment of the **type of investment offered and how it compares to similar investments in the Mozambican market**.

The company's current **liquidity ratio**¹ for years 2 and 3 averages 2.46, which is higher than normal parameters (1.5 to 2), meaning that it is able to meet its short-term obligations. The **gearing ratio**² (for years 2 and 3 will be 1.50 and 0.32 respectively, which is within the parameters that specify that 1/3 of the company's capital should be financed by equity. However, the results presented here are based on the following two **assumptions: the company will be able to sell all its production during the year and the honey price is not volatile**. These two ratios were reached using the data in appendix.

To ensure that the above ratio is met, the margin of safety for the Project must be determined. The break-even point can be interpreted as the point at which the company can cover all its costs and obligations to its investors. The honey produced by the company is packaged and sold in two different offerings (500 g and 250 g packs). The production projections indicate that the company needs to sell at least 13.5% of the total product to cover its operating costs³. This represents 41kg of the total 750kg that the company expects to produce per year. This means that out of the 750 bottles (5.5% of stock), 41 bottles of 500 g should be sold and out of the 1500 bottles (5.4% of stock), 81 bottles of 250 g should be sold. This analysis shows that the company will be able to **meet its short-term commitments** even if it can sell only 50% of its total supply.

^{1,2}: Information retrieved from Pertence's balance sheet, presented in appendix 1

³: Information retrieved from Pertence's analysts

Pertence's Project

RETURN ON INVESTMENT

Pertence reserves the right to set a rate of return, called the **interest rate**, that is appropriate to the risk to which the investor is exposed. In this way, after three years, Pertence's investors, will not only receive back all their capital, but will also receive interest on the capital at a rate ranging from 20% to 22,6% per annum during those three years, the first year being a grace period for capital and interest, meaning there is a shortage of both in the first year. Repayment of principal plus interest is therefore made quarterly from the second year onwards. The remuneration offered for this investment is in line with the market, taking into account the existing investment options, since the market offers an average rate of 2,9% per annum on traditional investments (term deposits with financial institutions) for the same amount of capital and the same investment period, which is justified by the security of the repayment of the principal. Other investment alternatives with a similar level of risk to those presented here, such as the purchase of commercial paper and corporate bonds issued by companies, listed on the Mozambique Stock Exchange, offer an average return of around 19%.

Table 2: Principal and Interest on Year 2 and Year 3.

Periods	Principal	Interest	Principal + Interest	
T1	68750,00	46750,00	115500,00	Year 2
T2	68750,00	46750,00	115500,00	
T3	68750,00	46750,00	115500,00	
T4	68750,00	46750,00	115500,00	
T5	68750,00	46750,00	115500,00	Year 3
T6	68750,00	46750,00	115500,00	
T7	68750,00	46750,00	115500,00	
T8	68750,00	46750,00	115500,00	

**values in MT, considering the annual rate of 22,6%. Attention, the values in the table above are not guaranteed and may not come true.*

Quick note: the values of the principal (68 750 MT) come from the 550 000 MT divided by the 8 installments, which is the 2 years in quarterly installments. Also, the remuneration is 22.6% (per quarter), totaling approximately 68% in the third year. Since there is a one year grace period, the 68% were divided in two years, representing only 34% per year, and 8.5% per quarter.

These numbers keep always constant since there is a fixed repayment on the initial capital. There are other options for arising based on equity and asset however, Pertence decided to operate with this fixed value.

Pertence's Project

VALUATION OVERVIEW

Valuation methods		Scenario
CASH FLOW	➡	In the first year (year of capital shortage) the company will have its cash flow mostly composed of financing and investment, since this is the time when the company will borrow and invest the capital. In the subsequent years the company will have higher operating cash flow, as the investment will start to pay off, and negative financing flows, meaning the repayment of the loan plus the promised interest.
SALES GROWTH	➡	Three scenarios can be identified, the optimistic which is the one expected by Matharia, where they aim to sell the honey at a price above the market, the normal which is in case the honey only comes out at the market price, and the pessimistic below the market price. The compound sales growths for the three scenarios are as shown in the figure beside. The project being viable only for the optimistic and normal scenarios.
COMPANY RESULTS	➡	The company will only have sales from the second year onwards, growing at a constant rate of 5% per annum from 2023 onwards. The gross return on sales will be above 70% for the three forecasted years, and the net return on sales will average 33%. This demonstrates that the company will be profitable for the three forecasted years.
PROFIT MARGIN	➡	The company presents positive results for the three forecasted years. A reduction in the company's profitability is expected mainly for 2023, due to the payment of the loan installments, which is expected to be higher for that year.

Pertence's Project

CAVEATS

The investment proposed here is subject to various risks, related to the nature of the business, the market structure, government regulation, and other risks indicated below. The following risks were perceived:

- **Market risk:** the project will be implemented in a market where the awareness about the importance of honey consumption is still low, which can somehow compromise the absorption of the product expected from the market and with this the company may not obtain the level of sales initially expected.
- **Competition risk:** the product to be produced has in the market substitution options with lower cost than the price, that is intended to commercialize it, which can somehow compromise the adherence that is expected from the market.
- **Default risk:** the investor is subject to the risk that any lender faces, the risk of default on loans granted and its ability to perform in the event of the company's inability to repay the capital invested.
- **Additional financing needs:** with this financing, the company intends to secure at least 36 months of operation to raise the necessary funds to repay the investors. However, additional funding may be required if revenue growth is less than anticipated. Also, if the company has problems achieving its key performance indicators, it may be difficult to obtain other financing.

This type of investment is highly speculative and involves significant risk.

Therefore, they should not be made by investors who cannot afford to lose their entire investment.

- **Liquidity risk:** investments made through Pertence's platform are generally illiquid. This means that once people have invested their money, it may be difficult to exit the investment and get it back at a time that is most convenient for them, as there is no secondary market for their investments.

By making an investment through Pertence's platform, people recognize that they are making a long-term investment, so they will have no control over the day-to-day decisions they make regarding a particular investment.

- **Execution risk:** the company may not be successful in executing its business plan due to a variety of unforeseen factors. This is because business plans are necessarily based on a number of assumptions, some of which may not materialize as originally anticipated. Such factors include, but are not limited to, unforeseen challenges in research and development, unforeseen delays in obtaining important partnerships such as manufacturing, distribution and marketing partners, and delays in obtaining sales.

In the next slide a small SWOT analysis will be presented in order to identify the areas of Pertence's business that are performing well. These areas are Pertence's critical success factors and they give Pertence's business its competitive advantage. It is an effective business tool that is used to strategize for short-term and long-term decisions.

Pertence

SWOT ANALYSIS

Strenghts

- Pertence is composed by a young and dynamic team, which can produce higher-quality results and solve problems faster.;
- Pertence has the possibility of being the first entity to test crowdfunding in Mozambique, allowing Pertence to have first-mover advantages by being first to market in this area;
- Pertence's team has immense knowledge of the Mozambican market and contexto, which results in better customer service;
- Pertence's platform is in final stage (development), which can be already be implemented and as mentioned during this paper, can work with other companies and projects;
- Some contacts were already made to test the platform.

Opportunities

- Pertence has the Sandbox support¹, which allows Pertence to monitor the financial sustainability and minimize its risk, allows the comapny to mitigate and adapt to the regulatory burden that innovative projects have to bear and attracts international entrepreneurship and investment;
- There are limited funding mechanisms for MSMEs and start-ups;
- Increased economic visibility of the country - decurrent of several resources with high commercial value: agricultural resources, minerals, and others.

Weaknesses

- Pertence's team has weak experience in crowdfunding;
- Pertence's platform is still in the phase of raising the necessary funds to implement the project's operational plan. As mentioned, Pertence only has one available Project, having others in mind but they are only in early stages.

Threats

- The COVID-19 pandemic², which has increased awareness around the need for financial reserves, driving customer and investor traction toward savings-based Fintechs;
- Mozambique has high levels of corruption/money laundering. Mozambique is the country in the world where there is the greatest possibility of money laundering and terrorist financing³;
- Mozambique has a low level of national investment, which means that the country itself has a less productive economy, lower living standards and a lack of competitiveness.

¹: Information retrived from Finnovating, 2020

²: Information retrieved from MicroSave Consulting, 2021

³: Information retrieved from Privacy Shield Framework

Pertence's Projects

NEXT STEPS

Pertence wants to diversify its portfolio, focusing more on fixed agri-crowdfunding projects and change its target investor group.

To meet the challenge of feeding a growing world facing scarce food production resources, climate variability and massive urbanization trends, it is necessary **to link more capital to agricultural projects**. An emerging financing trend that can significantly broaden the base of the investment pyramid in the agricultural sector is crowdfunding.

Through crowdfunding, sponsors of agricultural projects can reach large numbers of individual investors directly, expand a project's capital structure, and experiment with more creative investment terms. When a farmer gets an investment, the whole community around him/her gets better food.

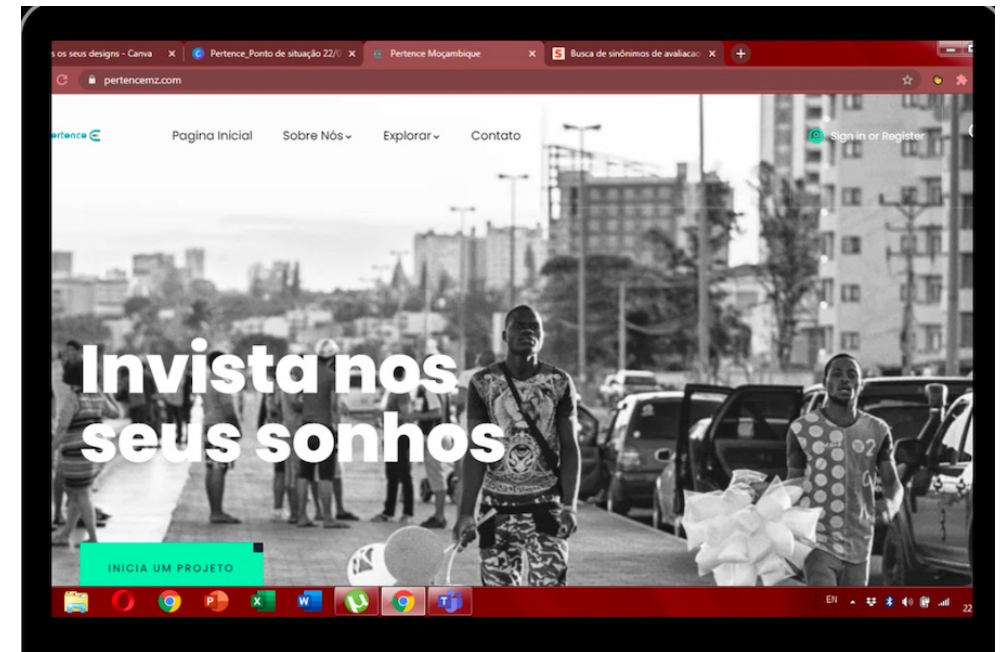
While crowdfunding has great potential, both agricultural companies and investors considering this funding option should not lose sight of the fundamental considerations that apply to other forms of investments. These include the **relationship between the business and an investor, investment risk and return, and the need to match capital investment and repayment cycles with the underlying business realities of a particular project**.

When talking about financing agricultural activities, it is important to understand what kind of farmers and cooperatives it is referring to. Even though most of the economic activity in this sector is subsistence farming, this is not the focus of this funding. It is also necessary to identify who these farmers are, in what regions they are located, how big are their farms and what investments do they make in agricultural activity.

It is becoming increasingly difficult to get bank loans so many farmers are looking for alternatives. One of them is the online crowdfunding.

At the moment, Pertence is working to introduce a fixed farming project, but it is still in a very early stage, so there so it is not possible to make an analysis of other projects that will come in the future.

Image 1: Pertence's front page website



Caption: "Invest in your dreams"

Final Conclusions

CONCLUDING REMARKS

The aim of this paper was to deepen the knowledge obtained about the **fintech world**, by working closely with a company that wanted to venture into this area. It is a fact that Pertence is recent and the team has a lot to learn, but with the analysis made of the Honey Cicle project it is concluded that it presents a competent team that has all the right to aspire to become a great **crowdfunding platform**. Furthermore, this first project is certainly the right step towards achieving the company's goal and mission, allowing it to have good prospects for the future.

However, it is never too much to be open to new **suggestions**. Some of the actions that Pertence could consider in the future projects would be:

- 1 Implement an **automated project evaluation system** and segregate projects according to credit risk (for debt).
- 2 Include projects with **shorter payback period**, preferably 6 months.
- 3 Implement **equity based** and **asset based projects** (agriculture projects), in order to ensure greater investor participation in projects and reduce funding costs for beneficiaries.

- 1 Not that the automated system is only for debt, but the credit risk will be for debt instruments for the time being. Maybe later on with the implementation of equity projects Pertence can include it as well.
- 2 The projects can more or less than 6 months, such as 3 months or 1 year, however, the 6 months is more an average that Pertence prefers to achieve, and due to the **nature of the projects** Pertence has seen so far, those projects only allow at least 6 months. The important thing is to **attract more investors by increasing liquidity**.
- 3 When speaking about investor's participation, it is said in a way of a more active participation, since they would become partners or owners of some asset, which will also be more convincing to investors, along with the reinvestment option which will guarantee a **greater retention of investors**. There is also the possibility to tokenize these assets for better transferability ensuring greater liquidity, as well as the possibility that one day the shares can be sold on secondary markets.

As mentioned previously, the return rate of this Project is very high, this is due to the **high credit risk of the beneficiaries**. In Mozambique the prime rate without spread is at 18%. Most of the companies that place projects do not have a guarantee and are MSME's. Therefore, an asset based project, where the investor owns an asset but agrees to the exploitation by the beneficiary in exchange for a remuneration, is **less risky and therefore less expensive**. So much like Equity where the beneficiary has **no obligation to pre-define fixed rate payments, but rather dividends based on their results**.

Final Conclusions

FINAL ACKNOWLEDGMENTS

As this review comes to an end, I could not finish it without thanking to Pertence for the opportunity they have given me to be able to work closely with them. Having the privilege of getting a better understanding of how the company works and in essence, how things actually work. It is through these kind of experiences that we better prepare ourselves for the future and the obstacles that come with it. As mentioned in the Talent part, developed in the group paper, it is through the development of internships, mini-courses and even partnerships with companies, that students have the chance to put into practice everything they have learned during their academic life.

I would like to thank once again to the whole Pertence team, especially to Ian Zaqueu, Igor Domingos and Maira Mussa who made me feel part of the team during these months. I must also mention Professor Esselina Macome for being the bridge between me and Pertence.

Appendix

Appendix 1: Pertence's Balance Sheet in Portuguese

Demonstrações Financeiras	Resultados Históricos					Resultados Previsionais				
	Ano 1H	Ano 2H	Ano 3H	Ano 4H	Ano 5H	2021	2022	2023	2024	2025
Verificação do balanço	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
					Live Case	1	TIR		319%	
Balanço										
Activos										
Activo Corrente										
Caixa e equivalente	-	-	-	-	-	(100 970)	294 720	363 251	540 047	1 026 573
Clientes	-	-	-	-	-	-	9 038	9 257	9 487	9 729
Existências	-	-	-	-	-	-	9 038	9 257	9 487	9 729
Outros Activos Correntes	-	-	-	-	-	-	9 038	9 257	9 487	9 729
Total de Activo Corrente	-	-	-	-	-	(100 970)	321 833	391 022	568 508	1 055 760
Activo Não Corrente										
Imobilizado líquido	-	-	-	-	-	500 000	500 000	500 000	500 000	500 000
Total do Activo	-	-	-	-	-	399 030	821 833	891 022	1 068 508	1 555 760
Passivo e Capital Próprio										
Passivo Corrente										
Fornecedores	-	-	-	-	-	-	11 625	12 206	12 817	13 457
Outros credores	-	-	-	-	-	-	-	-	-	-
Total do Passivo Corrente	-	-	-	-	-	-	11 625	12 206	12 817	13 457
Passivo Não Corrente										
Empréstimos de Médio e Longo Prazo										
Pertence	-	-	-	-	-	550 000	481 250	206 250,00	-	-
Bancário	-	-	-	-	-	-	-	-	-	-
Total do Passivo	-	-	-	-	-	550 000	492 875	218 456	12 817	13 457
Capital próprio										
Capital Social	-	-	-	-	-	-	-	-	-	-
Reservas	-	-	-	-	-	-	-	-	-	-
Lucro Retido	-	-	-	-	-	(150 970)	328 958	672 566	1 055 692	1 542 303
Total de Capital Próprio	-	-	-	-	-	(150 970)	328 958	672 566	1 055 692	1 542 303
Total do Passivo e Capital Próprio	-	-	-	-	-	399 030	821 833	891 022	1 068 508	1 555 760

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