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FINTECH IN KENYA: A POLICY AND REGULATORY PERSPECTIVE

Rodgers Musamali, Bhavish Jugurnath, Jackson Maalu
PhD Financial Technology Student – University of Mauritius, Senior Lecturer – University of Mauritius, Associate Professor – University of Nairobi
rmusamali@gmail.com, b.jugurnath@uom.ac.mu, jmaalu@uonbi.ac.ke

Abstract: *The broader objective of this paper was to carry out a policy and regulatory review of the framework supporting the fintech ecosystem in Kenya. In light of rapid innovations in fintech, it is at a nascent stage of development and characterized by a dearth of and scattered information. This study seeks to bridge this gap by contributing to the evolving body of knowledge in the fintech regulatory ecosystem in Kenya. Employing a qualitative approach, the study paints the journey towards financial technology in Kenya from the onset of independence. Resulting the study documents this journey into two-fold: a period of evolution of the fintech policy environment, and a phase of concrete policy proposals on fintech. In the former phase, the study innovatively presents a framework of five building blocks in support of the fintech policy ecosystem evolution. Furthermore, the regulation of the Fintech industry in Kenya is found to be sector specific particularly in financial services sector where the core financial activity provided is addressed without concentrating on the technology deployed in offering the service. Moreso, the regulatory approach guiding fintech can be described as 'test and learn' blended with inclusion of regulatory sandboxes.*

JEL classification: o3, 033, o38, g28
Key words: financial technology, policy, regulation, Kenya

1. INTRODUCTION AND BACKGROUND

There is growing body of evidence about financial technology (fintech) globally with the realization that the Fourth Industrial Revolution (4IR) will largely rely on incorporating technology into business activities. Resulting from the novel technological innovations, businesses are transforming their operations. At the centre of this revolution is fintech which

according to Financial Stability Board (FSB)[1] is defined as "technologically enabled innovation in financial services 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". Fintech interfaces finance and technology (Chang et al., 2020; Lee and Shin, 2018) and incorporates platforms that are disrupting traditional financial services such as mobile payments, money transfers, peer-to-peer lending, and robotic investment advice (Marr, 2017; Schueffel, 2016). Evidence indicates that fintechs do not require financial institutions to mediate between borrowers and lenders (Rosavina et al., 2019; Wang et al., 2015) therefore redefining the financial services industry. Fintechs are therefore bridging the gaps that enterprises have perennially faced inform of access to credit (Rosavina et al., 2019; Sangwan et al., 2020) and investment management advice (Gomber et al., 2018; Lee and Shin, 2018). Fintech is central to the delivery of better financial outcomes to customers, more so consumers and micro, small and medium enterprises (MSMEs). The importance of fintech is also acknowledged in its potential to create jobs, spur innovation, improve people's lives, increase opportunities in global trade (Kalifa, 2021), and contribute to overall economic growth. It is also instrumental in enhancing financial inclusion by bridging the gap between technology and business models related to financial services.

The Global Findex Database provides evidence on mobile money usage in Sub-Saharan Africa (SSA) countries (Figure 1). Mobile money systems consist of electronic money accounts that can be accessed through mobile telephones which are often likened to simple bank accounts (Demombynes and Thegeya, 2012). Kenya is seen to be ahead in mobile money usage at 68.66 per cent followed by Ghana (59.69%) and Gabon (57.67%) while South Sudan has least usage (1%). This is evidence of the enthusiasm around fintech in Kenya and buttresses the country as a leader in the same. There is however great potential to advance fintech development in Kenya and the SSA region going by the low penetration.

[1] https://www.fsb.org/work-of-the-fsb/financial-innovation-and-structural-change/fintech/

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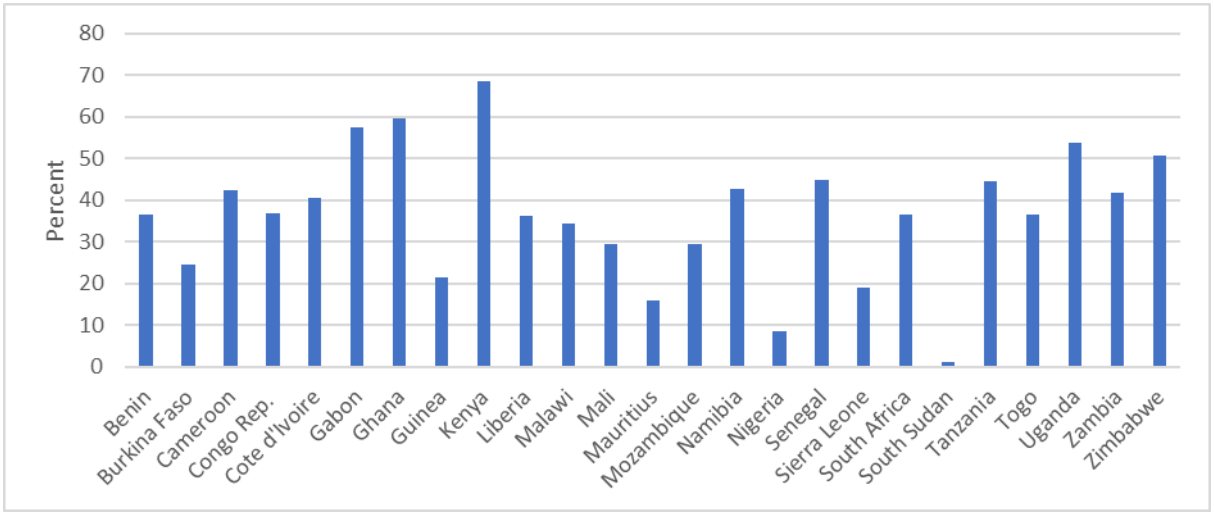

Fig. 1 – Mobile money usage in SSA region

Source: Global Findex Database, 2021

Kenya's mobile money uptake is also equally favourable compared to other global jurisdictions using available data (figure 2). Mobile money uptake in Kenya is higher than Thailand (60%), Argentina (35.08%), Russia Federation (32.94%), Singapore (30.6%), Bangladesh (29.01) and Brazil (26.96%), among others.

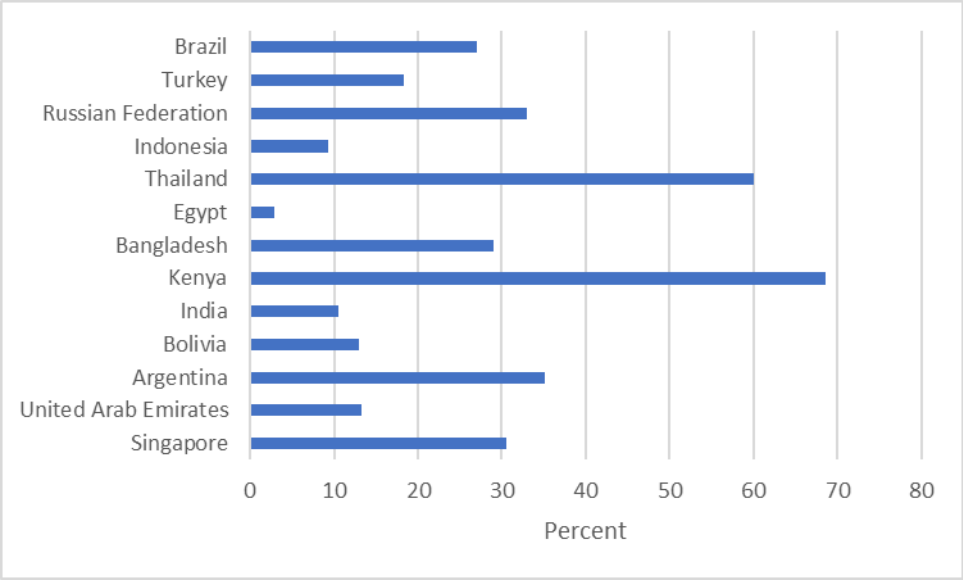

Fig. 2 – Comparison of mobile money usage in Kenya versus rest of the World

Source: Global Findex Database, 2021

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In Kenya, Mobile money and credit platforms dominate Kenya's fintech industry in terms of subscription and financial performance. According to the Communication Authority of Kenya estimates at end of June 2021 the penetration rate of mobile subscriptions in Kenya stood at 135.4 per cent, comprising about 64.4 million subscribers. Further, Central Bank of Kenya statistics indicate that mobile money transactions are the most common form of payment in the country. The mobile money sector has grown tremendously in the past 15 years since adoption. For instance, in the past 5 years (between August 2017 and August 2022) the value of money transacted through mobile money has grown by 136.6 per cent, ranging from 286 to 677 billion shillings (figure 3).

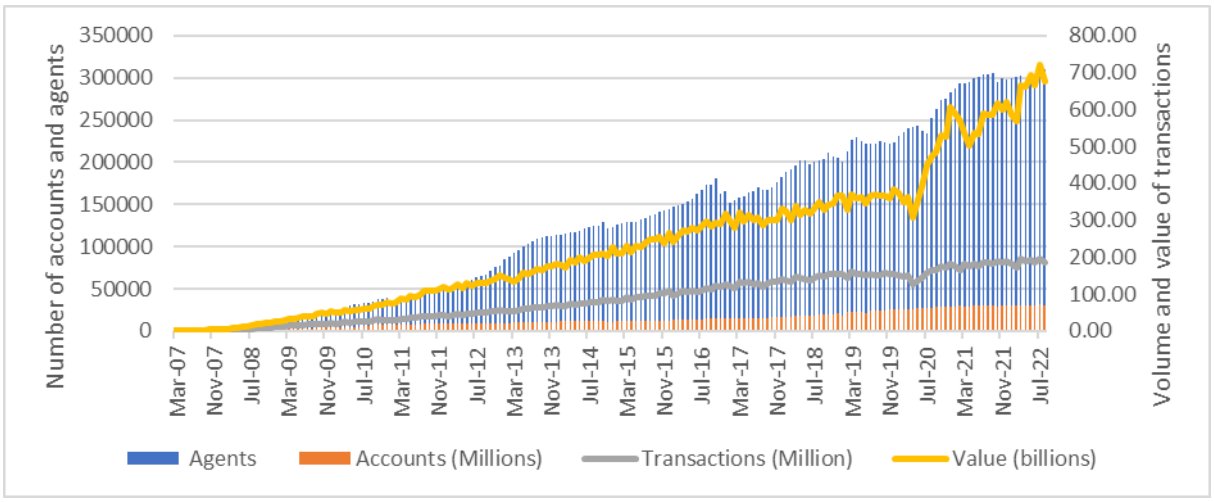

Fig. 3 – Mobile Money Transactions Performance in Kenya

Source: Central Bank of Kenya

Banks and telecommunication firms are the major users of fintech in Kenya going by the various banking digital applications and Safaricom's Mpesa[2] application largely utilized in the transactions. Related, formal financial inclusion has grown tremendously in Kenya, from 26.6 per cent in 2006 to 83.7 per cent in 2021 (figure 4). Similarly, informal financial access has reduced from 32.1 per cent in 2006 to 4.7 per cent in 2021; while financial exclusion has declined from 41.3 per cent to 11.6 per cent in the same time frame.

[2] MPESA is a mobile money transfer service that has revolutionized banking and payments in Kenya and the region

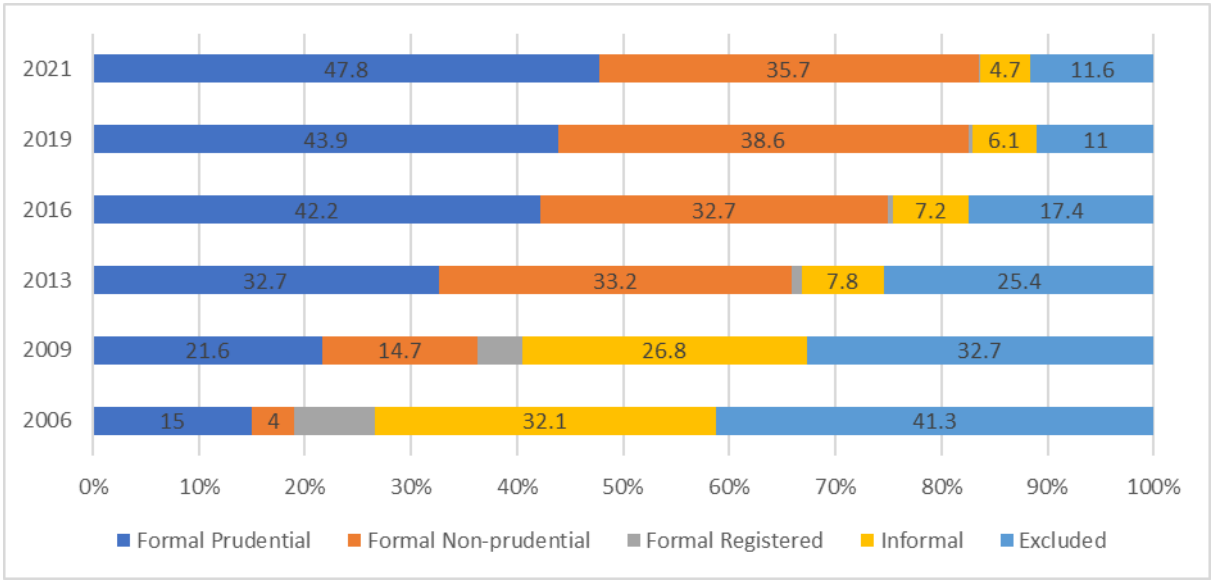

Fig. 4 – Financial access trends in Kenya

Source: Central Bank of Kenya; Kenya National Bureau of Statistics and Financial Sector Deepening, 2006-2021

The growth of mobile money in Kenya has not only contributed to bridging the gap in financial exclusion but has also yielded desired effects in financial innovation. These developments are a testament and in line with the Kenya Vision 2030 aspirations of advancing a knowledge-based economy with ability to spur wealth creation, social welfare, and international competitiveness. The Vision also aims at mainstreaming Science, Technology, and Innovation (STI) in all sectors of the economy integral in the development of a knowledge-based economy and to spur socio-economic transformation of the country. Exploiting Kenya's established lead in digital finance is also being considered particularly under Medium Term 3 and beyond. Globally, Sustainable Development Goals (SDGs) 8.3 and 9 buttresses these efforts with the former envisioning development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encouraging the formalization and growth of micro-small- and medium-sized enterprises, including through access to financial services (UN, 2016). SDG 9 advocates for building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation which is highly akin to fintech.

Subsequently, rapid innovations built upon mobile and digital platform's infrastructure have occurred resulting into growth in Fintech. The fintech ecosystem is therefore characterized by

innovations that yield to products and services in the areas of payments, digital banking, digital credit, InsurTech, assets and wealth management, equity crowdfunding and cryptocurrencies. Since the inception of mobile money in Kenya in March 2007, the regulatory regime around it has followed a 'test and learn' approach which has also been extended to developments in Fintech. While this may be so, rapid innovations in fintech is a cause to remain alert and requires an agile regulatory framework to keep up with the ever-evolving products and services as well as harness the opportunities and mitigate against threats that arise. Further, there is a dearth of knowledge on fintech and its regulation due to its nascent nature, hence provides an opportunity for researchers and policy makers to be interested in seeking and documenting as much information as possible. The success attributable to fintech in Kenya can largely be attributed to a supportive policy environment. Several buildings blocks have notably come into play to enable this and are worth noting in the quest to build the body of knowledge. Inspired by the aforesaid, this study reviews the policy and regulatory framework supporting the fintech ecosystem in Kenya. The study employs a qualitative approach and carries out a desktop review of development plans, economic blueprints, policies, sessional papers and general literature relevant to the growth of fintech in independent Kenya. This approach is preferred due to its flexibility and ability to encourage discourse going forward. The rest of the study is organized in four sections. The next section provides a review of policies, laws and regulations guiding financial technology in Kenya. Section 3 discusses the regulatory framework guiding fintech in Kenya. Section 4 offers a general review of literature on fintech 4 while section 5 concludes the paper.

2. REVIEW OF POLICIES, LAWS AND REGULATIONS RELATING TO FINANCIAL TECHNOLOGY IN KENYA

The policy stance towards Financial Technology development in Kenya is at its nascent stage though fast progressing. This is attributable to the fact that Fintech while evolving is still at early stages of development both in Kenya, at the regional level and globally. While this may be so, a pretty good foundation has been laid emanating from Development Plans, Sessional Papers and Economic Policies guiding the development trajectory of the country post-independence. This plans while not expressly ascribable to Fintech, they provide a broad

recognition of the role of science, technology and innovation which lays a good foundation for Financial Technology developments thereafter.

2.1 Evolution of the fintech policy environment

We present a thematic review of the development plans, Sessional Papers, and economic policies and their implication on meeting development outcomes. Following the policy review, we extrapolate a framework that describes evolution of the fintech policy ecosystem in Kenya (figure 5).

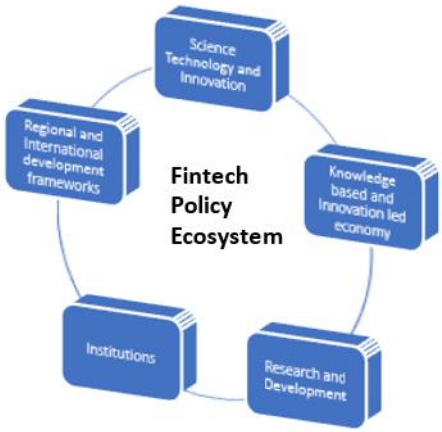

Fig. 5 – Five building blocks for the fintech policy ecosystem in Kenya

Source: Authors

The study argues that development of fintech in Kenya is built on the foundations of Science, Technology, and Innovation as an enabler of growth, a knowledge based and innovation led economy, research and development, appropriate (enabling) institutions, and acknowledgment that Kenya is a member of the global community influenced by both regional and international development frameworks.

a) Science, Technology, and Innovation (STI) as an enabler of growth

The journey of appreciating the potential of Science, Technology, and Innovation in meeting development outcomes dates to the second Development Plan (1970-74) which covered the investment programme by the Government of Kenya. In laying a basis for appreciation of technological advancements, the plan provided for establishment of a National Research and Scientific Council (NRSC) which had an objective of inter alia encouraging the application of science and technology to national, economic, and social objectives. This is akin to recognizing the role of technology in the development discourse from an early onset of the Kenyan Republic. This was followed up by the fourth Development Plan which spanned 1979-83 and prioritized Science and Technology to spur socio and economic development of the country. It laid emphasis on proper utilization of capital in new industrial investments to encourage increased opportunities for employment creation. The need to prioritize creation of an enabling environment for Small-scale and Jua Kali[3] enterprises through technology transfer and job creation was emphasized in the sixth Development Plan (1989-93).

In the seventh development plan (1994-96) the government mentioned creation of an innovation policy which indirectly implied indication of positivity towards acknowledging technological advancements. Further, formulation of a technology policy to address immediate technology requirements for goods and services was to be considered. This was earmarked to improve the standards of products made by Jua Kali sector. To strengthen scientific capacity and expertise the policy emphasized support towards indigenous innovations and entrepreneurship. The positive commitment by the government towards STI was once again portrayed in the eighth development plan (1997-2001) which focused on development of a technology culture that would accept, promote, and reward innovators. This culture was also meant to help appreciate the role of technology in development among Kenyans. At the onset of a new political dispensation led by the National Rainbow Coalition (NARC) administration the Economic Recovery Strategy (ERS) between 2003-07 was ushered in. The ERS recognized that there was low penetration of Information Communication Technology (ICT) services due to high costs of

[3] Swahili word which implies small-scale craft or artisanal work, such as making tools or textiles.

the equipment, poor telephone communication services and lack of power supply which needed to be addressed.

Further attention on the role of STI in development is bolstered in the Kenya Vision 2030 economic blueprint espousing the integral role it plays in charting a path towards a knowledge-based economy and the socio-economic transformation of the country. The vision also identified the need to mainstream STI in all the sectors of the economy. One of the key strategies acknowledged was to enhance training in STI related fields to meet developmental outcomes. Furthermore, the vision identified important strategies of boosting the manufacturing sector including improving productivity and innovation of Small and Medium Enterprises (SMEs) in a bid to strengthen them to become key industries; and boosting STI through increased investment. Post-World War 2, the World Economic Forum (WEF) global competitiveness report of 2006 had opined that alongside global integration, acceleration in the pace of technological and scientific progress was a cause of transformation across the world hence the desired attention on STI locally. In addition, the Constitution of Kenya, 2010 recognized the role of science and indigenous technologies which is synonymous to acknowledging the role financial technology has in meeting development outcomes. Further importance of technology is appreciated through the use of mobile phone networks, internet, and payment cards occasioned by increased trust, integrity and confidence in ICT based payment systems (Medium Term Plan 1, 2008-2012). This is a recognition of use of technology in the payment system which is associated to fintech. More focus on STI was elucidated in the enactment of the Science, Technology, and Innovation Act, 2013. The Act targeted to (a) Facilitate promotion, co-ordination, and regulation of the progress of STI within the country, (b) prioritize development of STI, and (c) entrench STI into the national production system and for connected purposes.

In the Second Medium Term Plan (2013-17) spurring of the manufacturing sector was given credence by establishing special economic zones in Mombasa (including Dongo Kundu Free Port), Lamu and Kisumu whose objectives were to enhance technology development and innovation. The Third Medium Term Plan (2018-22) was in sync with previous policy stances but specifically the government sought to align its initiatives to the ‘Big Four’ projects which were concerned with Industrialization, Manufacturing and Agro processing; Affordable

Housing; Food and Nutrition Security; and Universal Health Coverage. The sectors considered under the 'big four' plan predominantly house a lot of entrepreneurial activities with forward and backward linkages with each other, while ICT was identified to play a pivotal role in their achievement. Ideally, this was a continuing theme since ICT had earlier been acknowledged as a key foundation sector under Vision 2030 with STI as an enabler to the three pillars (economic, political, and social pillars).

b) Knowledge based and Innovation led economy

The Kenya Vision 2030 aimed at spurring a knowledge-based economy to stimulate wealth creation, social welfare, and international competitiveness. A knowledge-based economy in a way is synonymous to enhancement of technology including fintech since it incorporates ICT. A key tenet in the exploitation of the knowledge-based economy is an economic and institutional regime providing incentives for efficient use of the existing knowledge, creation of new knowledge, and flourishing of entrepreneurship. In tandem with the Vision 2030 aspirations the third Medium Term Plan prioritized accelerating the transition to an innovation-led and knowledge-based economy. The challenge however has been the slow-pace of implementation of some projects such as Konza Technopolis City which was earmarked to be established as a smart sustainable city and innovation ecosystem contributing to the country's knowledge-based economy with massive employment opportunities.

c) Research and Development

The Second Development Plan (1970-74) valued scientific research in development of industry, agriculture, and medicine. Similar sentiments were echoed by the Seventh Development Plan (1994-96) which purposed to inter alia strengthen scientific capacity and expertise. The Eighth Development Plan (1997-01) proposed increasing the share of the private sector in research and development funding. Focus on development of Jua Kali sector (informal sector) technologies to generate more employment was also emphasized. In Sessional Paper No. 2 of 2005, the quest to create an enabling policy and regulatory environment for Micro and Small Enterprises (MSEs) to increase competitiveness acknowledged technological advancements in the sector and proposed support for research development to boost their access to appropriate technologies and encourage innovation. Further insights are noted in Sessional Paper No. 9 of 2012 on the

National Industrialization Policy Framework for Kenya (2012-2030) which pointed at enhancing industrial research and development as well as innovation. Innovation was considered critical in meeting consumer tastes and preferences while boosting productivity and competitiveness of the industrial sector.

d) Importance of institutions in technological development

The Second Development Plan (1970-74) covered the investment programme by the Government of Kenya. In laying a basis for appreciation of technological advancements, the plan provided for establishment of a National Research and Scientific Council to encourage the application of Science and Technology to national, economic, and social objectives. The Fourth Development Plan (1979-83) further prioritized Science and Technology to spur socio and economic development of the country. It laid emphasis on proper utilization of capital in new industrial investments to encourage increased opportunities for employment creation. To strengthen the institutional base for industrial research, programmes at the Kenya Industrial Research and Development Institute (KIRDI), the Industrial Survey and Promotion Centre and the Industrial Research and Consultancy Unit of the Faculty of Engineering at the University of Nairobi were to be expanded. KIRDI was also to spearhead industrial research in collaboration with the University of Nairobi, Industrial Survey and Promotion Centre and National Council of Science and Technology. Other institutions that have been instrumental in spearheading technological advancement particularly, financial technology include the Central Bank of Kenya, the Office of the Data Protection Commissioner, and the Communication Authority.

e) Domestication of regional and international development frameworks

The local policies and frameworks do not exist in a vacuum and are influenced in one way or another by regional and international frameworks. Those include the East African Community (EAC) Vision 2050, the African Union Agenda 2063, and Sustainable Development Goals (SDGs). These frameworks lay a foundation for creativity, technology, and innovation hence digitization, and entrepreneurship. According to the EAC Vision 2050, the region targets to promote a learning society and organizations where a culture of creativity, innovation and entrepreneurship are encouraged, with object of achieving self-development and self-reliance. The policy also places emphasis on research and innovation in higher education institutions to

develop quality and innovative programmes, including entrepreneurship and business skills training, professional, technical, and vocational training, and lifelong learning, geared to bridging skills gaps. In addition, reduction of digital divide amongst partner countries is to be prioritized. The AU Agenda 2063 views the digital economy as part of the critical infrastructure to accelerate integration and growth, technological transformation, trade, and development on a regional context. That said on the international scale, Sustainable Development Goal (SDG) 8 target 8.3 envisions development-oriented policies that support inter alia creativity and innovation (UN, 2016). Related, SDG 9 advocates for building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation which is highly akin to fintech.

2.2 Concrete policy proposals on Fintech - Digital Economy / Finance

At the advent of the 21st century, concrete policy proposals on fintech have been registered. The First MTP (2008-2012) took recognition of use of ICT in the payment system which is associated to fintech. The Second MTP (2013-2017) took note of developments of mobile money applications which have spurred financial inclusion overtime. Following the launch of a retail savings bond in the second cycle of medium-term development, appreciation of the role of digital technology in investing in treasury instruments was acknowledged as an emerging issue under MTP 3 (2018-2022), an indicator that digital technology was progressively taking centre stage. The policy also took cognizance of the need to exploit Kenya's established lead in digital finance. Furthermore, the Kenya Youth Development Policy 2019 aimed at building digital skills and leveraging on young people's affinity to technology to help grow the economy. In the National Information, Communications and Technology (ICT) Policy 2019 the intent to promote Kenya as the fintech infrastructure hub for the region and use that opportunity to achieve national goals is advanced. It envisages establishment of a digital environment where money creates value quickly by moving rapidly and efficiently through the business transaction cycle. The opportunities and infrastructure will provide an enabling environment for businesses to raise capital, list on the Nairobi Securities Exchange and attract foreign direct investment. Essentially this policy not only appreciates the importance of the fintech ecosystem as a technological advancement but also a way of spurring entrepreneurship.

Following increased growth of FinTech's, particularly those that are credit providing, there was need to regulate the sector. Revisions to the Central Bank of Kenya Act Cap 491 were introduced through [Act No. 15 of 2021, s. 4.] and empowered the bank to regulate digital lenders. This was to be carried out through licensing and supervision of digital providers, approval of digital channels to conduct digital business, establishment of parameters for pricing, and suspension or revocation of licenses, among others. In addition, the Central Bank of Kenya was mandated to consult other regulators pertinent to developments in digital lending such as the Office of the Data Protection Commissioner and the Communication Authority. Further, the Central Bank of Kenya introduced the Digital Credit Providers[4] guidelines, 2022 through legal notice number 6 of the Central Bank Act Cap 491. These provisions aim at licensing and regulating digital credit providers. The guidelines outline corporate governance issues based on ethics and integrity, good reputation and legitimacy, sound risk management and compliance with the law. Digital Credit Providers' business is largely credit provision, product approval, credit appraisal, and credit protection. Other issues outlined in the provisions include consumer protection, confidentiality, exchange of credit information, anti-money laundering and the combating of financing of terrorism.

The National Payment Strategy 2022-2025 by the Central Bank of Kenya envisages a secure, fast, efficient, and collaborative payments system that supports financial inclusion and innovations that benefit Kenyans. It takes cognizance that the growth of the payments system in Kenya has resulted from innovations that have allowed integration of digital payment solutions in all sectors of the economy such as health, education, manufacturing, transport, and agriculture. This has widely resulted into assimilation of digital and electronic payments. The National payment system goes out to support Kenya's journey of digital transformation including the inclusive growth agenda. It also acknowledges the important role played by the digital payment's infrastructure during the advent of Covid-19 in providing the much-needed support to build resilience. The policy also recognizes the role of digital payments in promoting cross-border payments hence key in speeding regional and continental integration through trade, investments, and capital flows. With innovations, technological advancements in the

[4] These excluded institutions licensed under the Banking Act Cap 488, Microfinance Act No 19 of 2006, SACCO Societies Act No. 14 of 2008, and the Kenya Post Office Savings Bank Act Cap. 493B, among others.

digital ecosystem have given rise to novel platforms including block chain technology in payments, and emergence of digital money, aspects that the strategy appreciates. The core principles of the strategy include trust, security, usefulness, choice, and innovation, with the latter playing a key role in creating a platform to advance the digital ecosystem in Kenya but not in isolation since the first four are critical as well. The strategy is also in support of a digital, inclusive, and 24/7-hour economy. It also seeks to consolidate and extend Kenya's global leadership in digital payments and innovation.

The Digital Economy Blueprint, 2019 envisions "a nation where every citizen, enterprise and organization have digital access and the capability to participate and thrive in the digital economy". The blueprint proposes five pillars as foundations of growth for a digital economy including Digital Government; Digital Business; Infrastructure; Innovation-Driven Entrepreneurship and Digital Skills and Values. Digitalization in government seeks to enable use of digital services and platforms for service delivery. Through the digital business pillar, the government seeks to offer a robust marketplace for digital trade (including cross border trade), digital financial services, and digital content. Digital trade lays emphasis on e-commerce initiatives where trade is digitally conducted while goods and services are physically delivered. Going into the future digital trade will slowly edge out traditional trading and facilitate e-commerce, digital payments and create a fintech ecosystem. This will create opportunities for income, wealth, job creation, and economic growth. The digital financial services focus on access to financial services, typically over the mobile phone, electronic card or online platforms. Such financial services include inter alia payments for services rendered, loan requests and disbursements, savings deposits, insurance premium payments, pensions, and capital markets products. The enormous development of digital finance in Kenya has led to the rapid growth in financial inclusion. Mobile money infrastructure has over time created new markets for businesses. Moreover, it has also served as a backbone for other industries to reach the market through mobile applications (Apps) integrations with business platforms for effective service delivery. Digital content focuses on the digital creative economy. The various facets of this dynamic industry include film, music production, games development, digital advertising, and design.

Further the infrastructure pillar envisages availing affordable, accessible, resilient, and reliable infrastructure. The Innovation-Driven Entrepreneurship pillar seeks to offer support to homegrown firms to generate world class products and services to facilitate widening and deepening of digital economic transformation. Innovation–driven entrepreneurship ecosystems provide the bedrock for a robust private sector through the creation and growth of businesses. The digital economy transformation is earmarked to open opportunities in digital skills, entrepreneurship, and innovation. The digital economy blueprint also recognizes the important role MSMEs play in the economy including employment creation, income generation and poverty alleviation and advocates for their targeting through digital entrepreneurial programmes. Additionally, the Digital Skills and Values pillar targets development of a digitally skilled workforce grounded on sound ethical practices and sociocultural values.

The draft digital economy strategy 2020 targets to put Kenya amongst leaders in digital economy in Africa hence unravel economic realities introduced by future industries and markets. Subsequent results will include labor productivity, economic diversification, high-skilled talent, job creation and economic growth. The strategy pledges to exploit emerging technologies like Internet of Things (IoT) and social media network. It also seeks to create jobs and increase wealth through online platforms such as the Ajira Digital Program introduced in 2017 which encourage training the youth to obtain employment abroad. Basically, Ajira digital program seeks to bridge the gap between skills demand and jobs. In addition, one of the key objectives of the strategy is to enhance the contribution of innovation driven entrepreneurship to the growth of the digital economy in Kenya.

3. SITUATIONAL ANALYSIS OF THE POLICY AND REGULATORY FRAMEWORK GUIDING FINTECH IN KENYA

Kenya prides herself as a leader in mobile money through the growth and development of Mpesa and similar financial products, which has accelerated financial inclusion through appropriate, affordable, and accessible services that have built onto mobile and digital platform’s infrastructure. The regulatory approach to Fintech in Kenya can be attributed to the

regulatory treatment of mobile payments and mobile money[5]. Kenya adopted 'a test and learn' legal and regulatory approach towards digital lending and dedicated payments as well as adoption of regulatory sandboxes in the financial sphere particularly insurance and capital markets. That said, the rapid technological advances brought about through developments in Fintech call for responsiveness in regulation hence need for continuous improvement and a regulatory framework cognizant of such.

Similar to many other jurisdictions, Kenya does not have an all-encompassing Fintech regulation framework. Currently, the regulation of the Fintech industry is sector specific particularly in the financial services sector where the core financial activity provided is addressed without concentrating on the technology deployed in offering the service[6]. The main financial services regulators in Kenya are indicated in table 1.

Table 1: Fintech regulators in Kenya

Regulator	**Mandate**
a) Financial services regulators	
The National Treasury and Planning (TNT)	• Financial services and by extent Fintech fall under its ambit. • It formulates, evaluates, and promotes financial policies to meet social and economic transformation objectives of the country.
Central Bank of Kenya (CBK)	• Regulates, supervises, and licenses financial institutions to ensure financial stability in accordance with the CBK Act, Cap 491.
Insurance Regulatory Authority (IRA)	• Regulates, supervises, and develops the insurance industry in Kenya.
Capital Markets Authority (CMA)	• The Capital Markets Act Cap 485A mandates CMA to supervise, license, and monitor the activities of market intermediaries, together with the stock exchange and the central depository and settlement system.
Retirement Benefits Authority (RBA)	• The RBA inter alia regulates and supervises the establishment and management of retirement benefits schemes.

[5] CCAF (2021) FinTech Regulation in Sub-Saharan Africa, Cambridge Centre for Alternative Finance at the University of Cambridge Judge Business School, Cambridge
[6] TheCityUK and PWC (2022). FinTech in Kenya: Towards an enhanced policy and regulatory framework

Sacco Societies Regulatory Authority (SASRA)	• Supervises and regulates SACCO societies in Kenya including Deposit Taking and Specified Non-Deposit Taking SACCO Societies.
b) Technology services regulators	
Ministry of Information Communications and Technology (ICT), Innovation and Youth Affairs	• The communications and technology sector falls within the purview of the ICT Ministry.
Communications Authority of Kenya (CA)	• CA is the regulatory authority for the communications sector in Kenya and is empowered to license and regulate information and communications services, including telecommunications, radio communication and broadcasting. • CA may license a FinTech company where its operating model incorporates a technological aspect, and the implementation of the innovation requires the FinTech business to establish its own telecommunications infrastructure or result in content generation.
c) Other relevant regulators	
Competition Authority of Kenya (CAK)	• CAK's main purpose is to promote and protect effective competition in markets and prevent misleading market conduct within the country
Office of the Data Protection Commissioner (ODPC)	• ODPC regulates the processing of personal data and to protect the privacy of individuals.
Financial Reporting Centre (FRC)	• FRC is created by the Proceeds of Crime and Anti-Money Laundering Act (POCAMLA) 2009, with the principal objective of assisting in the identification of the proceeds of crime and the combating of money laundering.
Kenya Revenue Authority (KRA)	• KRA is responsible for the assessment, collection and accounting for all revenues that are due to government, in accordance with the laws of Kenya.

Source: Authors

3.1 Fintech Regulations in Kenya

Regulation of FinTech industry in Kenya is based on the underlying financial activity or product. Some of the activities include digital payments, digital banking, digital credit, InsurTech, assets and wealth management, cryptocurrencies, and equity crowdfunding.

Digital payments

Regulating for new innovations can be challenging and daunting. However, to navigate these challenges the World Bank has classified four regulatory approaches: (a) Wait and See (b) Test and Learn (c) Innovation Facilitators (which including Sandboxes) and (d) Regulatory Laws and Reform (WBG, 2020). The regulatory approach to FinTech in Kenya can be traced to its regulatory treatment of mobile payments. When M-Pesa was launched in 2007, the CBK and the CA adopted a test-and-learn approach that led to the enactment of a dedicated payments framework which consisted of the National Payment Systems Act (NPSA) and the National Payments Systems Regulations (NPSR), 2014. Both were to provide a formal mechanism for the regulation of payments systems and service providers. Specifically, The NPSR 2014 provides for the authorization and oversight of payment service providers, designation of payment systems, designation of payment instruments and anti-money laundering measures. On the other hand, the National Payments System Act, 2011 provides for the regulation and supervision of payment systems and payment service providers.

Subsequently, FinTech companies operating within the payments space were required to be authorised as Payment Service Providers (PSP) by the CBK. An application for authorisation as a PSP is made to the CBK in a standard form accompanied by requisite documents. PSPs have an obligation to keep the funds of their customers ring-fenced from their own by ensuring that the money is kept in a trust fund and that the balance in fund does not fall below the money owed to the customers. Further, NPSA allows a PSP to appoint agents and cash merchants to provide the services on its behalf but retains the overall responsibility to the customers.

Digital Banking

The Banking Act, Cap 488 provides that all institutions intending to transact banking business financial business or the business of a mortgage finance company in Kenya shall do so after being licensed by Central Bank of Kenya. However, the regulation of digital channels offering financial services is not carried out separately from those of the banks. The Central Bank Prudential Guidelines on outsourcing interpreted through clauses 4.1.1 and 4.1.4 require that the CBK approves third party digital services channels used in providing banking services. Commercial banks on the other hand have a responsibility to monitor digital banking channels and ensure reliability to prevent abuse through illegal activity proliferation. Non-bank Fintech

bodies that offer deposit taking and credit services have to partner with licensed financial institutions. For example, M-Shwari[7] and KCB-M-Pesa[8] which are both savings and loan non-bank products offered by NCBA Bank[9] and KCB Bank Kenya Limited[10] respectively and being delivered through M-Pesa.

Digital credit

Following increased growth of FinTech's, particularly those that are credit providing, there was need to regulate the sector. Revisions to the Central Bank of Kenya Act Cap 491 were introduced through [Act No. 15 of 2021, s. 4.] and empowered the bank to regulate digital lenders. This was to be carried out through licensing and supervision of digital providers, approval of digital channels to conduct digital business, establishment of parameters for pricing, and suspension or revocation of licenses, among others. In addition, the Central Bank of Kenya was mandated to consult other regulators pertinent to developments in digital lending such as the Office of the Data Protection Commissioner and the Communication Authority. Further, the Central Bank of Kenya introduced the Digital Credit Providers[11] guidelines, 2022 through legal notice number 6 of the Central Bank Act Cap 491. These provisions aim at licensing and regulating digital credit providers. The guidelines outline corporate governance issues based on ethics and integrity, good reputation and legitimacy, sound risk management and compliance with the law. Digital Credit Providers' business is largely credit provision, product approval, credit appraisal, and credit protection. Other issues outlined in the provisions include consumer protection, confidentiality, exchange of credit information, anti-money laundering and the combating of financing of terrorism.

Insurance Technology (Insurtech)

[7] M-Shwari is a revolutionary banking product created in partnership with M-Pesa and NCBA, which allows you to save and borrow money through your phone while earning you interest on money saved.
[8] KCB M-PESA is a loans and savings product exclusively offered by KCB Bank Kenya Ltd to Safaricom M-PESA customers.
[9] NCBA Bank is a subsidiary of NCBA Bank Plc, a big financial services provider in parts of East and West Africa.
[10] KCB Bank Kenya Ltd is a subsidiary of KCB Group Plc, is a financial services holding company based in the African Great Lakes region.
[11] These excluded institutions licensed under the Banking Act Cap 488, Microfinance Act No 19 of 2006, SACCO Societies Act No. 14 of 2008, and the Kenya Post Office Savings Bank Act Cap. 493B, among others.

InsurTech entails use of innovative technology to positively transform insurance services. Regulation for InsurTech services is based on the core insurance product or service offered. The Insurance Act (Amendment) 2006, Cap 487 and its subsidiary legislation oversees regulation of insurance business in Kenya with oversight from Insurance Regulatory Authority. The IRA's innovation hub in conjunction with other stakeholders in the insurance sector introduced the Bima Lab Accelerator Program[12] and a regulatory sandbox (BimaBox) to encourage the growth of InsurTech products and offer an ecosystem for the testing of innovative insurance solutions with real consumers.

Assets and wealth management

Digital technology plays an important role in asset and wealth management to improve on efficiency and engage more broadly with clients[13]. The Capitals Markets Authority through the CMA Act Cap 485A has a responsibility to promote, regulate and facilitate the development of an orderly, fair and efficient Capital

Box 1: The Capital Markets Authority Regulatory Sandbox in Kenya

According to the World Bank Group, (2020) a regulatory sandbox is defined as *a virtual environment that enables live testing of new products or services in a controlled and time-bound manner*. A sandbox is typically aimed at promoting innovation, guiding interactions with firms but also permitting supervision by regulators on evolving financial products. The Capital Markets Authority Regulatory Sandbox is a tailored regulatory environment that allows for the live testing of innovative capital markets related products, solutions, and services with the potential to deepen and develop the capital markets prior to launching into the mass market. The CMA sandbox allows for the live testing to be done in a less difficult regulatory environment hence attracting fintech companies to innovate and add value to financial services. The platform seeks to help the CMA to understand evolving trends on fintech, provide an evidence-based tool for promoting innovation and regulation while ensuring that investors are protected, financial stability is maintained, and integrity risks are mitigated. The sandbox platform is governed by the Regulatory Sandbox Policy Guidance Note (PGN), 2019 which provides a framework for its establishment. As of 30th August 2022, CMA had successfully tested and exited six financial innovations namely Moneto Ventures Limited, Pezesha Africa Limited, Genghis Capital Limited, Innova Limited, Central Depository and Settlement Corporation and Fourfront Management Limited.

Source: Capital Markets Authority website

[12] https://www.prudentiallife.co.ke/news-bima-lab-accelerator-program/

[13] PwC (2016) Sink or Swim: Why wealth management can't afford to miss the digital wave

Markets in Kenya. That said, CMA licenses and regulates market intermediaries within the securities industry such as stockbrokers, derivative brokers, trustees, dealers, investment advisers, fund managers, investment banks, central depositories, real estate investment trusts (REIT) managers, and online forex brokers. The Authority also has a role in regulating use of electronic commerce for dealing in securities or offer services ordinarily carried out by a licensed person. This would entail for instance providers of technology infrastructure used in asset and wealth management such as portfolio management platforms, research engines, Know-Your-Customer (KYC) systems, analytics tools, and settlement systems. The CMA also has an established regulatory sandbox (Box 1).

Cryptocurrencies

The regulatory stance on cryptocurrencies in Kenya is still not certain. Cryptocurrencies can either be viewed from the confines of being virtual currencies (is still not considered legal tender in Kenya[14]) or securities in which their regulation will fall under the ambit of CBK and CMA respectively.

Equity crowdfunding

The Investment Based Crowdfunding Regulations, 2021 by the CMA are the first step to provide regulation around crowdfunding. The draft regulations propose that platform operators should be licensed by the CMA. However, when there are no regulations, the CMA could issue a letter confirming that a crowdfunding model does not need to be regulated under the Capital Markets Act (TheCityUK and PWC, 2022). For instance, On 12th October 2020, the CMA issued a 'No Objection' to Pezesha Africa Limited (Pezesha) which is a debt-based crowdfunding platform after a successful testing period in the regulatory sandbox[15].

3.2 Cross cutting regulations

Information and Communication Technology

[14] https://centralbank.go.ke/images/docs/media/Public_Notice_on_virtual_currencies_such_as_Bitcoin.pdf
[15] https://www.cma.or.ke/index.php/news-publications/press-center/181-press-release-pezesha-exits-from-the-cma-regulatory-sandbox

The Communications Authority of Kenya (CA) established through the enactment of the Kenya Information and Communications Act, 1998 is the regulator for the communications sector in Kenya. The Authority has a mandate of developing the information and communications sectors including broadcasting, cybersecurity, multimedia, telecommunications, electronic commerce, postal and courier services[16].

The CA utilizes the Unified Licensing Framework (ULF), which is technology and service neutral. The ULF market is structured into three main licenses: Network Facilities Provider (NFP); Application Service Provider (ASP); and Content Service Provider (CSP)[17]. FinTech entities integrating telecommunications in their operational models are required to be licensed under the ULF. Fintech entities generally require a CSP license when offering services around the telecommunications infrastructure (including SMS and the internet). Other Fintech entities might need different licenses informed by their operational approaches for instance Mobile Network Operators (MNOs) such as Safaricom and Airtel Kenya require a NFP (Tier 1) license while Mobile Virtual Network Operators (MVNOs) such as Equitel need an ASP license.

Data protection and privacy

The constitution of Kenya 2010 through article 31 provides every person the right to privacy which protects information relating to family or private affairs as well as non-infringement of private communications. The Data Protection Act, 2019 gives effect to these provisions by regulating processing of personal data, among others. Considering the nature of operations by Fintech entities, personal data is a vital cog of daily operations particularly related to KYC, transactions, and operational information.

Consumer protection

Article 46 of the Constitution of Kenya 2010 provides for consumer protection provisions regarding quality of goods and services consumed. In buttressing the constitutional provisions, the enactment of the Consumer Protection Act, 2012 provides for the protection of the consumer and prevents unfair trade practices in consumer transactions. Similarly, the Competition Act,

[16] https://www.ca.go.ke/about-us/who-we-are/what-we-do/
[17] https://www.ca.go.ke/industry/telecommunication/licensing-procedure/

2010 provides for protection of consumers from unfair and misleading market conduct, in addition to proving for the establishment of the Competition Authority mandated to inter alia promote competition and consumer welfare. The competition Authority therefore has a cross sectoral mandate. There also exists specific sector consumer protection provisions which include the CBK Act, CBK Prudential Guideline on Consumer Protection, the Banking Act, the Insurance Act, the Retirement Benefits Act, the Capital Markets Act, the Sacco Societies Act, and the Data Protection Act, among others. Fintech entities operating under these jurisdictions will automatically be guided by these sectoral provisions as well as the overall consumer protection framework.

Cybersecurity

Article 31 of the Constitution of Kenya, 2010 provides for the right to privacy including that pertaining to communications and protects persons against infringement. The Computer Misuse and Cybercrimes Act, 2018 (CMCA) strengthens this constitutional provision by establishing a cybersecurity regulatory framework guiding the country. The Act *provides for offences relating to computer systems; to enable timely and effective detection, prohibition, prevention, response, investigation and prosecution of computer and cybercrimes; and to facilitate international co-operation in dealing with computer and cybercrime matters*. Other important documents guiding the financial sector on cybersecurity include the guidelines issued by the CBK on the Information and Communications Technology Risk Management to guide banks on how to deal with cyber risks resulting from ICT usage. These guidelines offer minimum requirements to be followed by banks in setting up information security frameworks. In 2019 the CBK issued further guidelines on cybersecurity pertinent to payment service providers (PSP's) with requirements to adopt to develop and implement effective cybersecurity and governance and risk management frameworks.

Anti-money laundering and KYC

The regulatory framework on Anti-money laundering in Kenya is guided by the Proceeds of Crime and Anti-Money Laundering Act, 2009 (POCAMLA). This legislation prohibits money laundering and introduces measures to combat the same, provide for identification, tracing, freezing, seizure and confiscation of the proceeds of crime. Financial institutions are identified

as reporting institutions which by implication extends to Fintech providers since they operate under the same sphere. Reporting institutions are required to be registered with the Financial Reporting Centre (FRC) but also conduct due diligence in line with KYC to monitor large, unusual, and suspicious transactions used within their platforms, Fintech entities included. In addition, they should establish and maintain internal controls and reporting procedures around AML. Other AML provisions include, the Prevention of Terrorism Act, 2012 which guides entities including financial institutions on monitoring products and services they provide that could be used in supporting terrorist activities. On suspicion of such activities, the financial institutions are obliged to report through the FRC. The CBK through the Digital Credit Providers guidelines and the CMA have also issued Guidelines on the Prevention of Money Laundering and Terrorism Financing through DCPs and in the Capital Markets respectively.

3.3 Overview of the fintech regulatory environment in Kenya

The regulation of the fintech in Kenya while still evolving just like in other countries is characterized by a sector specific approach where focus is on the financial services activity being regulated. Further, general multi-sectoral regulations are important to offer a robust regulatory framework. That said, the main financial services that are a focus of regulation include digital payments, digital banking, digital credit, InsurTech, assets and wealth management, cryptocurrencies, and equity crowdfunding. Cross cutting issues include information communication technology, data protection and privacy, consumer protection, cybersecurity, and anti-money laundering and KYC. Subsequently, the regulatory approach guiding fintech in Kenya can be described as ‘test and learn’ blended with inclusion of regulatory sandboxes as growth in innovation continues to be experienced hence the need to provide an environment that allows innovative ideas to be tested before being released to the market. Table 2 below provides a summary of institutions offering fintech regulation and their responsibilities.

Table 2: Summary of institutions offering fintech regulation in Kenya and their responsibilities.

Product	Regulator	Responsibility	Reference
Digital payments	CBK	Authorization, licensing, and regulation of fintech entities in digital payments	National Payment Systems Act, 2011 and the National Payments

			Systems Regulations, 2014.
Digital credit	CBK	Licensing and regulation of digital credit entities	Central Bank of Kenya Act Cap 491 and Digital Credit Providers guidelines, 2022
Digital banking	CBK	Licensing and regulation of entities in banking business	CBK Prudential Guidelines and Banking Act, Cap 488.
Insurtech	IRA	Licensing and regulation of insurance service providers	Insurance Act (Amendment) 2006, Cap 487
Assets and wealth management	CMA	Licensing and regulation of market intermediaries	CMA Act Cap 485A
Cryptocurrencies	CBK/CMA	Regulatory approach still uncertain depending on whether considered as virtual currencies (not recognized as legal tender by CBK) or securities (CMA to offer regulation)	CMA Act Cap 485A and CBK public notice on cryptocurrencies.
Equity crowdfunding	CMA	Licensing of platform operators and issuance of letter of no objection from CMA/or CBK	Investment Based Crowdfunding Regulations, 2021
FinTech entities integrating telecommunications	CA	Regulates Network Facilities Provider, Application Service Provider, and Content Service Provider	Kenya Information and Communications Act, 1998
Fintech entities utilizing personal data	ODPC	Regulates processing of personal data	The Data Protection Act, 2019, and the Constitution of Kenya 2010
All financial service providers	FRC	Register with FRC as reporting institutions	Proceeds of Crime and Anti-Money Laundering Act, 2009; Prevention of Terrorism Act, 2012; and Digital Credit Providers guidelines, 2022.

Source: Authors

3. GENERAL LITERATURE ON FINTECH

Literature on fintech particularly on regulation in Kenya is fast evolving. In a report titled *Fintech in Kenya: Towards an enhanced policy and regulatory framework* the CityUK and

PWC (2022) sought to assess the fintech policy and regulatory environment in Kenya. The authors engaged the Kenyan Fintech stakeholder community for input and insights, reviewed approaches in other markets for to improve the sector and recommended improvements on the existing policy framework. Using a desk-based research approach and stakeholder engagements, the authors established that regulatory approach to fintech in Kenya was a 'test and learn' coupled with adoption of regulatory sandboxes. Fintech regulation was also implemented through sector-specific financial services regulation inter phased with general regulation hence suffered challenges of multiple regulations and regulators. In conclusion, the report observed that proper coordination and harmonised Fintech regulatory framework was key to dealing with duplicity and barriers to entry.

A further report aimed at supporting fintech startups working in Kenya, and those seeking to enter the Kenyan fintech market by the BFA Global and Cambridge Centre for Alternative Finance (CCAF), 2021 highlights several regulatory challenges including: (a) regulatory overlaps resulting from numerous authorities operating in the finance sector (b) fragmentation in the finance legal framework, and (c) legal and regulatory gaps within the FinTech framework. The report puts forth several recommendations to help startups engage with regulators. First the report encourages startups to carry out research by reviewing requirements for market entry before approaching relevant regulator(s) and arm themselves with specific questions. Startups should also consider the current regulatory environment with retrospect to future developments that may impact growth of their company. Second, startups should engage the regulators early to familiarise them with company products and services in a bid to seek for regulatory guidance as the company grows. Lastly, startups are inspired to think like regulators by considering the regulators' objectives to guide priorities.

More regulatory challenges in fintech are highlighted in a report by Didenko (2021) in Kenya and South Africa (which are considered African leaders in Fintech). The report identifies two salient bottlenecks in Kenya, first there is need for a proactive regulatory regime since regulation of fintech lacks technology. Second, several regulators that exist in the fintech space are not coordinated hence causing a risk of potential conflicts of jurisdictions. The report also establishes that there is need for greater representation (voice) amongst industry players in shaping future regulation of fintech in South Africa. Further, the regulatory developments in

South Africa comprise of a system of social and economic impact analysis while Kenya adopts the sandbox framework.

A study by Ferguson, et. al. (2019) explored the impact of consumer demand, technology, and regulation on digital payment systems in SSA. Notably, the study established that Kenya's regulatory-led approach is preferred as opposed to Nigeria's pre-emptive and South Africa's bank-favouring approaches which seem to stifle innovation and slow down true financial inclusion. The results further support the need for 'enabling' government regulation that allows for innovators and consumers to adapt technology for the African market. It also identified a framework with three main impact factors namely technology, regulation, and demand. Regulation is also seen to be necessary in allowing entrepreneurs to drive innovation and protect against fraud. The Cambridge Centre for Alternative Finance (CCAF), 2021 aimed at providing insights on fintech regulation in the SSA region laying emphasis on the Covid-19 pandemic. The study considered Kenya as a benchmark on fintech regulation with a few challenges being noted. At the onset are overlapping regulatory mandates arising from a multiplicity of regulatory authorities overseeing different sections of the financial sector. In addition, entity/institution-based regulatory approach as opposed to an activity-based one poses challenges to regulation of certain categories of FinTech activity. The study also establishes that there are unregulated initiatives due to limited regulatory scope in instances where a product/service may not be explicitly prohibited.

On the global scale, Ernest and Young (2016) assesses how the UK FinTech ecosystem compares to international FinTech ecosystems (California, New York, Germany, Singapore, Hong Kong, and Australia). The study establishes that a model fintech ecosystem is built around talent (technical and entrepreneurial talent), capital (financial resources for startups and scale-ups) policy (government policy across regulation, tax, and growth of the sector), and demand (end client demand). The results also indicate that the UK has the strongest fintech policy environment with the most supportive regulatory regime (being a first mover in implementing fintech policy initiatives). Policy regimes in Singapore and Australia are also perceived to be progressive. Furthermore, the study proposes creation of a FinTech 'delivery body' to drive-high impact policy initiatives to implementation as quickly as possible.

Kalifa (2021) reviews the UK fintech ecosystem with an eye on the future regulatory framework to not only grow the sector but also maintain the country's world lead. The report proposes delivery of a digital finance package that creates a new regulatory framework for emerging technology through (a) developing a comprehensive fintech strategy, and (b) adoption of specific policy initiatives aimed at helping create an enhanced environment for fintech, and with likelihood of driving global initiatives in fintech. The report further suggests implementation of a Scalebox that supports firms focusing on scaling innovative technology. This could be achieved through (i) enhancing the current regulatory sandbox (ii) creating a new, permanent 'digital sandbox' to encourage collaboration (iii) support partnerships between FinTech and Regulatory Technology (RegTech) firms, and (iv) provide additional regulatory and supervisory support for regulated firms in the growth phase. In addition, the report proposes making FinTech as an integral part of UK trade policy and continuing to establish Fintech Bridges with other countries.

In China, Zhou et. al. (2018) explored the evolution of fintech and its regulation. The study noted rapid growth of Digital Financial Services (DFS) which challenged financial regulators to respond through development and publication of guidelines and detailed rules for regulation and supervision of specific types of DFS. The study further highlighted major regulatory challenges ahead including ensuring: (a) dynamism of existing and future legislation to respond to new forms of and associated with DFS (b) new regulations are effectively and efficiently enforced (c) balancing regulation of DFS with growth while ensuring that competition thrives.

Batunanggar (2019) outlines developments in the fintech landscape and discusses the regulatory framework in Indonesia. Amongst the findings, the study establishes customer protection and data security concerns to be key risks affecting fintech development. The primary challenge for regulators is to strike a balance between innovation, integrity of financial markets and consumer protection. In addition, the study notes that speed of innovation versus regulation is an important component of an agile framework since regulators are normally perceived to be slow than innovators. Further, the Indonesia Financial Services Authority (Otoritas Jasa Keuangan/OJK) utilizes regulatory sandbox and an innovation centre to support financial innovations. The IMF (2019) through a technical note examines the implications of fintech for the regulation and supervision of the Singaporean financial services sector. It highlights the reasons behind the

success of fintech in Singapore. These include government support, conducive regulatory framework, developed markets, availability of capital, and talent.

D'Silva et. al. (2019) provides lessons on the design of the digital financial infrastructure from India. The study notes that digital finance has the potential to transform both emerging and advanced economies. India's approach is premised on providing digital financial infrastructure as a public good encouraging private innovation by providing open access to this infrastructure and creating a level playing field through the regulatory framework. Cyber security risks for digital financial platforms however remains a challenge. These include identity and data theft, unlawful violations of privacy among others. In conclusion, India's state-of–the-art digital foundational infrastructure is premised on two principles: (i) building digital platforms as public goods so both public and private sector participants can develop technological innovations; and (ii) incorporating data privacy and security in the design of digital public goods.

4.1 Overview of literature

The literature on Fintech regulation in Kenya just like in many other countries is scant and still evolving. As seen in the review, many studies and reports have handled bits and pieces of regulation with various outcomes. The report by the CityUK and PWC (2022) is perhaps the most comprehensive piece we have come across which provides the fintech regulatory landscape in Kenya. While this may be so, the report documents the most recent developments in Fintech policy and regulation in Kenya but fails to acknowledge the foundation(s) upon which such developments have been built on since independence, a gap this study fills.

5. CONCLUSIONS

The study sought to provide a policy and regulatory perspective of fintech development in Kenya. Going by recent evidence, the study acknowledges that technological developments are at the heart of the fourth industrial revolution and here to stay. Technology has permeated business activities and more so the financial space through fintech. The study therefore takes stock of developments of fintech in the policy arena in independent Kenya. It presents a framework of five building blocks in support of the fintech policy ecosystem evolution. These are namely Science, Technology, and Innovation as an enabler of growth, a knowledge based and innovation led economy, research and development, appropriate (enabling) institutions, and

domestication of regional and international development frameworks. The study also establishes that regulation of the Fintech industry in Kenya is found to be sector specific particularly in financial services sector where the core financial activity provided is addressed without concentrating on the technology deployed in offering the service. Furthermore, the regulatory approach guiding fintech can be described as 'test and learn' blended with inclusion of regulatory sandboxes. The findings presented in the study serve to contribute to the body of knowledge in the fintech ecosystem in Kenya, have policy implications, and should also serve to elicit debate and further contributions into the future.

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