



CAROL ANTÓNIO VELASCO MATIAS

**FINTECH AND FINANCIAL INCLUSION: THE SPECIFIC CASE OF *M-PESA*
UNDER THE MOZAMBIKAN REGULATORY FRAMEWORK**

Dissertation to obtain a master's
degree in the specialty of Law and
Financial Markets

Supervisor:

Dr. Miguel de Azevedo Moura, Assistant Professor at the Nova School of Law

June, 2023

NOVA UNIVERSITY OF LISBON
NOVA SCHOOL OF LAW AND NOVA IMS
MASTER'S IN LAW AND FINANCIAL MARKETS

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ANTI-PLAGIARISM STATEMENT

I declare, on my honour, that I am the sole author of this thesis dissertation, which is a result of my personal study and research. I declare that I have acknowledged all materials and sources consulted and all citations are dully identified, pursuant to article 23 of Decree no. 362/2016 of April 7th, published in the in the Official Gazette (*Diário da República*), 2nd series, no. 68, which approves the Regulation of the Master's in Law and Financial Markets.

CAROL ANTÓNIO VELASCO MATIAS

Lisbon, June, 2023

DEDICATION

To my mother, *Alda Velasco*, my biggest supporter.

To my late father, *António Matias*, who will always be remembered by me.

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CITATION METHOD

The dissertation is written in English, as per article 34 (3) of Decree no. 362/2016 of April 7th, published in the in the Official Gazette (*Diário da República*), 2nd series, no. 68, which approves the Regulation of the Master's in Law and Financial Markets. The use of terms in languages other than English is due to reasons of scientific accuracy. The standard adopted for citation, footnotes, bibliography, and others are the Portuguese 405.1 and 405-4 of the Portuguese Quality Institute.

NUMBER OF CHARACTERS

I herein declare that the body of this dissertation, including spaces and footnotes, with a total of 105.905 characters, pursuant to article 34 (4) of Decree no. 362/2016 published in the Official Gazette (*Diário da República*), 2nd series, no. 68, of April 7th, 2016, which approves the Regulation of the Master's in Law and Financial Markets.

LIST OF ACRONYMS AND ABBREVIATIONS

AFI – Alliance for Financial Inclusion

AI – Artificial Intelligence

AML – Anti Money Laundering

ATM – Automated Teller Machine

BoM – Bank of Mozambique

BVM – Mozambican Stock Exchange

CBK – Central Bank of Kenya

CNIF – NacionalComitee of Financial Inclusion

CVM – Central de ValoresMobiliários

EMI – Electronic Money Issuers

ENIF – National Inclusion Strategy

EU – European Union

FSD Moç – Financial Sector Deepening Moçambique

GBM – Bank of Mozambique Governor

GDPR – General Data Protection Regulation

HDI – Human Development Index

ICI – In-Country Implementation Program

ICSF – Credit Institutions and Financial Companies

ISSM - Insurance Supervision Institute of Mozambique

IIF – Financial Inclusion Index

INE – National Statistics Institute

IT – Information Technology

KYC – KnowYourCustomer

LICSF – Law on Credit Institutions and Financial Companies

MNO – Mobile Network Operator

MPME – Small and MediumEnterprises e MédiasEmpresas

MZN - Meticais

PIB – Gross Domestic Product

POS – Point of Sale

PSD2 – Payment Services Directive

P2P – Peer to peer

SADC – Southern African Development Community

SNP – National Payments System

USD – United States Dollars

TELCO – Telecommunications Company

ABSTRACT

In the modern world, living without a bank account is almost unimaginable, as financial access to most of the basic services offered in the market is an important indicator of economic development and well-being of individuals. For various reasons, more than a third of the Mozambican population does not have a formal bank account. In addition to all the inconveniences of difficult access to means of payment, this group of unbanked citizens is considered risky by the traditional banks and the financial system, and as a result they have restricted access to financial products and services that are important for their economic development.

This thesis aims to identify and analyse the drivers of financial inclusion through FinTech innovations and discuss the strategic framework and regulatory measures adopted under the Mozambican legal framework to push for the use of Fintech in the promotion of financial inclusion, through the study of the specific case of *M-Pesa*.

Recognizing the impact of FinTech innovations in expanding access to financial services, and as the financial system regulator, the Bank of Mozambique has encouraged and monitored the progress of technology-based financial services and the mitigation of possible risks in their implementation, through the institution of regulatory sandboxes.

Further to the current regulatory framework and the regulator's approach to this mobile payment service, this study also analyses the regulatory perspectives for the future and the implications for legislative gaps related to Data Protection and the relevant Protection of funds.

The conclusion of the thesis show that the mobile banking services help to solve the problems of unbanked customers imposed by the traditional bank institutions, based on the main drivers of financial inclusion and how this gap is filled by service providers that mainly target unbanked customers.

Key words: Fintech, Fintech Regulation, Financial Inclusion, e-money, M-Pesa.

RESUMO

No mundo moderno, a vida sem contabancária é quase inimaginável, uma vez que o acesso financeiro à maioria dos serviços básicos oferecidos no mercado é um indicador importante do desenvolvimento económico e do bem-estar dos indivíduos. Por várias razões, mais de um terço da população moçambicana não tem uma contabancária formal. Para além de todos os inconvenientes de difícil acesso aos meios de pagamento, este grupo de cidadãos sem conta é considerado uma clientela de alto risco pelos bancos tradicionais e pelo sistema financeiro e, como resultado, têm acesso restrito à produtos e serviços financeiros que são importantes para a sua iniciativa económica.

O presente estudo visa identificar e analisar os vectores da inclusão financeira através das inovações FinTech e discutir o quadro estratégico e as medidas regulamentares adoptadas pelo regulador moçambicano para impulsionar a utilização da tecnologia financeira na promoção da inclusão financeira, através do estudo e análise do M-Pesa.

Reconhecendo o impacto das inovações da FinTech na expansão do acesso aos serviços financeiros, e como regulador do sistema financeiro, o Banco de Moçambique encorajou e monitorizou o progresso dos serviços financeiros de base tecnológica e a mitigação de possíveis riscos na sua implementação, através da instituição de sandboxes regulatórios.

Para além do actual quadro regulamentar e da abordagem do regulador a este serviço de pagamento móvel, este estudo analisou também as perspectivas regulamentares para o futuro e as implicações para as lacunas legislativas relacionadas com a protecção de dados e o relevante esquema de garantia de depósitos para as FinTechs.

Os resultados do estudo mostram que os serviços bancários móveis ajudam a resolver os problemas dos clientes não bancários impostos pelas instituições bancárias tradicionais, com base nos principais vectores da inclusão financeira e na forma como esta lacuna é mitigada pelos prestadores de serviços que visam principalmente os clientes não bancários. Os resultados da investigação são evidenciados através do estudo do M-Pesa, um serviço de

pagamento móvel que tem levado a uma maior inclusão financeira em Moçambique desde a sua implementação, ao fornecer uma estrutura alternativa à banca tradicional.

Palavras-chave: Fintech, Regulação de Fintechs, Inclusão Financeira, dinheiro electrónico, M-Pesa.

INTRODUCTION

This dissertation seeks to examine the impact of Fintech in financial inclusion under the Mozambican regulatory framework, through the analysis of the mobile financial service of *M-Pesa* in Mozambique. In the modern world, living without a bank account is almost unimaginable because of the financial access to most of the basic services offered in the market (from paying direct debit basic day to day bills such as water, electricity, or gas, to receiving salary or applying for credit loans, amongst others), which major indicator for economic development and individual wellbeing, while responding to their needs. However, a large part of the adult population in Mozambique does not have a bank account, mostly because they find it difficult to open one, either due to the lack of accessibility of the traditional bank infrastructures located in urban areas, lack of credit history, combined with challenges of proving their identity formally, which lead banks to treat them as high risk, consequently making conventional banking services inconvenient.

In order to address this issue, alternative solutions are being sketched to address these barriers by the Mozambican government, in order to provide financial access and promote financial inclusion to the unbanked, through the use of innovative Fintech solutions.

These technological solutions help overcome the problems of weak physical and institutional infrastructure and the fixed cost structure of incumbent banking. Weak levels of financial literacy, volatility, informality and poor governance pose constraints to the commercial viability of many financial institutions in developing countries. The unbanked, in most cases, cannot afford the minimum average balance requirements and typical bank charges, in addition to lacking products and services tailored to their needs. Mobile phone technology offers Fintechs the advantage of making instantly available solutions tailored to all incomes by optimising installed infrastructures with the gain of scale for widespread distribution through secure networked channels. With mobile money, citizens underserved by the incumbent bank gain a secure means of transfer and payment at a competitive cost, are able to secure funding, have savings and be active participants of the financial system.

The Mozambican government outlined a national financial inclusion strategy in 2016, which includes regulatory perspectives to allow new players to enter the Mozambican financial market, development of educational strategies for the unbanked, creation of a legal framework that responds to regulatory gaps and requires financial consumer protection in providing financial services, to guarantee the effectiveness of financial inclusion.

With the recent legal reform in the financial sector that resulted in the approval of the new Law on Credit Institutions and Financial Companies that replaced the previous one, which was approved more than two decades ago and was certainly unsuited to the current situation of the Mozambican financial system and was not fit to respond the dynamic changes to financial services being offered in the market, we are witnessing significant transformations in the way the legislator decided to regulate the financial services and Fintech solutions offered by the new players in the Mozambican market.

1. Problem

Financial inclusion has assumed greater level of importance in recent times due to its perceived importance in contributing to the well-being, economic and social progress of local communities, including smallholder farmers and owners of micro, small and medium enterprises, both in urban and as rural areas, as it reduces the existent gap in the financial system, between traditional banks and the unbanked.

For this reason, the Bank of Mozambique has been paying increasing attention to this issue, seeking to support and stimulate national debate on the major challenges that digital innovation poses to the financial system and its regulation.

Giving access to unbanked people who are currently excluded from financial services would provide the possibilities for the creation of a large depository of savings, investment, and therefore global wealth generation. In other words, access to financial services that are well suited for low-income earners facilitates payments, promote economic development, and credit creation. The choice of the theme we proposed to develop is justified on the one hand, by the topicality and dimension of this matter in the Mozambican legal system, both from a theoretical-dogmatic perspective and from the regulatory point of view, which is

why it seems pertinent to undertake an investigative study in order to analyse the impact of fintechs in promoting financial inclusion, through the implementation of *M-Pesa*, which qualifies as a mobile banking type service, adjusted to the needs of the unbanked population.

Mozambique has a population of 30,832,244 million people and only 5.293.240 of the adult population (17%) has a formal bank account¹, meaning that more than half the population does not have access to the banking services offered on the national financial market. As such, the unbanked population manages to have access the financial system through alternative means (e.g., Fintechs, such as *M-Pesa*), which contributes to the financial inclusion of 67.2% of the adult population.

2. Dissertation objectives

i. General objective

The general objective of this study is to analyze the implications that Fintechs have in financial inclusion, through the analysis of the specific case of *M-Pesa*, an electronic money issuer.

ii. Specific objectives

The following, constitute specific objectives of the study:

- Discuss the concept and legal nature of fintech companies under the Mozambican regulatory framework.
- Discuss the regulatory approach adopted by the Bank of Mozambique on regulating of *M-Pesa*.
- Discuss the legal nature of *M-Pesa* under the Mozambican regulatory framework.
- Discuss the impact of *M-Pesa* on the promotion of financial inclusion.
- Demonstrate how Fintech has a positive correlation in financial inclusion.

¹

3. Research methodology

To carry out the proposed study we used a qualitative research method, supported by bibliographical research, through the consultation of manuals, scientific articles, reports and legislation, regarding the subject matter and also with the use of electronic sources through the Internet.

Throughout the investigation and drafting of the study include lack of Mozambican literature available on Fintechs and financial inclusion, refusal of disclosure of information by the Regulator and other relevant authorities, which led us to resort mostly on books and material support of other jurisdictions.

4. Structure of the thesis

The present work is divided into four chapters. In Chapter I we present introductory remarks to financial technology, providing its concept, Fintechs taxonomy, its evolution and the impact of Fintechs in the financial industry. In Chapter II we will discuss how Fintechs are regulated under the Mozambican regulatory framework, the Fintech regulatory approaches adopted by the regulator, Fintech services offered in the market and consumer protection. In Chapter III we will present Financial Inclusion Pillars under the national strategy for financial inclusion. Finally, Chapter IV will focus on the specific case of *M-Pesa*, where we will provide an overview of this mobile money service, discuss the approach of the regulator in framing this service in the Mozambican financial system, discuss the protection of the financial consumer in the use of *M-Pesa* services and provide data demonstrating the success of M-Pesa and its correlation with financial inclusion.

CHAPTER I – FINANCIAL TECHNOLOGY

1.1. Etymology

MOHAMED and ALI (2018, p. 13) provide an etymological and general perspective of financial technology, as an emerging financial services sector that is fast becoming indispensable to financial institutions and is constantly impacting the way technologies support or enable banking and financial services.

The Financial Stability Board defines Fintech as a “technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services”². FREEDMAN (2006, p.1 apud MOHAMED and ALI, 2018) defines financial technology as “being concerned with building systems that model, value, and process financial products such as stocks, bonds, money, and contracts”³. SCHUEFEEL (2016) defined fintech as “a new financial industry that applies technology to improve financial activities”⁴.

DORFLEITNER et al. (2016, p.4) state that “the term Fintech also denotes companies or representatives of companies that combine financial services with modern and innovative or properly disruptive technologies. As a rule, new market players offer internet-based services, applications, and targeted products. Fintechs generally seek to attract customers with products and services that are easier to use, more efficient, transparent, and automated than those currently available. Traditional banks have not yet exhausted the possibilities for improvement in this regard”.

KARAKAS and STAMEGNA (2017) state that Fintechs can also be short for “Financial technology”, a broad term that is mainly used to refer to companies that are using technology-based systems designed to provide financial services directly or to try to make the financial system more efficient. Originally, the term referred to technology applied to the back end of established consumer and commercial financial institutions.

²[FinTech - Financial Stability Board \(fsb.org\)](https://www.fsb.org/2018/04/fin-tech/)

³ MOHAMED, Hazik; ALI, Hassnain – Blockchain, Fintech, and Islamic Finance.p. 13.

⁴ Ibidem.

Today, the interpretation of Fintech has expanded to include any technological innovation in the financial sector, including innovations in financial education, retail banking, investment, or office improvement, such as back-office functions. The term Fintech has also become synonymous with the emerging financial services sector in the 21st century. In this context, Fintechs cover a wide range of services and products, such as cashless payments, P2P lending platforms, robo-trading, robo-advice, crowdfunding platforms, and virtual currencies, and are expected to expand further in the coming years.

ALCARVA (2018) argues that Fintechs aim to apply a set of emerging technologies in the financial sector with the objective of financial innovation through the creation of different business mechanisms with implications for this system. Today it is understood that Fintechs are companies that are openly disruptive of the entire financial system. And, through digital means and the decentralisation of decision centres, they are challenging, and will continue to challenge, the traditional players (banks, traders, investment banks, asset management companies, payment means companies, etc.)

The term initially referred to the technology used in the “back-end” of the major financial institutions. In recent years, however, the term has come to be used for all forms of technological innovation in the financial sector, especially those related to start-ups. Similarly, Fintechs correspond to a set of innovations applicable to the market of financial instruments that are part of the European Union's strategy to make markets more competitive. Despite the various ways of identifying them, Fintechs today constitute one of the priorities for the development of the Mozambican economy in the context of the development of the digital economy, which integrates and branches out into all sectors of activity from the financial to the non-financial sector.

1.2. Fintech evolution

Technology is transforming finance around the world to an unprecedented degree, generating new opportunities and new risks. Financial regulators must develop new approaches to regulation, including the use of technology, to balance the benefits of innovation and economic development with the need and indispensability of financial stability and sustainability, and the protection of consumers in it (Zetzscheet al., 2017).

Due to the broad scope of the Fintech Taxonomy, regulators may face a dilemma: rule-based regulatory frameworks that clearly set out compliance obligations but are often expensive from the point in the start-up phase and can be a barrier to innovation and job creation; (principle-based regulation) which is more flexible but can create some uncertainty as to what is expected in terms of regulatory compliance.

KARAKAS and STAMEGNA (2017) further state that the “interconnection between finance and technology is not a new phenomenon, dating back to the 1860s when the installation of the first transatlantic cable for telegraphic communications launched the first era of financial globalisation by enabling the rapid transmission of financial information, transactions and payments around the world.

Technological progress, such as the telex machine, the introduction of credit cards, portable financial calculators, and ATMs in the 1950s and 1960s, as well as the shift from analogue to digital industry in the 1970s, increased the speed of financial transactions. Globalisation, the widespread accessibility of the internet, the introduction of mobile phones, online banking and program trading in the 1980s were other important financial innovations.

In addition to these innovations, the global financial crisis of 2008 set the framework for financial services and information technology as we know it today and had a catalytic effect on Fintechs. In fact, these observations reflect significant manifestations of paradigm shifts, allowing the connection between technological development and financial markets, which generated a new form of organisation between companies and society until the crisis.

In light of this finding, the aforementioned authors state that “in fact, the post-crisis funding shortfall, growing public distrust of formal financial institutions and regulatory reforms such as the Dodd-Frank Act⁵ or Basel III not only increased financial institutions’ compliance obligations (e.g. higher capital and reporting requirements) and introduced affordability (stress), but also contributed to the rapid growth of the fintech sector,

⁵<https://www.investopedia.com/terms/d/dodd-frank-financial-regulatory-reform-bill.asp>

increasing opportunities for fintech companies to enter the financial sector by providing innovative and cheaper services”⁶.

MORO-VISCONTI (2021) argues that “Fintech is na elastic business that can concentrate on market niches and specific costumer segments, leveraging an innovative use of (big) data.

ARNERET et al. (2015) argues that Fintechs comprise five main areas according to the following topology:

- (i) Finance and investments, such as alternative financing mechanisms, crowdfunding and P2P, and robotics advisory services.
- (ii) Operations and risk management to create better compliance systems (e.g.,regtech).
- (iii)Payments and infrastructure, such as internet and mobile payment systems and infrastructure for securities trading and settlement and over the counter (OTC) derivatives trading.
- (iv)Data security and monetisation to increase the efficiency and availability of financial services (using“big data”), to better exploit data values and address cybercrime and espionage.
- (v) Customer interface, such as online and mobile financial services.

ARNER et al. (2015) argue that Fintechs are seen as a combination of financial services and information technology, an interconnection with a long history. As we know, this is not a recent model. In the 20th century, the first ATM was created in 1967, beginning the second phase of the introduction of technology in the financial system. This would continue until 2008, a period very much dominated by the transformations and innovations undertaken by banks and the financial system in general with a view to the mass use of technology in the financial system and interoperability between banks.

⁶KARAKAS, Cemal, STAMEGNA, Carla – Fintech: Prospects and challenges for the EU.

Between 1997 and 2008, the financial system was transformed in a very significant way, with emphasis on the digitalisation of some processes such as “online banking” (access to financial services through the telephone, website and later via smartphone applications).

In 2008, the first fintechs appeared in a context directly influenced by the technological evolution of mobile internet in smartphones and tablets. This exponential growth in the penetration of mobile devices coincides with a reduction in the cost of equipment, mobile broadband connectivity and data storage. There has been a very significant increase in available data, arising from the iteration generated in mobile equipment, and it is now possible to have very significant information about customers and be able to use it for the benefit of the bank's business (Kelly, 2014).

ARNER et al. (2015) make a historical summary on the evolution of fintechs:

- (i) Fintechs 1.0 (1866-1967) focuses on the transition from analogue to digital, the first era of financial globalisation and the early post-war period, which may include the Marshall Plan and the Bretton Woods institutions.
- (ii) Fintechs 2.0 (1967-2008) focuses on the development of digital and traditional financial services. These services provided the modern foundations driven by the digitalisation and globalisation of finance.
- (iii) Fintechs: 3.0 (2008 – up to now) it is about the democratisation of digital financial services (fintechs) in light of the global financial crisis.

1.3. Impact of Fintech in the financial industry

The great novelty of fintechs is their fast way of providing services efficiently to consumers competing with traditional market players, providing alternative financial services and making it possible for people to bank without necessarily having to go to a bank.

PHILIPPON (2017) argues that Fintech startups open a new way of doing business and using new technologies to create new opportunities to generate profits with more efficient and less costly ways. The Fintechs have intervention in areas such as, Big Data, e-Commerce, cryptocurrencies, mobility, blockchain, credit, personal finance, cybersecurity,

means of payments, identification or facial recognition, Transfers, Means of payments, cryptoactive, Integrated solutions for micro and SMEs (ALCARVA, 2018).

ALCARVA (2018) argues that “the inevitability of fintechs’ success stems from two factors - cost and speed - that place consumers on the side of this digital financial revolution. By eliminating intermediation, it eliminates costs, but it also allows for the customisation of virtually any type of financial product, and all with speed of processing”. Fintechs are transforming the financial system based on three fundamental characteristics:

- a. Democratisation of the financial system.
- b. Disintermediation of traditional business models.
- c. Customer experience.

PHILIPPON (2017) states that “the fintech movement shares some characteristics like all other disruptive innovation movements, but also some features specific to the financial sector. As in other industries, fintech startups propose disruptive innovations for the provision of specific services. The main advantage of incumbents is their customer base, their ability to predict industry developments and their knowledge of existing regulations. The main advantage of startups is that they are not held back by systems and are willing to make risky choices”. Such risky choices should or could be considered, as these are startups that deserve different treatment depending on their circumstances and competitiveness with each other and with established companies.

PHILIPPON (2017) further states that “Fintech startups, on the other hand, have the chance to build the right systems from scratch. Moreover, they share a culture of efficient operational design that many operators do not have. A specific characteristic of funding is the degree to which incumbents rely on financial leverage. As argued earlier, leverage is embedded in many financial contracts and subsidised by several current regulations. It is a feature, for example, when incentives need to be provided.

Fintech startups can therefore help for two reasons. First, they will show how far technology can provide low-leverage solutions. Second, they are funded with much more equity than existing companies." When Sharma (2015), quoted by Pranjivan (2019, p.34), states that "the regulatory environment, requiring companies to change their IT

processes to comply with the complexity of the rules; higher consumer expectations, as new technologies have driven consumer demand for better, faster and cheaper services; lower risk appetite, as a direct result of the crisis; evolution of the fintechs sector, with new business models and big players, forcing banks to react; and transformations over the years, especially with the emergence of outsourcing. This assessment is an example of the Shumpeterian theory of creative disruption, showing that technological evolution and human invention have created a new era for financial services”. We can deduce that fintechs are revolutionising the world of finance gradually and in some sectors supersonically, as seen in payment systems, cryptocurrencies and Artificial Intelligence, biotechnology, etc.

CHAPTER II – FINTECH REGULATION UNDER MOZAMBICAN LEGAL FRAMEWORK

2.1.A background on the Mozambican financial system

The Republic of Mozambique is a country located in the southeast of the African continent, with a population of 30,832,244 and a gross domestic product of USD 39 billion. Mozambique is endowed with rich and extensive natural resources. The country's economy is based mainly on agriculture, but the industrial sector, mainly in food manufacturing, beverages, chemicals, aluminium and growing oil and gas. The country's tourism sector is also growing.

South Africa is Mozambique's main trading partner and the main source of foreign direct investment. Portugal, Brazil, Spain and Belgium are also among the country's most important economic partners. Mozambique's GDP per capita, human development index (HDI), income inequality and life expectancy rates are still among the worst on the planet, while the United Nations (UN) considers Mozambique one of the least developed countries in the world⁷.

The financial trajectory of the country post independency is marked by the first Mozambican constitution, which was characterised by a framework of a centrally planned economy, one-party rule and strong state intervention, with limited private initiative⁸. Although the right to private property was recognised, the Constitution provided special protection for state property.

After the proclamation of national independence on 25 June 1975, the State took nationalisation and restructuring measures covering various economic and social sectors, including the financial system.

In effect, Decree-Law no. 5/76 of 5 February determined the reversion of all rental properties in favour of the State, which came to hold the monopoly of rental properties, which was reverted by Law no. This law was reverted by Law no. 15/91 of the 9th of

⁷<https://pt.wikipedia.org/wiki/Mozambique#top-page>

⁸ Augusto Paulino, pp 113

January, which allowed State institutions, State companies, natural and collective persons and companies to build properties for sale or lease or to carry out other activities related to real estate rights, namely the activity of real estate intermediation, as well as the tenants of State properties to acquire them by onerous title.

With the approval of Decree-Law no. 16/75 of 13 February 1975, the transitional government established intervention measures designed to stimulate economic activity or prevent deliberate damage to economic activity. These measures included, inter alia, State intervention in the supervision or administration of companies that were not functioning in a manner that would normally contribute to the economic development of Mozambique and to the satisfaction of collective interests, through the appointment of their directors or administrative committees, the suspension of the duties of one or more directors and other company officers, prior economic and financial reorganisation measures, the obtaining of extraordinary financial aid, as well as the return to the State of assets abandoned for a period of more than ninety days.

Law no. 5/77 of 31 December determined the start of a process of restructuring the banking sector, which included the cessation from 1 January 1978 of all activities of Casa Bancária de Moçambique and the departments of Banco de Crédito Comercial e Industrial, Banco Comercial de Angola, Banco de Fomento Nacional and Banco Pinto & Sotto Mayor.

The second moment was marked by the approval of the 1990 Constitution, which brought with it profound changes in several areas. The various changes included the introduction of a multiparty system in the political arena, with the ruling party ceasing to have a leading role and taking on a historical role in the achievement of independence. In the economic area, the State ceases to have an interventionist role and begins to adopt a regulatory role, through the definition of market economy policies and the promotion of pluralism of property sectors.

Contrary to the previous constitutional text, the 1990 constitution was marked by the abandonment of the monist conception of power and of a single party and a bet on a market economy and the valorization of free private enterprise, as well as the competition of all types of property: state, cooperative, mixed, and private.

PAULINO (2017), states that the model of “state owner” and interventionist was in decadence and the “regulatory state” was emerging. Indeed, new winds were blowing from Europe, Latin America, and the African continent itself: the reunification of Germany on 3 October 1990 with the incorporation of East Germany into the Federal Republic of Germany, the development of authoritarian regimes in Africa and Latin America, the collapse of the Warsaw Pact, the subsequent change in the European and Asian maps and the emergence of the United States of America as the world's dominant superpower. In this scenario, the values of representative democracy, individual freedom, property and the free market became the triumphant ideas of a liberal-convictive revolution, a movement that translated into the triumph of political and economic freedom.

With the constitutional amendment made in 2004, the rights not only of economic agents but also of consumers in the family sector, the national business sector, and the protection of foreign investment were explicitly enshrined.

In 2004 the financial system was also expressly enshrined in the constitution. The mission assigned to it by the constitutional legislator is to guarantee the formation, capture and security of savings, as well as the application of financial means necessary for the economic and social development of the country⁹.

In these terms, the action of all the players in the financial system, in particular the credit institutions must be guided by the aim of the constitutional provision: to mobilise the financial resources necessary to promote the economic and social development of Mozambique. It should also be noted that, in addition to the interests of investors and economic agents, the interests of consumers of financial products and services must also be considered.

In the pursuit of the mission entrusted to the financial system, the Bank of Mozambique has an important regulatory and supervisory role, to discipline and correct all distortions that jeopardise the stability of the financial system. Ex ante, the Bank of Mozambique has a preventive function of prudential and behavioural supervision and ex post a protective function of action, which is activated in times of crisis (e.g., in situations of recovery and

⁹Article 126 of the Mozambican Constitution of 2004.

reorganisation of institutions), with a view to protecting consumers, creditors and the security of the financial market.

The current spectrum of the Mozambican economy is characterised by the growth of foreign and national investors from various sectors and nations. This naturally has led to an increase of financial transactions as well as the inflow and outflows of funds between Mozambique and foreign States - a relationship that routinely imposes on the Bank of Mozambique the duty to regulate and oversee these transactions to ensure that the country's macroeconomic policies and strategies are correctly implemented.

2.2.Fintech Regulatory approach

Regulation is the act and effect of regulating, that is, of establishing general and abstract rules of conduct.

LLEWELLY (1999) points out that the main objectives of financial regulation are to ensure systemic stability, to maintain the health and safety of financial institutions and to protect consumers¹⁰.

The regulator strives to enable a level playing field for digital innovators and incumbents, while ensuring consumer protection and reducing any form of systemic risk¹¹.

FERNANDO (2021) states that in the field of financial regulation, social objectives such as financial stability, market integrity or consumer protection take precedence over favouring competition in financial services markets. In fact, the licensing requirements for those markets typically act as a form of barrier to entry that can only be justified based on higher-priority goals¹².

¹⁰The author points out seven economic components that should be considered in the regulation and supervision of financial markets: (i) potential systemic problems associated with externalities; (ii) correction of imperfections and market failures; (iii) the need for monitoring financial institutions and existing economies of scale; (iv) the need for consumer confidence, which also represents a positive externality; (v) potential "grid lock" associated with adverse selection and moral hazard; (vi) moral hazard associated with rulers' choices between lender of last resort and deposit guarantee funds; and (vii) consumers' needs for protection and low transaction costs.

¹¹ Volker Liermanf, pp 220.

¹²Restoy, Fernando, 2021.

Regulating Fintechs is not always an easy task to regulators, as technological innovation grows at a rapid pace which can sometimes be a dilemma for regulators who are not able to always be up to date on the most recent technologic developments, innovation is unpredictable and existing regulatory structures are often slow to adapt to changing social and economic circumstances, and regulators tend to be risk averse. Digital products, services and industries can become very large very quickly, and the political cycle often takes longer to catch up, whereas a new Fintech startup can develop and establish a business in a matter of months. As a result, adapting quickly to technological innovation poses a significant problem for both regulators and the technology industry. This regulatory challenge is exacerbated by the fact that Mozambican regulatory system is complex and fragmented, with different competent authorities whose oversight sometimes overlaps.

With that in mind and to not stifle innovation, the Bank of Mozambique has been working in partnership with the FSD Moç since 2018, in launching regulatory sandboxes to test, in a controlled manner, innovative products and services¹³ about which there is still no certainty as to their efficiency/adequacy or the risks of their use, before they are introduced in the market. In this environment, the regulatory authority closely monitors and evaluates *pari passu* the entire process of development of the innovations, gathering valuable experience that will allow it to find the best way to regulate or improve the regulatory framework on the products or services tested, to stimulate technological innovation, increase competition and benefit the consumer with better and cheaper financial products and services¹⁴.

2.3. Legal framework of Fintechs under Mozambican law

The Law on Credit Institutions and Financial Companies (LICSF) defines Fintech as “technological innovation in financial services that may result in new business models, applications, processes or products, with a relevant effect on the provision of financial services”.

¹³ The main areas of interest include, but are not limited to, digital wallets and payment aggregators, credit analysis solutions, data analytics solutions, digitalisation and financial services, e-KYC solutions and crowdfunding.

¹⁴ <https://www.bancomoc.mz/pt/areas-de-actuacao/inclusao-financeira/sandbox-regulatorio-do-bm/>

The following is the applicable legal framework to FinTechs, currently in force in Mozambique:

- i. The Constitution of the Republic of Mozambique.
- ii. Statutory Law of the Bank of Mozambique.
- iii. The Law on Credit Institutions and Financial Companies.
- iv. National Payments System Law.
- v. Consumer Protection Law and its Regulation.
- vi. The Electronic Transactions Law.
- vii. Payment Service Providers Regulation.
- viii. Anti Money Laundering Law.

2.4.Financial Consumer protection

The new Code of Conduct for Credit Institutions and Financial Companies and Financial Consumer Protection was approved by Notice no. 8/GBM/2021 of December 22nd, which revokes Notice no. 2/GBM/2018 of April 16th.

According to its preamble, the new code of conduct arises from the need to promote best practices in the conduct of credit institutions and financial companies and the protection of financial consumers in the design, dissemination and availability of financial products and services, as well as to promote trust and fairness in the relationship they establish with consumers.

The code strengthens and broadens the scope of financial consumer protection (about data protection and advertising of financial products and services) and embodies the general consumer protection principles set out in the Law of Credit Institutions and Financial Companies.

Let us look in more detail at some of the provisions introduced because of the objectives listed above:

(i) Extension of the scope of application

The new code extends the scope of application of the consumer protection rules, and now applies not only to ICSFs and microfinance operators, but to all entities subject to supervision or monitoring by the Bank of Mozambique in the course of their activity (e.g. electronic money issuers, payment services providers, any fintech firms).

(ii) Right to Information and awareness

The financial consumer has the right to obtain from the institution clear and objective information on the financial products and services offered fees, commissions and charges, and basic knowledge on joining them, in order to make an informed decision.

(iii) Right to choose

The financial consumer is entitled to choose financial products or services, as well as to change the institution or the domicile for receiving or obtaining the respective products and services, and the financial institution cannot prevent him/her from doing so.

(iv) Duties of the financial consumer

New provisions were introduced regarding the duties of the financial consumer, subjecting him/her (among others) to the obligation to (i) act in good faith during the negotiation, as well as in the execution of the contracts entered into with the institution; (ii) read and analyse all the information made available by the institution, before contracting any financial product; (iii) not make use of amounts unduly deposited or transferred to his bank or electronic money account; (iv) comply punctually with the contract entered into with the institution, paying all the instalments and other charges within the time limits established in the contract.

(v) Rules of conduct and Protection of the financial consumer

In carrying out their activities, institutions should adopt transparent, current, and clear policies and rules of conduct related to the treatment and respect of the financial consumer, integrating them as part of their institutional culture and in their market activities, disseminating them among their employees and publishing them on their respective websites for consultation by the consumer and the public.

(vi) Transparency

Institutions must, before and during the contractual relationship, provide the consumer with information and assistance on the characteristics and use of the financial product or service, the conditions of access, membership or contracting, in a true, clear, complete, objective and appropriate manner, in language that is perceptible and distinct from the promotional material.

(vii) Duty to report changes in the provision of financial services

In the course of their activities, institutions shall communicate to the financial consumer and the general public at least 30 (thirty) days in advance any change in the provision of financial services, any decision to close a branch, wind up or suspend its activities, or transfer its business to another institution or location.

(viii) Duty to provide a customer service channel

In the light of the new code, institutions should publicise and maintain a free, direct service and access in Mozambique and abroad, which is quick and easy, in Portuguese language, and which allows the consumer to contact them twenty-four hours a day, by telephone and, complementarily, by any other means.

(ix) Duty to report on transactions through payment instruments and channels

Under the terms of the new code, institutions are obliged to provide the consumer with a short message service (SMS) for information on any operations or transactions carried out in Mozambique or abroad, through electronic or physical payment instruments, in real time and free of charge.

(x) Abusive and prohibited practices

The range of abusive practices by institutions was extended to include (among others), the following prohibitions (i) restricting the consumer's freedom to choose the insurance company of his choice for the establishment of credit insurance; (ii) taking possession of and/or retaining the consumer's payment instrument and/or respective access codes, namely bank card, cheque, as a condition or guarantee for the repayment or payment of debts or any expenses; (iii) imposing on the consumer the assumption of additional pecuniary obligations that are more burdensome compared to the existing ones, generating breach of primary and additional obligations.

CHAPTER III – FINANCIAL INCLUSION

3.1. Definition

It is the uptake and usage of a range of financial products and services by individuals and small, and medium enterprises (SMEs), provided in a manner that is accessible and secure to the customer and sustainable to the provider.

Broadly defined, financial inclusion lays down the premise that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way.¹⁵

Financial inclusion refers to all initiatives that make formal financial services available, accessible, and affordable to all segments of the population. This requires particular attention to specific portions of the population that have been historically excluded from the formal financial sector either because of their income level and volatility, gender, location, type of activity, or level of financial literacy¹⁶. In so doing there is a need to harness the untapped potential of those individuals and businesses currently excluded from the formal financial sector or underserved, and enable them to develop their capacity, strengthen their human and physical capital, engage in income-generating activities, and manage risks associated with their livelihoods. Financial inclusion goes beyond improved access to credit to encompass enhanced access to savings and risk mitigation products, a well-functioning financial infrastructure that allows individuals and companies to engage more actively in the economy, while protecting users' rights.¹⁷

¹⁵<https://www.worldbank.org/en/topic/financialinclusion/overview>

¹⁶ In fact, the total number of bank accounts rose from 5,116,741 in 2020 to 5,293,240 in 2021, i.e., an increase of 3.4%. In terms of gender segregation, there is a downward trend in banking in both genders, and among women, the total number of adults holding bank accounts rose from 196 women per 1,000 adults in 2020 to 194 in 2021. The male population now has 426 accounts per 1,000 adults in 2021, compared to 427 in 2020, which is a reduction of one account per 1,000 adults compared to 2020.

¹⁷ Financial inclusion in Africa (2013). African Development Bank.

3.2. Pillars of financial inclusion

The common concepts that describe financial inclusion are availability, accessibility, affordability established in the market, aimed to satisfy the consumers' needs. From this, becomes clear that the financial access offered by financial technologies does not correlate directly to financial inclusion. It is certainly a step towards financial inclusion. It is a mean and not an end. There are a set of other variables that have to be observed in order to affirm that financial inclusion is present in a specific economy. Although some studies define a variety of indicators, the following are the most common dimensions of financial inclusion: (i) access, (ii) usage and (iii) quality, as demonstrated below.¹⁸

Table1. Pillars of Financial Inclusion

1. ACCESS	Availability of formal, regulated financial services: Physical proximity Affordability
2. USAGE	Actual usage of financial services and products: Regularity Frequency Duration of time used
3. QUALITY	Products are well tailored to client needs Appropriate segmentation to develop products for all income levels

Source: Financial inclusion in Africa 2013-African Development Bank.

Adopting a multidimensional definition of financial inclusion is crucial because it helps to overcome the often-erroneous assumption that inclusion is inevitably achieved simply by providing enough access points.

A broader understanding of financial inclusion should focus on how frequently customer use products, whether the products meet their needs, and whether they are better off as a result. As demonstrated in the Figure 1, defining and measuring usage and quality in addition to ease of access would be very useful for analytical purposes.

These three dimensions of financial inclusion are broad categories into which indicators can be classified without being restrictive. They simply provide a framework to help policy makers develop a sufficiently robust measurement strategy that reflects the

¹⁸ Financial inclusion in Africa (2013). African Development Bank.

multidimensional nature of financial inclusion. Within this framework, policymakers must continue to develop a set of indicators that meet their needs and resources.

The Mozambican government has established following pillars for financial inclusion, aligned with the National Strategy for Financial Inclusion: (i) Access and Use of Financial Services, (ii) Quality and Strengthening the financial structure, (iii) Consumer Protection and Financial Education.

- ***Pillar I: Access and Use of Financial Services***

With funding from the Fund for Support for Economic Rehabilitation (FARE), the preparation of the campaign for birth registration for members and groups of associations saving accumulated credits in rural areas and issuing identification cards for membership of financial services began in 2021, with a view to expanding and access of other Mozambicans to financial services in rural areas. In the agrarian campaign 2020/2021, the SUSTENTA Programme of the Ministry of Land, Environment and Rural Development (MITADER) benefited 103 districts in eight provinces of the country (except Inhambane, Maputo Province and Maputo City), where 543 small emerging commercial farmers (PACE) were financed to serve 112,000 smallholders, corresponding to 56,040 households.

In parallel, another 181 entrepreneurs in the agricultural sector in Cabo Delgado, Zambézia, Manica, Sofala and Gaza provinces received direct funding, and overall, the programme directly and indirectly covered 291,241 beneficiaries. Another highlight is that of a total of 219,561 pensioners paid in December 2021 by the INPS, 184,433, corresponding to 84%, were paid via transfers to the respective bank accounts.

In 2021, Absa, Millennium BIM and Standard Bank materialised the provision of electronic access channel to their respective systems, for the payment of pensions directly to each pensioner's account, considering the desideratum of integration of pensioners in the Single Centralised System of pension payments. Meanwhile, the integration of other financial institutions operating in the country is underway. In what concerns the facilitation of withholding at source of loan repayment values granted within the scope of the implementation of programmes to grant financing to pensioners, it has also become a reality in financial service providers, namely BayPort, Letshego and Peace Fund.

The main objectives of the first pillar are to expand and diversify the network of access points to financial services and to improve the legal and regulatory framework for the expansion of products and services.

Table 2. Total of Access points

	Pontos de Acesso		Nível de Concentração		Var. (%)
	2020	2021	2020 (%)	2021 (%)	
Agências ⁽¹⁾	789	754	0.7	0.6	(4.4)
Agentes Bancários	1,342	1,099	1.2	0.8	(18.1)
Agentes Não Bancários ⁽²⁾	69,548	94,697	62.5	69.2	36.2
Representações ⁽³⁾	1,112	1,586	1.0	1.2	42.6
Delegações e Balcões ⁽⁴⁾	148	153	0.1	0.1	3.4
ATM	1,710	1,631	1.5	1.2	(4.6)
POS	36,540	36,957	32.9	27.0	1.1
Total⁽⁵⁾	111,215	136,877	100.0	100.0	23.1

Source: Mozambique`s Financial Inclusion Report (2021)¹⁹

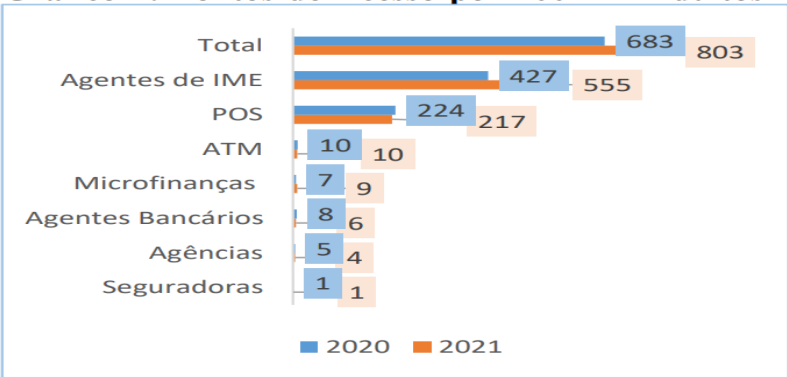
The highest concentration of access points was at the level of EMI agents, with 69.2%, representing a growth of 6.7 pp, in 2021, compared to the previous year. This is followed by POS, with 27% of the total number of access points, resulting in a reduction in the level of concentration level by 5.6 pp, in 2021²⁰.

Regarding demographic access, in 2021, 803 access points were recorded for every 100.000 adults, representing an increase of 17.6% compared with 2020 (refer to Graph 1).

¹⁹Notes: ⁽¹⁾ Branches of banks, micro banks and credit unions; ⁽²⁾ EMI agents; ⁽³⁾ Representations of savings and loans organisations, micro ⁽³⁾ Representations of savings and loans organisations, microcredit operators and deposit-taking intermediaries; ⁽⁴⁾ Branches and counters of insurance institutions; ⁽⁵⁾ Excluded from the total number of access points ⁽⁵⁾ Excluded from the total number of access points are branches of stock exchange operators to avoid over-counting, since they coincide with bank branches.

²⁰Source: Mozambique`s Financial Inclusion Report (2021).

Graph 1. Access points for every 100.000 adults

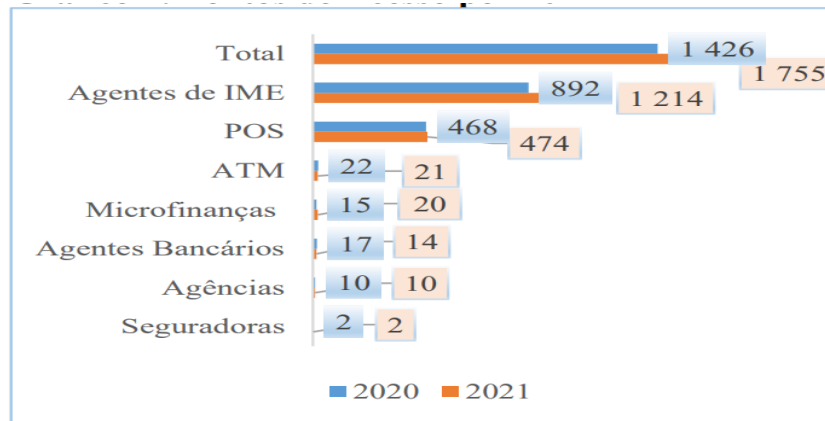


Source: Mozambique’s Financial Inclusion Report (2021)

Regarding demographic access by type of access point, the highest coverage of the adult population is by non-bank EMI agents, with 555 access points per 100 thousand adults, representing an increase of 30.1%, when compared to 2020. On the other hand, POS recorded the lowest population coverage, with 217 points per 100 thousand adults in 2021, compared to 224 points per 100 thousand adults in 2020, representing a 3.3% decline, when compared to 2020.

Regarding geographic access, Graph 2 illustrates that 1,755 access points per 10,000 km² were recorded in 2021, against 1,426 observed in 2020, representing a 23.1% increase. Similarly, to demographic access, the EMIs and POS agents contributed to a large extent to this result, with 1,214 agents and 474 POS per 10 thousand km², an increase of 36.2% and 1.1%, respectively, when compared to 2020.

Graph 2. Access Points by 10.000 km²

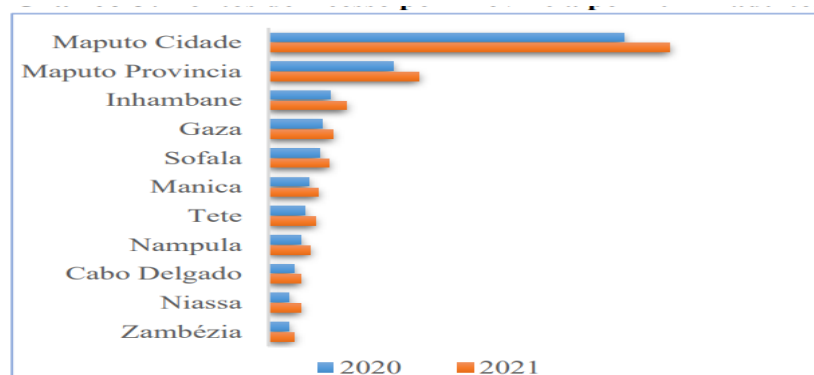


Source: Mozambique`s Financial Inclusion Report (2021)

As with demographic access, the agents of the IME and POS contributed greatly to this result, with 1,214 agents and 474 POS per 10 thousand km², an increase of 36.2% and 1.1%, respectively, when compared to 2020.

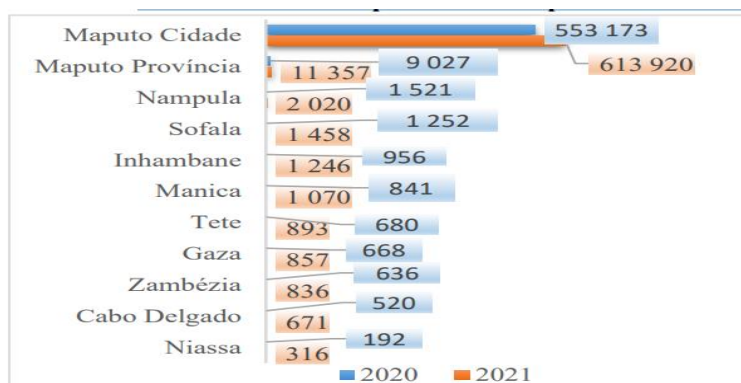
Graphs 3 and 4, below, illustrate the geographical and demographic distribution of access points by province. Regarding the demographic distribution of access points per province, in 2021 Maputo city and the provinces of Maputo, Inhambane and Gaza had the highest number of access points per 100,000 adults, with 4.706, 1.765, 909 and 750 access points, respectively. In turn, Zambézia, Niassa and Cabo Delgado provinces are those that registered the lowest levels of demographic access (per 100 thousand adults), with 297.375 and 380 access points, respectively.

Graph 3. Access Points by Province per 10.000 adults



Source: Mozambique`s Financial Inclusion Report (2021)

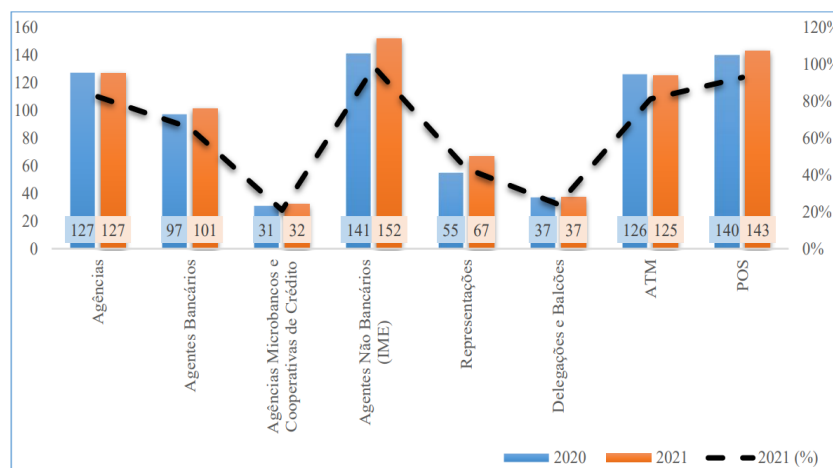
Graph 4. Access points by Province per 10.000 km²



Source: Mozambique`s Financial Inclusion Report (2021)

In terms of coverage by type of access point, in 2021, the country had 99% coverage by EMI agents and 93% by POS, followed by bank branches with 82% coverage, ATMs with 81% and bank agents with 66% coverage. Branches and branch offices/branches contributed 44% and 24% coverage, respectively, with micro-banks and credit unions being the type of access point that recorded the lowest level of coverage, with only 21%.

Graph 5. Coverage of Financial Services Access Points



Source: Mozambique`s Financial Inclusion Report (2021)

At the provincial level, all provinces have full coverage of at least one EMI agent in each district, apart from Nampula which has 91% coverage.

Table 3. Coverage of Access Points by Province

	2020								2021							
	Agências	Agentes Bancários	Agências Microbancos e Cooperativas de Crédito	Agentes Não Bancários (IME)	Representações	Delegações e Balcões	ATM	POS	Agências	Agentes Bancários	Agências Microbancos e Cooperativas de Crédito	Agentes Não Bancários (IME)	Representações	Delegações e Balcões	ATM	POS
Nível de Cobertura																
Provincia de Maputo	100%	63%	100%	100%	100%	50%	100%	100%	100%	63%	100%	100%	100%	50%	100%	100%
Gaza	79%	71%	14%	86%	57%	29%	86%	79%	79%	100%	14%	100%	64%	29%	79%	79%
Inhambane	100%	86%	29%	100%	50%	21%	100%	100%	100%	86%	29%	100%	64%	29%	100%	100%
Sofala	92%	69%	23%	100%	54%	8%	92%	100%	92%	69%	23%	100%	69%	8%	85%	100%
Manica	75%	83%	25%	92%	25%	25%	83%	92%	75%	83%	25%	100%	42%	25%	83%	92%
Tete	73%	73%	13%	93%	20%	60%	73%	87%	80%	73%	13%	100%	40%	60%	80%	87%
Zambézia	64%	55%	14%	82%	27%	18%	64%	77%	64%	45%	14%	100%	32%	18%	68%	82%
Nampula	96%	74%	9%	91%	39%	13%	91%	91%	91%	74%	9%	91%	39%	13%	91%	96%
Cabo Delgado	82%	29%	6%	94%	12%	12%	71%	100%	82%	29%	6%	100%	18%	12%	65%	100%
Niassa	75%	38%	19%	88%	13%	25%	75%	94%	75%	50%	25%	100%	13%	19%	75%	100%
Total	82%	63%	20%	92%	36%	24%	82%	91%	82%	66%	21%	99%	44%	24%	81%	93%

Source: Mozambique`s Financial Inclusion Report (2021)

- **Pillar 2: Quality and Strengthening the financial structure**

The main objective of the second pillar is to strengthen the structure of the National Payments System, to ensure a steady expansion of credit, which includes the creation of a regulatory framework and policies that will allow the entry of new entities that intend to offer financial services through technological innovation.

The approval of the Law on Credit Institutions and Financial Companies in 2020 which defines for the first time Fintechs and establishes that in the public interest, namely financial inclusion the Bank of Mozambique may determine that certain financial services certain financial services and products or minimum services.

To ensure the strengthening of the financial structure, The BoM is currently preparing a vision for the National Payment System 2022-2027, which includes, among other objectives, the promotion of financial inclusion.

Also, the BoM, in partnership with TELCOs, has created actions to ensure the general interoperability of payments in Mozambique which allows for payments to be made between bank accounts and EMIs and vice-versa.

Furthermore, the BoM is committed to carry out a diagnosis on the existing legal framework and structure to strengthen the current legal regime aligned to the market needs.

- **Pillar 3: Consumer Protection and Financial Education**

The following are the main objectives of the third pillar:

- (i) Enhance the legal, regulatory, and supervisory framework for the protection of financial consumers.
- (ii) To increase the range of information available to the public.
- (iii) Raise the level of financial literacy.

With regard to improving consumer protection and financial education, the following actions were taken in 2021:

By the BoM:

- (i) Review of Notice no. 3/GBM/2018, of 18 April, which approves the Regulations on the Advertising of Financial Products and Services.
- (ii) Celebration of World Savings Day and the National Financial Education Roadshow, which, given the restrictions resulting from the COVID-19 pandemic, took place via remote channels, especially television and social networks.
- (iii) Advisory campaigns for employees of Electricidade de Moçambique and the Attorney General's Office, which focused on guiding participants to prevent financial errors that contribute to over-indebtedness, as well as exit strategies in cases where the person is already over-indebted.

By the ISSM:

- (i) Promotion, in partnership with TVM, of television programmes on insurance matters, where issues at various levels of the insurance activity were addressed, within the scope of the Bet on Insurance Project.
- (ii) ISSM has been carrying out several actions in the framework of consumer protection and financial education. However, due to the containment measures, these were circumscribed to face-to-face events with homogeneous groups (levels of professionals).

By the BVM:

- (i) Training for financial players, stock exchange operators and others on operating procedures in the trading cycle of listed securities.
- (ii) Capacity building for target audiences, on BVM's contribution to boosting small and medium-sized companies in times of pandemic
- (iii) Participation of BVM, as a panelist, in the Mozambique Fintech Week event, with the objective of divulging its role as a financing opportunity.
- (iv) Insertion of information about the Capital Market and BVM, in several magazines.
- (v) Participation in webinars and several television programmes.
- (vi) Launch of a mobile application and dashboard for the Financial Education Programme, aimed at using technology to disseminate information and reduce physical presence, both in the dissemination process and in the demand for BVM information.

3.3. The National Strategy for Financial Inclusion (ENIF)

The Government of Mozambique launched in 2016 the National Strategy for Financial Inclusion (ENIF) 2016-2022, which aims to provide a structured approach for the implementation of policies and actions priority actions for the establishment of mechanisms for monitoring, evaluation, and coordination of activities to be carried out by the various stakeholders, aimed at accelerating the process of building a financially included society in Mozambique.

In effect, in 2021, Mozambique maintained its policy of regional and international cooperation and collaboration with various institutions on matters of financial inclusion. As a member of the Alliance for Financial Inclusion (AFI), in 2021 it benefited from support under the In-Country Implementation Program (ICI), to conduct the National Financial Literacy Diagnosis in the country.

The success of the ENIF is linked to the conditions of the economy and the financial sector, as well as the level of involvement of the Government and the private sector. In fact, and despite the macroeconomic and fiscal challenges registered in recent years, several actions

have been implemented and are underway, through various institutions at Government level and in the private sector, aimed at promoting the expansion of access points to financial products in the country, with special emphasis on rural areas.

At the international and regional level, in 2020 Mozambique maintained cooperation and collaboration with various institutions on matters of financial inclusion. As a member of the AFI, the highlight goes to the holding of the 3rd Global Conference on Inclusive Green Finance, co-organized by the BoM and AFI. Considering the Maya Declaration for financial inclusion, Mozambique has made 3 commitments under the Sochi Agreement, namely:

- (i) Approval of an instrument that operationalises the Regulatory Sandbox for Fintechs.
- (ii) developing a regulatory framework (regtech) that adjusts to financial innovations (fintechs) and determines prudential supervision for fintech payment services institutions; and
- (iii) Continuously promoting the introduction in the national market of financial products and services, business models and innovative solutions that contribute to the provision of accessible financial services to the entire population. In effect, in 2020 the AFI programme called the ICI Programme began, which has the component of developing a regulatory and supervisory policy framework for fintechs in Mozambique.

The mapping of access points to financial products and services was consolidated during the period under analysis. It was deemed necessary to prepare a standard on the mandatory reporting of new points of access, and Notice no. 05/GBM/2020 of April 13th was approved, on the Mandatory Capture and Sending of the Geographical Coordinates of Points of Access to Financial Services. The mapping process of points of access is in the data consolidation phase, especially for e-money agents, whose capture for the baseline is still ongoing, given the large number of such points of access.

The national risk assessment on money laundering and terrorist financing was conducted throughout 2020, with emphasis on the inclusion in the national risk assessment of the

module on financial inclusion products. This activity is a prerequisite for the definition of KYC requirements by levels²¹.

Improving the legal and regulatory framework in the financial sector is essential to boosting financial inclusion. Thus, with a view to increasing and diversifying financial institutions, alternative means of payment, financial services and technological innovation in the financial system, the BoM approved Notice no. 03/GBM/2020 of March 27th on minimum capital for companies providing payment services in the categories of payment aggregators and funds transfer. Consumer protection is key to maintaining the confidence of users of financial services. To this end, within the legal, regulatory, and supervisory framework for financial consumer protection, Notice no. 09/GBM/2020 of December 17th (Complaints Handling Regulation) was approved.

The national financial system has experienced growth and expansion through the improvement and expansion of its infrastructure, thus contributing to greater inclusion of the population.

The bankability of the economy has a significant impact on financial inclusion. Bankarisation measured by the number of bank accounts per 1,000 adults, shows that in 2020 there were about 314 bank accounts per 1,000 adults, up from 305 in 2019, illustrating an increase in the country's bankarisation by 9 bank accounts per 1,000 adults. There was an increase in the number of bank accounts from 4,885,221 in 2019 to 5,116,741 in 2020, corresponding to a rise of 5.0%. On the other hand, in terms of the expansion of e-money accounts, by 2020 the country had about 66% of its adult population with an open e-money account with electronic money issuers (EMIs), up from 56% in 2019.

In terms of physical access, more districts now have at least one point of access to financial services. In 2020, from a total of 154 districts, the country had 127 districts covered by bank branches and 31 districts with coverage of microbanks and credit unions, representing a coverage level of 82.5% and 20% of total districts, respectively, up 9.5 pp and 2 pp compared to 2019. The level of penetration of the insurance market is low. Throughout 2020, the Mozambican insurance market operated with 21 insurers (13 non-life insurers, 4

²¹ Article 10 of the AML Law.

life insurers and 4 life insurers), 1 microinsurer, 1 reinsurer and 735 insurance intermediaries (103 insurance brokers, 27 commercial insurance agents, 121 individual insurance agents and 484 insurance promoters). In nominal terms, the insurance market grew by 20.5%¹, 0.7 pp lower than in 2019, which showed a growth expansion of 21.2% over 2018. The penetration rate of insurance in the economy stood at 2.2%, an increase of about 0.5 pp points compared to 2019. The performance of the capital market is based on the performance of its main indicators, that is, gross market capitalisation and as a percentage of gross domestic product (GDP), turnover, market liquidity, number of listed securities, among others. Market capitalisation, the main indicator of the stock market, rose from 102,138.73 million MT in 2019 to 114,216.65 million MT in 2020, representing growth of 11.8%. In terms of GDP, market capitalisation was 12.9%.

The Government's initiatives largely oriented towards the financial inclusion of the rural population have contributed to the improvement in the levels of financial inclusion of this population group. Digitisation of state payments (G2P) is also a path to financial inclusion. Indeed, the State Social Security system, which covers progress, was registered in the actions programmed in the ENIF.

The degree of fulfilment of the ENIF action plan shows that in 2021, of the total 54 actions enrolled, 17 (31%) have been carried out, 21 (39%) are underway and 4 (7%) have not yet been started and 12 (22%) are ongoing.

Despite the remarkable developments registered throughout 2021, some challenges persist in improving the levels of financial inclusion, especially in rural areas. Thus, to ensure the effective implementation and achievement of the ENIF objectives, actions that can have a high impact in the short term (12 months) on financial inclusion should be defined. Among them: (i) operationalisation of the CNIF; (ii) continuous modernisation of the legal and regulatory framework; (iii) continuous strengthening of the insurance and capital market; and (iv) design of financial services and products adjusted to the needs of the population.

3.1.Fintech and Financial inclusion

It has been widely studied and documented that financial inclusion provides significant benefits to the poor and marginalized and is also an important engine of economic development. Access to formal financial services and products allows households to expand consumption, manage risks and invest in durable goods, health and education. Almost 40 years ago, Mohammed Yunus, the founder of Grameen Bank in Bangladesh and winner of the Nobel Peace Prize in 2006, pioneered the concept of microfinance to help the BoP to improve their lives.

Potential development benefits from financial inclusion have been evidenced by many studies over the past decade-particularly the use of digital financial services, including mobile money services, payment cards, and other financial technology applications (or Fintech). Although the evidence is somewhat mixed, even studies that do not find positive results often point to opportunities to achieve better outcomes through careful consideration of local needs.

Fintech solutions are expected to reduce operating costs, making it profitable for providers to serve a larger range of customers. For financial-service providers, MANYIKA et al. (2016) argues that technology can bring up to 90 percent cost reductions with respect to physical branches. This expected gain explains why developing economies are quickly moving from traditional banking to digital finance.

During the pandemic situation of covid 19, Fintech helped government reach people quickly and securely with cash transfers and other forms of financial assistance, as well as providing businesses with emergency liquidity. They allow people to transfer money – Including cross – border transfers – and pay bills from home or at a market or store, with limited physical contact.

But the potential is much greater than what has been achieved so far.

The Coronavirus crisis has highlighted the benefit of digital financial services in many different dimensions and their critical role in achieving the Sustainable Development Goals.²²

CHAPTER IV – THE SPECIFIC CASE OF M-PESA

4.1. Overview

M-Pesa (where “M” stands for mobile and “Pesa” is Swahili²³ for money) is a Fintech service which offers diverse mobile money transactions, launched in Kenya in 2007 by Vodafone Group plc²⁴ and Safaricom, which is the largest MNO in Kenya.

M-Pesa is also commonly referred to as a mobile money account, a branchless banking service or mobile banking.

The service is currently present in 7 African countries: Kenya, Tanzania, Lesotho, Democratic Republic of Congo, Ghana, Mozambique, and Egypt, with provision of expansion for new economies in the continent²⁵.

A joint venture was established between Safaricom plc and Vodacom²⁶, in order to conclude the acquisition of the *M-Pesa* from Vodafone Group plc and to accelerate the expansion of financial services to new African markets.

The disposal of the *M-Pesa* brand, support, and product development services to Vodacom and Safaricom is broadly financially neutral for Vodafone Group²⁷.

Although there are other mobile payment services on the country (e.g., E-mola and mkesh), due to the high level of subscribers and transactions offered by the service, *M-Pesa* is

²² Digital Financial Services (2020). World Bank Group, <https://www.worldbank.org/en/topic/financialsector/publication/digital-financial-services>

²³ Swahili is a language widely used in East Africa, especially between people who speak different first languages, <https://www.oxfordlearnersdictionaries.com/definition/english/swahili>.

²⁴ Vodafone is a leading telecommunications company in Europe and Africa, <https://www.vodafone.com/about>.

²⁵ Outside the African continent, the service is also present in Romania, Albania and India, <https://socialfintech.org/do-you-know-about-m-pesa-you-should-do/>.

²⁶ Vodacom is a leading African communications company providing a wide range of communication services, including data, mobile and fixed voice, messaging, financial services, enterprise IT and converged services to 116 million customers (including Safaricom), <https://www.vodacom.com/about-us.php>.

²⁷ <https://www.vodacom.com/about-us.php>.

identified as the largest payments platform in the country, with over 40 million users and processing over a billion transactions every month²⁸. M-Pesa is currently the biggest financial service in Mozambique in terms of range of access, which costomers you to transfer and withdraw money, make payments in physical and virtual establishments for products and services, save money and take out loans via mobile phone.

4.2.Regulator’s approach

The Constitution of Mozambique foresees that the Bank of Mozambique (“BoM”) is the Central Bank of Mozambique. It is governed by its own statutory law and is subject to the laws of Mozambique as well as to international rules that are derived from treaties or conventions to which the Republic of Mozambique has subscribed.

Thus, the BoM is part of the indirect administration of the State – and therefore subject to the laws and rules applicable to the State Administration – the acts of the Governor of the BoM are issued in the form of Notice (“*Aviso*”), which is subject to publication in the Official Gazette (“*Boletim da Republica*”).

On a national level, the statutory law²⁹ of the BoM identifies its nature, objectives and functions as well as establishes its headquarters in Maputo.

The BoM’s statutory law defines its primary objective as the preservation of the national currency value. The BoM is, therefore, entrusted upon to: (i) promote an adequate monetary policy; (ii) conduct a credit policy that enables the growth and economic and social development of the country; (iii) manage external availabilities and ensure the volume of payments in the context of international trade; and (iv) regulate local banking activity.³⁰ Therefore, amongst other tasks and roles, the BoM is The Bank of Mozambique establishes prudential limits differentiated according to the type of institution and/or the risks inherent inherent to their activity, including specific limits for institutions whose institutions whose business model, applications, processes or products are characterised as Fintechs.

²⁸<https://www.vodafone.com/about>.

²⁹ Enacted by Law no. 1/92 of January 3rd.

³⁰ Article 3.2 of Law no. 1/92 of January 3rd.

There is not a blanket to regulatory approach to Fintech, and different regulators have employed different methods and tools when assessing and responding to developments:

(i) **Wait and see**

This approach is defined by regulators observing and monitoring the trends of innovation from afar before intervening where and when necessary. Over time, as regulators gain capacity around innovation, and technology becomes more commonly adopted by licensed entities, policymakers may incrementally change regulations over time. A wait and see approach have commonly emerged when there is regulatory ambiguity on whether an activity falls under the remit of a particular institution. Alternatively, when there has been a need to further build regulator capacity prior to issuing a response, a Wait and see approach has offered regulatory forbearance in order to allow innovations to develop unhindered.

(ii) **Test and learn**

Involves the creation of a custom framework for each individual business case allowing it to function in a live environment (often with a noobjectionletter from regulators). However, the extensiveness of supervision and oversight, as well as the safeguard measures put in place, varies across jurisdictions. In some cases, policymakers have followed a light-touch without close supervision, and in others, policymakers have followed more extensive frameworks on a case-by-case basis that involved stringent supervisory attention and oversight.

(iii) **Innovative approach**

Some public authority's welcome innovation in the digital finance sphere. They promote experimentation and introduce governmental measures to promote new initiatives. Some examples of supportive governmental institutions are regulatory sandboxes, innovation hubs and startup accelerators.

(iv) **Policy Responses**

Applying existing regulatory frameworks to new innovations and their business models, often by focusing on the underlying economic function rather than the entity. In this scenario, the existing regulatory framework does not change and instead authorities clarify how existing requirements apply to Fintech.

Adjusting existing regulatory frameworks to accommodate new entrants and the re-engineering of existing processes to allow adoption of new technologies. In this scenario the current regulatory framework is amended to include Fintech activities, creating new regulatory frameworks or regulations to include (or prohibit) Fintech activities. This includes instruments like laws or new regulations to extend regulatory perimeters, introduce specific requirements for new class of players in the ecosystem or to specifically prohibit certain Fintech activities.

To support the development of an appropriate legal, regulatory and supervisory framework around the policy response areas, many countries have been exploring new regulatory approaches aimed at promoting innovation and experimentation, particularly in areas where the regulatory framework is either unclear or not present.

It is important to note that, while each category is distinct, integration among the approaches is common and they can be applied in tandem. In addition, it is possible for elements within each category to overlap, be applied differently in different jurisdictions, and share similar policy tools.

To regulate the operation of *M-Pesa*, the Mozambican Regulator adopted the Policy Response approach, by applying the existing regulatory framework at the time, to allow the new business model to operate.

M-Pesa was established on January 16th, 2013, through the incorporation of Vodafone M-Pesa, S.A, a public limited company licensed with the Bank of Mozambique as an e-money institution and is regulated by the Bank of Mozambique. The Company was incorporated with three shareholders and the Telco Vodacom Mozambique, S.A. is the major shareholder, with a 99.98% stake in the share capital.

The Law on Credit Institutions and Financial Institutions in force at the time³¹ was amended in 2004³². The amendment introduced for the first time in the Mozambican financial system, the figure of EMIs. Under that law, an e-money institution was defined as a credit institution which has as its principal purpose is issuing means of payment in the form of electronic money³³. Under the current Law, an e-money institution is defined as a financial company which has as its principal purpose is issuing means of payment in the form of electronic money.

As such, to regulate the operation of M-Pesa, the BoM applied the policy response approach, aligned with the existing regulatory framework at the time and issued an EMI license to M-Pesa.

As an EMI, M-Pesa is subjected to capital requirements imposed by the BoM and the deposits received from the public are protected by the Deposit Guarantee Scheme, and are restricted in commercial banks are mainly represented by fiduciary funds, which are the deposits made into the fiduciary account by all third parties in exchange for mobile e-money and the interest earned on the proceeds of the fiduciary fund that will be used upon approval of the usage plan by the Bank of Mozambique. This cash is deposited in restricted accounts with reputable financial institutions. Restricted deposits with commercial banks are not available for use in the day-to-day operations of the company.

4.3. How M-Pesa is driving financial inclusion

For most of the unbanked users of the service, convenience is obvious when contrary to conventional banks, it is possible to find points of *M-Pesa* agents within local neighborhoods, without having to travel more than 200 kilometers to find a banking institution.

In addition to the geographical barrier, another major barrier unbanked people face is being able to formally gather documentation attesting to their residence, their sources of income,

³¹ Law no. 15/99 of November 1st.

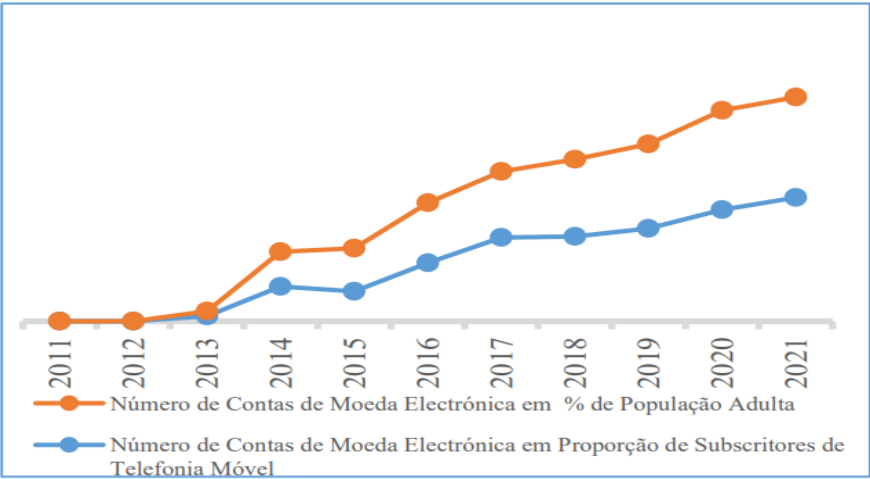
³² Law no. 9/2004 of June 21st.

³³ Electronic money is monetary value represented by a claim on the issuer which is stored in an electronic medium and accepted as means of payment by entities other than the issuer.

minimum deposits requirements and therefore the creditworthiness to access specific financial credit solutions.

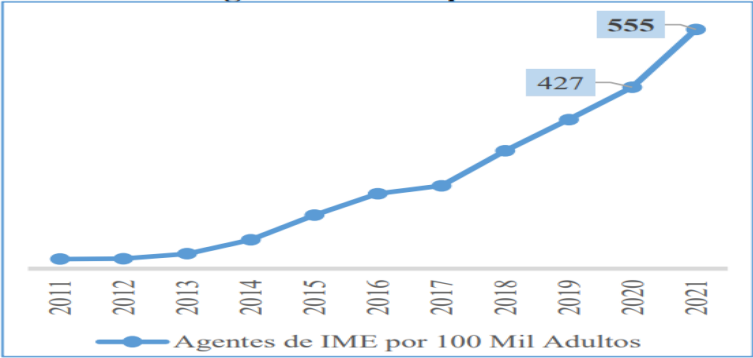
By 2021, the country had 67.6% of its adult population with an e-money account opened with EMIs, which is an increase from 66.4% registered in 2020. In the period under review, of 13,817.45 thousand mobile phone subscriptions existing in the country, 11,412.19 thousand, which corresponds to 82.6%, had a subscription with EMIs, compared to 74.5% in 2020 (Chart 16). From a total of 69,548 existing EMI agents, the country now has 555 agents for every 100,000 adults, compared to 427 in 2020, i.e., a 30% increase, and the role that this service plays in financial inclusion in the country should be highlighted (Graph 7).

Graph6. Mobile and E-money subscribers



Source: Mozambique`s Financial Inclusion Report (2021)

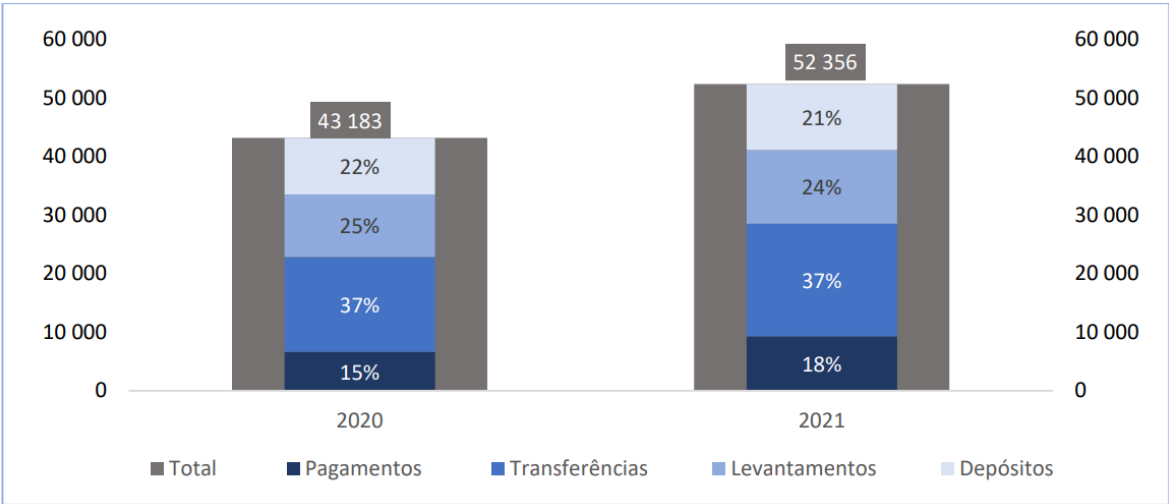
Graph 7. EMIs agents by 100.000 adults



Source: Mozambique`s Financial Inclusion Report (2021)

Overall, there were no significant changes in terms of the composition of the portfolio of e-money transactions, with the preference for using this service to carry out some domestic transactions continuing. There was also an increase in payment transactions for services of around 3 pp, against a reduction in deposit and withdrawal transactions of 1 pp for both.

Graph 8. Volume of e-money transactions



Source: Mozambique`s Financial Inclusion Report (2021)

All that is required is that the applicant has a cell phone and a SIM card from the operator (in this case a Vodacom SIM card) registered in its name, in order to be able to subscribe to the service and perform the required transaction as the case may be.

With the introduction of *M-Pesa*, overcoming these barriers has become feasible, since it provides financial services to millions of people who have mobile phones, but do not have bank accounts, or simple have limited access to banking services.

It is easy to see that technology has enabled these services to emerge, but the reason why they are still function and keep growing is the response to the customer needs that they offer. *M-Pesa* creators have observed and exploited changes in consumer behaviour for their benefits and of the costumers.

However, banks can also benefit from these developments in the market. In Kenya, one of the major commercial banks (Kenya Commercial Bank), has grown its customer base from

half a million to six million costumers, thanks to a credit history from *M-Pesa*, enabling customers to show banks their financial history.

Now, *M-Pesa* provides over 41.5 million people with a safe, secure and affordable way to send and receive money, top-up airtime, make bill payments, receive salaries, get short-term loans and much more.

Below are described the range of financial services currently provided by M-Pesa:

(i) **Deposits and withdrawals**

M-Pesa is not a sophisticated or difficult platform to use. All that is required for usage is that prior to commencement of operation, the consumer registers its mobile number at an agent with recourse to an identification document.

No minimum fees for deposits or maintenance fees for commission are required.

M-Pesa offers services which allow its costumers to convert between electronic money and real cash (these are desposit-withdrawal transactions) and can transfer e-cash from their account to that of another account holder via SMS.

Deposit and withdrawal operations take place at M-Pesa retail outlets M-Pesa agents, which are independent retailers authorized to trade e-cash for real cash.

Contrary to the deposits, withdrawal transactions can also be alternatively made in specific designated ATMs, which offer the possibility to withdrawal money.

(ii) **Transfers**

Transfers can be made to other users of *M-Pesa* directly to their phone number in the mobile phone, or alternatively to designated bank accounts of banking institutions that signed partnersid agreements with M-Pesa.

(iii) **Loans**

In Mozambique, *M-Pesa* offers loans service which allows clients to make loans at the Bank and receive money on the spot, without needing a bank account³⁴. This service is offered to all Vodacom Customers who have an active *M-Pesa* account for at least three months.

The loans can be paid within 7 days (with a service fee of 10%), 14 days (with a service fee of 12%), 30 days (with a service fee of 15%). Standard loan amounts vary from MZN 70 to MZN 3.500,00 (approximately USD 1,10 to 54,84 respectively).

In some cases, it is possible for clients to apply for loans with superior amounts, provided that said client complies with a certain set of requirements, that attest to its creditworthiness (e.g., use Vodacom and *M-Pesa* services frequently, make loan repayments on time, have all the account details updated).

In Kenya, due to the partnership agreement between the Kenyan Commercial Bank and *M-Pesa*, Kenyans can have access to loans. With the majority of loan applicants in Kenya being deemed uncreditworthy due to a lack of credit history, access to finance was a struggle, but the creation of credit scores derived from mobile phone data (*M-Pesa*) has meant that 80% of applicants are now deemed eligible for finance, with an average default rate of 2%. The average loan amount is of US \$40.³⁵

(iv) **Purchase of security**

In 2018, the Kenyan Government issued treasury bills purchasable through *M-Pesa* in an attempt to finance much needed infrastructure construction. Although the launch went worse than expected, with only 25% of the target being reached and only 5% off the people who signed up for the bonds purchasing, there are positives to be seen in fact that 85% off the people who bought the bonds had never bought one before. This is undoubtedly a positive, as it is testament to the theory that Africa's Fintech market is budding.³⁶

In 2019, the Mozambican State-owned company, Hidroeléctrica de Cahora Bassa, S.A. concluded the sale of 4% of its share capital through an Initial Public Offering in the

³⁴<https://www.vm.co.mz/M-Pesa2/Txuna-M-Pesa>

³⁵<https://socialfintech.org/do-you-know-about-m-pesa-you-should-do/>

³⁶<https://socialfintech.org/do-you-know-about-m-pesa-you-should-do/>

Mozambique Stock Exchange – making it the largest equity capital markets transaction to ever occur in Mozambique at that time, amounting to MZN 3.3 billion (USD 50 million). National citizens were allowed to buy shares, with recourse to their *M-Pesa* accounts.

Considering the above, it is evident that M-Pesa introducing imaginative methods to bring the unbanked into the formal economy using mobile phones. For commercial banks, the main benefits of mobile phone technology are being able to conduct banking transactions anywhere. Mobile banking is a powerful way to offer savings services to the billions of people worldwide who have mobile phones but no bank accounts. It has a number of advantages over traditional banking methods because it removes the barriers imposed by banks (geographic accessibility, documentary proof of residency, credit score, among others). It also offers other advantages such as immediacy, security and efficiency. Its strength lies in changing the economics of service delivery, particularly by reducing the cost of financial transactions.

CONCLUSION

The low penetration of traditional financial services compared to the exponential growth of mobile telephony in Mozambique creates a unique niche for the development of mobile banking, EMIs and fintech solutions to bridge the gap to the unbanked.

In rural areas, the commercial bank branch network is particularly underdeveloped due to physical, geographical isolation or inaccessibility, as well as poor infrastructure and financial illiteracy, all of which have led high costs of providing banking services. With a population of 30,832,244 million people where only 5.293.240 of the adult population (17%) has a formal bank account, more than half the Mozambican population does not have access to the banking services offered on the national financial market.

With the access provided by alternative means (e.g., Fintechs, such as *M-Pesa*), 67.2% of the adult population has the opportunity to access financial services and participate actively in the economy. In this study we have argued that the use of M-Pesa has contributed to the financial inclusion of the unbanked and how this gap is filled by unbanked service providers. In doing so, we presented the specific case of *M-Pesa* as a mobile banking service that has led to higher financial inclusion in Mozambique, by providing an alternative structure to conventional banks due to the regulatory requirements imposed. *M-Pesa* is an alternative innovation to respond to the demands of the people, as it does not have high costs, is accessible in rural areas and does not have burdensome requirements to the population.

As an underdevelopment country, the Mozambican Government in partnership with the Bank of Mozambique and other relevant authorities, recognize that financial inclusion is essential for sustainable economic development. Its importance has increased as international recognition of the role it plays in stimulating financial has in stimulating financial savings, financing the economy and, consequently, in the expansion of economic activity, income generation and poverty reduction, resulting in economic development, reducing social inequalities and improving the well-being of the population in general.

To boost the national financial inclusion indicators, the government of Mozambique launched the National Strategy for financial inclusion, which is based on the financial inclusion pillars (access and usage, quality and strengthening of financial structure, and consumer protection and financial education). The National Strategy for Financial Inclusion presents a structured approach to establishing, on the one hand, policies and priority actions and, on the other, mechanisms for monitoring, evaluation and coordination between actors, with a view to increasing access to and use of financial products and quality of services offered.

It is important that regulation evolves rapidly to meet changing consumer protection and public interest concerns in an ongoing basis, while maintaining an environment that is conducive to innovation and the entry of new players into the Mozambican market. Although the BoM regulator works closely with EMIs, some laws give the regulator wide discretionary powers that, if not exercised judiciously, could stifle innovation (as in the case of crypto currencies).

Despite the remarkable developments registered throughout 2021, some challenges remain for the effective achievement of the objectives and goals of the National Strategy for Financial Inclusion, such as the establishment of a specific framework for licensing and supervision of fintechs. Concerted efforts of the regulator ought to be made, to harmonize or codify the fragmented laws, regulations, and notices, to provide a concise, simplified legal framework but also facilitate the referral of Fintech companies to a coherent framework.

On the other hand, increasing the level of coverage of the infrastructure supporting mobile telephony is fundamental to increase the levels of financial inclusion.

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