Central Bank of Kenya

Kenya National Payments System Vision and Strategy

2021 - 2025


BANK
PAY

Table of contents

Tables, figures and boxes

Acronyms

A2A	Account to Account
AML	Anti Money Laundering
API	Application Programming Interface
BIS	Bank for International Settlement
CA	Communications Authority of Kenya
CAK	Competition Authority of Kenya
CBK	Central Bank of Kenya
CMA	Capital Markets Authority
COMESA	Common Market for Eastern and Southern Africa
DFS	Digital Financial Services
EAC	East African Community
EAPS	East Africa Payments System
EFT	Electronic Funds Transfer
FSP	Financial Service Provider
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IMT	International Money Transfer
IRA	Insurance Regulatory Authority
KBA	Kenya Bankers Association
KCDCA	Kenya Credit and Debit Card Association
KEPSS	Kenya Electronic Payment and Settlement System
MDA	Ministries, Departments, Agencies
MFB	Microfinance Bank
MFI	Microfinance Institution
MMO	Mobile Money Operator
MNO	Mobile Network Operator
MPSP	Mobile Payment Service Provider
NACH	Nairobi Automated Clearing House
NPS	National Payments System
P2B	Person to Business Payments
P2G	Payments to Government
P2P	Person to Person Payments
PSP	Payments Service Provider
POS	Point of Sale
RBA	Retirement Benefits Authority
REPSS	Regional Payments and Settlement System
RTGS	Real Time Gross Settlement
SACCO	Savings and Credit Cooperative Organisation
SASRA	SACCO Societies Regulatory Authority
SIPS	Systemically Important Payment Systems
SLAs	Service Level Agreements
SWIFT	Society for Worldwide Interbank Financial Telecommunications
TPPP	Third Party Payments Provider/ Processor

KENYA NATIONAL PAYMENTS SYSTEM
VISION AND STRATEGY, 2021-2025

Global Leadership and National Resilience

VISION

To enhance Kenya's global leadership in digital payments by building a world-class, secure, resilient and collaborative payments system that powers Kenya's economy and its journey towards cash-lite.

PRINCIPLES

- ***Trust***
- ***Security***
- ***Usefulness***
- ***Choice***
- ***Innovation***

Snapshot of

Voices from industry

"Payments are [an] integral part in the economy thus affordability and usefulness of the payment options in the market is critical. This will also boost financial inclusivity in the economy thus creating a robust platform for ease of exchange of value."

– Bank

"Kenya has great potential of becoming one of the leading economies in Africa in terms of digitization."

– Bank

" As Kenya continues to open up to the world, e-commerce will continue to be an important element of the payments landscape."

– Fintech

"For an integrated payment system to deliver better service, it requires certain infrastructure to be in place and accessible for flawless payment processing"

– Fintech

"Super-platforms will have both opportunities and threats that will need to be managed for optimal benefit."

– Microfinance Bank

"To enable wider usage, there must be confidence that the system is safe and affordable."

– Bank

We believe that a robust, competitive, secure payments ecosystem has the potential to contribute to macroeconomic growth, power Kenya's transition to a digital economy, and facilitate inclusive finance for all"

– Fintech

Snapshot of

Top features for the Kenya NPS

Customer centricity | Digitization | Inclusiveness

Top three priorities for realizing the vision of the Kenya NPS

Policy and regulation | Payments infrastructure | Security

Most valuable features of the Kenya NPS

24*7*365 payments | Interoperability | Effective complaints mechanism

Developments most likely to impact payments in Kenya

Digital identity | Cyber security | Smart phones | E-commerce

Biggest threat in the future

Cyber security risks | Internal risks | AML/CFT risks

Key statements of the
NPS Vision and Strategy

VISION STATEMENT

To enhance Kenya's global leadership in digital payments by building a world-class, secure, resilient and collaborative payments system that powers Kenya's economy and its journey towards cash-lite.

VISION PRINCIPLES

- **TRUST** – a system which guarantees that payments will be made and received in a timely and reliable manner.
- **SECURITY** – a resilient system that safeguards all payments and channels in an increasingly digital world.
- **USEFULNESS** – a system that meets the payment needs of individuals, businesses and government in a cost-effective manner.
- **CHOICE** – availability of feasible options resulting from collaboration among different service providers.
- **INNOVATION** – an ecosystem that produces value-adding solutions which also compete at the global stage.

VISION STRATEGIC OBJECTIVES

1. To facilitate payments systems that meet the diverse needs of users and support the country's development agenda.
2. To ensure payments systems are secure through influencing industry and global standards, and adopting safe technologies.
3. To power an ecosystem based on collaboration leading to launch of premier and globally competitive innovations.
4. To implement a supportive policy and regulatory framework that is firmly enforced across all existing and emerging players.

Foreword

1 Executive summary

Kenya's National Payments System (NPS) has undergone rapid change over the last fifteen years. Starting with the modernisation programme that led to the establishment of the Kenya Electronic Payment and Settlement System (KEPSS) in 2005, and the enactment of the NPS Act, 2011 and the NPS Regulations in 2014, CBK has facilitated major improvements in payment services over the years. In 2007, through CBK's facilitation, mobile money was introduced, heralding a new chapter of payments services in Kenya and beyond. Today, CBK regulated "payments rails" are used to launch innovations in sectors such as education, health and agriculture. The use of mobile money systems to mitigate the effects of the COVID-19 pandemic is testimony to Kenya's strong payment system foundation.

This work has been done based on the mandate CBK has in establishing, regulating and supervising an efficient and effective payment, clearing and settlement system. The first NPS Framework and Strategy was developed in 2004. Its main objective was to modernize the payment system and provide basis for creating a new legal and regulatory framework (see summary in Table 2).

This enabled development of the NPS Act, 2011 and NPS Regulation, 2014. At that time, the payments system had a number of challenges: high risks due to lack of a real-time settlement system, lack of trust on cheque payments especially for high-value payments, limited sharing of information, lack of coordinated public awareness among the payment system stakeholders and a less developed regulatory framework.

Today, the Kenya NPS has significantly improved. It is made up of a number of core elements (see Table 1 and Figure 1). This includes: payment service providers (PSPs), clearing and settlement participants, and users consisting of individuals, businesses, corporates and government institutions. These players interact on the basis of rules and procedures that govern different parts of the payments system.

Kenya's payments landscape, like in most countries, has undergone major changes. Further, an increasingly younger population that is more digitally adept has necessitated payments solutions that present viable choices which meet changing consumer preferences. However, despite these changes and improvements in the overall payments landscape, CBK is cognisant of the fact that there are segments of the population that still find the current NPS hard to access, hard to use or beyond their means in terms of access and relevance. These and many other reasons were the key motivations for the formulation for this Vision and Strategy.

The current NPS Vision and Strategy sets out the vision for Kenya's NPS for the next five years (2021 - 2025). The vision is anchored on a vision statement that captures the desired end state that CBK seeks to achieve, anchored on five core principles, namely: trust, security, usefulness, choice and innovation (see Section 4).

The development of this Vision and Strategy involved discussions with a wide range of stakeholders including PSPs, banks, SACCOs, fintechs and other end users. Based on this engagement, the CBK sifted through vast amount of feedback, distilling it to some of the proposals and initiatives that are presented in the coming sections. In addition, these materials were also put in the context of CBK's overall objectives and priorities for

To enhance Kenya's global leadership in digital payments by building a world-class, secure, resilient and collaborative payments system that powers Kenya's economy and its journey towards cash-lite.

the payments sector, including alignment with various international standards. Based on this, a statement was identified as the vision for Kenya's national payment system for the next five years, 2021 - 2025, underpinned by five core vision principles, namely:

- **Trust –** a system which guarantees that payments will be made and received in a timely and reliable manner.
- **Security –** a resilient system that safeguards all payments and channels in an increasingly digital world.
- **Usefulness –** a system that meets the payment needs of individuals, businesses and government in a cost effective manner.
- **Choice –** availability of feasible options resulting from collaboration among different service providers.
- **Innovation–** an ecosystem that produces value-adding solutions which also compete at the global stage.

Finally, the NPS Vision and Strategy has been accompanied by four key strategic objectives which will guide implementation of activities in the strategy period: -

1. To facilitate payments systems that meet the diverse needs of users and supports the country's development agenda.
2. To ensure payments systems are secure through influencing industry and global standards, and adopting safe technologies.
3. To power an ecosystem based on collaboration leading to launch of premier and globally competitive innovations.
4. To implement a supportive policy, legal and regulatory framework that is firmly enforced across all existing and emerging players.

The strategic objectives will be vital for two main reasons. First, they will provide a clear direction to anchor the strategy initiatives and activities. Second, the strategic objectives will provide concrete frameworks for monitoring and evaluating implementation of the vision (see Section 7.4).

The CBK recognizes that this Vision and Strategy is being presented at a time when Kenya (and the entire globe) has been grappling with the COVID-19 (Coronavirus) pandemic. The pandemic has presented a challenging environment, one which calls for re-alignment and resilience. The pandemic also presents opportunities for change. For Kenya, it enabled us to re-align the mobile and digital payment system to mitigate the negative impact of the pandemic in ways that were not yet tested, but which proved effective and timely (see Box 6).

Overall, the vision and the accompanying strategic objectives will be the foundation for developing Kenya's payments systems and industry. Through its implementation, the CBK hopes to address the diverse needs of the Kenyan people and its economy, and support our nation's ambition of becoming a digital, cash-lite and 24/7 economy, including enhancing our global leadership in digital and mobile money innovation.

Box 1: Alignment to Government of Kenya strategies

Payments are simply a means to facilitate economic activities among individuals, households and businesses. To this end, the NPS Vision and Strategy is designed to enable payments support wider Government of Kenya initiatives aimed at integrating digital technologies in the economy and boosting attainment of our long-term development aspirations. These include the Vision 2030 and the third Medium Term Plan (2018 - 2023), the *Big Four Agenda,* the Digital Economy Blueprint launched by H. E. President in Rwanda in May 2019, and Digital Finance Policy Framework that is being finalised by the National Treasury and Planning. The NPS Vision and Strategy also seeks to build on CBK interventions in facilitating mobile payments during the COVID-19 pandemic (see Box 6), to present mid- to long-term initiatives that support the 8-Point Economic Stimulus Programme announced by H.E. President in May 2020, and the Post Covid-19 Economic Recovery Strategy outlined in the 2020/2021 budget statement of June 2020 and the Budget Review and Outlook Paper of September 2020.

Vision 2030 and Post COVID-19 recovery strategies

Kenya's Vision 2030 is the long-term development blueprint which aims to transform Kenya into a newly industrialised country and provide high quality of life to all citizens by the year 2030. The third Medium Term Plan and the *Big Four* Agenda (food security, affordable housing, manufacturing and affordable healthcare for all) were being implemented to accelerate the achievement of Kenya's Vision 2030. However, following the outbreak of the COVID-19 pandemic, the Government of Kenya announced an 8-Point Economic Stimulus Programme and a Post Covid-19 Economic Recovery Strategy aimed at protecting vulnerable Kenyans and sectors in the short-term, and also stimulate and sustain economic activity in the mid- to long-term. The focus of the Post Covid-19 Economic Recovery Strategy includes investment in ICT and digital infrastructure to support the use of digital platforms to facilitate e-commerce and efficient delivery of public services. This NPS Vision and Strategy seeks to build on gains made through CBK measures that were announced in March 2020 to increase the use of mobile money and digital payments. There will be focus on enhancing digital infrastructure, increasing access to affordable payment services, anchored on the pricing principles announced by CBK in December 2020.

Digital Economy Blueprint

The Digital Economy Blueprint (DEP) was formulated by the Ministry of Information, Communication and Technology (ICT) and other stakeholders. It was launched by H.E. President in Kigali, Rwanda in May 2019. Its vision is "a digitally empowered citizenry, living in a digitally enabled society." It will be delivered in five pillars as the foundation for growth of the digital economy: Digital Government; Digital Business; Infrastructure; Innovation-Driven Entrepreneurship and Digital Skills and Values. Attaining the objectives under the Digital Business pillar will require a robust and efficient payment system. The NPS Vision and Strategy document will support the DEP and its Strategy through enhancing efficiency and increased use of digital and mobile payments. This will also positively impact on other pillars such as Digital Government and Digital Infrastructure and Innovation that relies on digital and mobile payments.

Digital Finance Policy Paper

The National Treasury and Planning is finalizing a Digital Finance Policy. The objective of this policy framework is to ensure that financial services are delivered to Kenyans through integration with digital technologies. In particular, the main strategic objectives include open infrastructure; consumer protection; financial system regulation and nurturing future development. Notably, digital finance has the potential to provide affordable, convenient and secure banking service. The NPS Vision and Strategy seeks to ensure that Kenya's Payment Systems are robust, secure, efficient and effective and this will provide the necessary complementary support to the Digital Finance Policy initiatives. More specifically, the vision focuses on such areas as customer centricity, digitization, inclusiveness, policy and regulation, payment infrastructure, security, 24/7/365 payments, interoperability, digital identity and cyber security among others, all of which are critical to the successful implementation of the Digital Finance Policy.

2 Introduction

This document sets out the vision and strategic initiatives for Kenya's National Payment System for the next five years (2021 - 2025). The vision and the accompanying strategic initiatives will be the foundation for the development of Kenya's payment systems and industry. The Vision and Strategy are aimed at addressing the diverse needs of the Kenyan people and its economy, and support our nation's ambition for a digitised, cash-lite and 24/7 economy (see Box 1). The vision will also be the basis for consolidating and projecting Kenya's regional and global leadership in digital payments, extending this even further. Finally, the vision and strategic objectives will enable strengthening of the regulatory framework, to make it fit for purpose and fit for future.

The Central Bank of Kenya (CBK) has developed this vision and strategic objectives, based on the mandate it has in the CBK Act (Cap 491 Laws of Kenya), namely to "formulate and implement such policies as best promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement systems", and in line with CBK's mandate to issue currency that is anchored under Article 231 of the Constitution of Kenya, 2010.

Central banks have always been about money – how money is created, how money is held, how money is exchanged and how money or monetary value is moved. In turn, these roles accord particular core functions to any central bank – monetary policy, bank supervision, foreign exchange and payments, among others. Payments, therefore, has always been an integral feature of how the CBK has operated since its inception in September 1966. This Vision carries on from that heritage, but more importantly, projects the role of the CBK in accelerating the digitalisation process and enhancing the safety, security, stability and relevance of various payment systems. As a testament to this, the CBK has completed a major upgrade of the KEPSS in June 2020, giving it unparalleled capabilities and efficiencies (see Box 4). This strategy will also provide a firmer foundation to accelerate current initiatives which are being implemented in a number of areas, such as review of KEPSS rules to align them with the new platform, completion of a number of NPS guidelines and enhancement of data reporting by PSPs.

Kenya has witnessed rapid change not just in its economy, but more closely to CBK's work, in financial inclusion and payments. In 2003, only two in every 10 Kenyans had access to a prudentially regulated financial service. Today, that number has risen to more than 8 in every 10 Kenyans,[1] providing a majority of Kenya with means of not just holding monetary value, but a safe way of transmitting it, i.e., making payments.

The CBK is cognisant that this strong performance should not make us complacent. Kenya's payments journey is still an incomplete story; and it is impacted by multiple forces. The structure of the economy is changing, as is the country's demographics. A service-oriented economy, underpinned by Vision 2030 and "Big Four" agenda, will require faster, affordable and secure payment systems. Similarly, an increasingly younger population, means that payments solutions must

1. Central Bank of Kenya, Kenya National Bureau of Statistics and FSD Kenya, FinAccess Household Survey, April 2019

Box 2: How the NPS Vision and Strategy document was developed

The NPS Vision and Strategy has been developed on a collaborative and consultative basis, drawing on participation from various stakeholders throughout the entire process. In particular, feedback was sought and obtained from key industry players such as payment service providers, banks and money remittance providers, Kenya Bankers Association, SACCOs, fintechs, payment processors and aggregators, retailers and merchants, Government ministries, departments and agencies, the World Bank and FSD Kenya (who provided technical support during the process). The key elements of the technical design and stakeholder engagement included the following:

Technical design

The technical work was undertaken by the CBK through an Inter-Departmental Project Team comprising the following Departments: Banking and Payments, Legal, Bank Supervision, Financial Markets, Currency and Research. To ensure that the strategy is developed on a comprehensive basis, it covered a wide scope which included review of the previous NPS framework, undertaking a diagnostic study of the current domestic payments sector, review of emerging payments regionally and globally, investigating factors that underpin payments market trends, identifying key challenges and gaps to be addressed, and reviewing relevant global standards, and identifying best practices that Kenya can learn from other countries.

Research activities

To augment the technical design and incorporate feedback and input from payments industry and stakeholders, a market survey (using a structured questionnaire) was undertaken to obtain views from various stakeholders (see Annex 1 for summary findings). This also including drawing on data and findings from the FinAccess 2019 dataset. The response rate from the survey was 71% and included feedback from 35 commercial banks, 11 microfinance banks, 3 mobile money providers, 8 fintechs, 9 Government ministries, Departments and Agencies, 14 money transfer operators, 3 deposit taking SACCOs, 2 citizen associations and 3 industry associations. The questionnaire enabled feedback on a number of areas, such as:

- Degree to which the current payment system meets the needs of its users and citizens
- Challenges faced in areas such as fraud, cyber threats and access, including affordability
- Priority areas for realizing the NPS vision, with a focus on policy, regulation and security
- Key future drivers of a payment system such as interoperability, digital identity, cyber security, smart phones, e-commerce, customer centricity, regulation, security, infrastructure, innovation, competition and standards

Industry engagement

In order to interrogate the technical design and survey findings, CBK also directly engaged industry players and payment participants. A stakeholder workshop was held in November 2018, market analysis workshop in April 2019 to present findings from the market survey and analysis, and additional focused group discussions (FGDs) in the first half of 2019. The direct industry engagement was also used to test the applicability of the findings from the surveys, findings from the global best practice review (see below and summary in Annex 2), and agree on the challenges, priorities and casting of the overall payments vision for Kenya.

Global scan and best practice review

CBK also partnered with FSD Kenya (and its research partner, Bankable Frontiers Associations Global) to undertake a global review payment vision and strategy documents from other countries (see Annex 2). The aim was to draw and learn relevant lessons that could be adopted to Kenya's context. The countries reviewed include South Africa, India, United Kingdom, Canada, Singapore and Nigeria. Key lessons were drawn in terms of how to design and pitch a vision statement, the scope of forward-looking payments strategies, and the importance of underpinning a payments vision on core principles and alignment to relevant international standards.

present viable choices that meet changing consumer preferences. Responding to current and future COVID-19 impacts require resilience and customer-centricity.

As a payments regulator, CBK is also embarking on ensuring that PSPs are fully aligned to our priorities on embedding a better culture on compliance and customer centricity. In particular, the CBK is of the view that pricing practices and tariffs are often complex and opaque. These practices bring harm to consumers, deter uptake of services leading to significant under-utilisation of network resources. The CBK is determined to ensure that pricing practices are reflective of CBK's overall stance on customer-centricity, affordability and transparency, and is already working with the industry to make this outcome a reality.

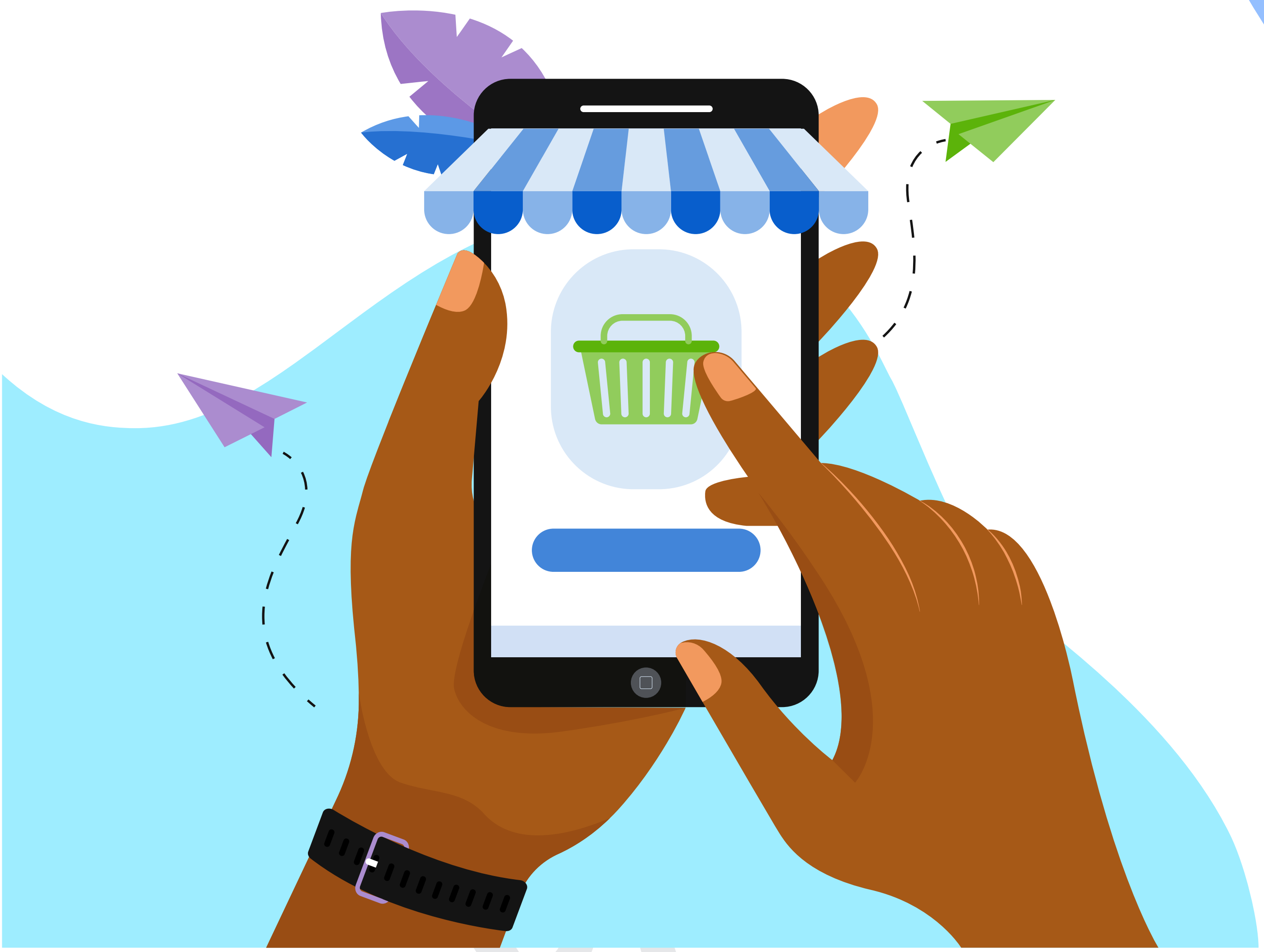
The CBK will be focused on these realities, to ensure that the payment systems support the country's inclusive growth agenda. Further, the CBK will put particular emphasis on ensuring a culture of compliance cuts across all aspects of payments services, anchored on a strengthened regulatory framework and enhanced oversight.

The COVID-19 pandemic and associated effects have impacted countries in ways that have no historical precedence. The measures to combat it have in turn produced significant adverse effects on businesses, economies and livelihoods. In this context, the CBK undertook a number of measures to help the country mitigate the effects of COVID-19, recognising its key role in the economy. Soon after the first case of COVID-19 was confirmed in Kenya, the CBK moved swiftly to implement emergency measures to enhance the use of mobile and digital payments (see Box 6). In addition, various cash transfer and emergency related payments by the Government and other organisations have leveraged the mobile money payment system to support businesses and the public. The payment system that Kenya had built over the last decade became an asset that the nation deployed in its time of need. This Vision and Strategy seeks to strengthen the entire NPS sector so that it continues to support the country, including mitigating the knock-on effects that the COVID-19 pandemic will create going forward.

In developing this Vision and Strategy, the CBK undertook a consultative process (see Box 2 and Annex 1). A number of stakeholder engagement activities were conducted. These include: industry engagement through an extensive survey that was used to obtain feedback across a range of payments stakeholders; a detailed market analysis that was used to drill down into the current state of the payments sector; and focus group discussions that were used to gauge the understanding and perceptions of the payments sector.

CBK consulted with the groups such as: payment service providers (PSPs), commercial banks, switches, microfinance banks, e-money issuers, mobile network operators, deposit-taking SACCOs, international money transfer providers, payments aggregators and international card schemes; various industry, business and consumer associations and bodies; various government ministries, departments and agencies; payments industry and systems experts; consumer groups; various merchants; and financial technology (fintech) firms (see summary process at Box 2 and list of institutions involved at Annex 1).

Finally, work also included a review of various payments strategies from other countries in order to benchmark with other jurisdictions (see Annex 2), and aligning it with key global standards (see Box 3). Internally within the CBK, the Vision and Strategy drew input from various departments, namely, Bank Supervision, Financial Markets, Currency Operations, Banking and Payment Services, Strategic Management, Finance, and Internal Audit and Risk. CBK is grateful to all industry stakeholders and partners who provided technical support during this process.



3 Context

3.1 Structure of the NPS

Kenya's national payments system (NPS) is the conduit through which individuals, businesses and institutions transfer value in order to facilitate economic processes and business transactions. The NPS is composed of diverse institutions and participants who interact on the basis of particular arrangements, procedures and infrastructure that enables payment, clearing and settlement. The payment system therefore forms an integral part of the country's monetary, financial and economic system, making it crucial for realisation of the Government's economic and development agenda.

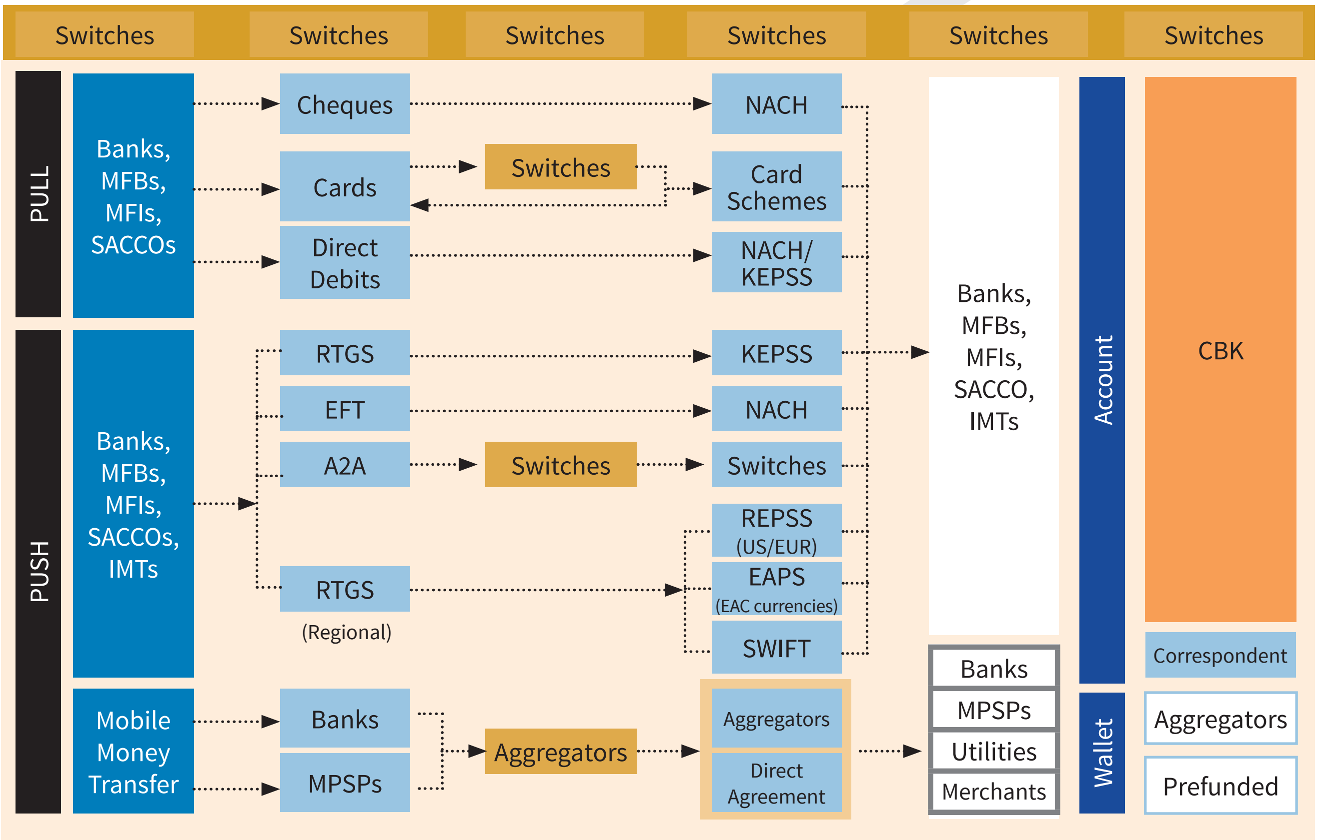
The NPS is made up of payment system rules, payment instruments and the participating players. The foundational element for the payment system rules is the legal and regulatory framework that is outlined in the NPS Act of 2011 and the NPS Regulation of 2014. In addition to the NPS Act and Regulation, various payment streams have rules and procedures, for example, the Kenya RTGS system (KEPSS) has its own set of rules that govern how KEPSS participants relate with each other. Similarly, the NACH, which is responsible for the clearing of cheques and EFTs, has its own rules and procedures that govern its members.

Figure 1 outlines key features of the payment instruments and players operating in the Kenya NPS. A recent addition to the payments scene in Kenya is the rapid increase of fintechs who offer various forms of services indirectly linked to payments.

3.2 Regulatory framework

The Kenya payments legal and regulatory framework consists of key elements that are designed with a specific purpose. The CBK Act specifies our overall payments mandate, which vests ownership and regulation of the NPS on the CBK. Based on this, the NPS Act of 2011 provides the overall payments supervisory and

Figure 1: Kenya's national payments landscape



oversight framework while the NPS Regulation, 2014 provides further detail to operationalise the Act. There are a number of guidelines such as on cybersecurity and authorisation of PSPs to provide specific guidance on these areas. Key features of the payments regulatory framework include:

- Establishment of the payments supervisory and enforcement powers
- Setting out the criteria of designating payment systems and instruments
- Process for applying for authorisation and the obligations of the NPS participants
- Establishment of which NPS participants can settle and clear payments, and the applicable rules and procedures
- Setting out the technical requirements for a PSP, such as governance and interoperability of payment systems
- Outlining the process of introducing new payment products into the market and making changes on existing products
- Outlining the process of PSPs engaging agents and merchants

Since the enactment of the NPS Act, 2011, the CBK has published a number of guidelines such as the guideline application for authorisation of PSPs that was issued in June 2014 and the guideline on cybersecurity for PSPs that was issued in July 2019. At an industry level, payment participants have standards and scheme rules which are concerned with the method of transmitting payment information while imposing certain requirements on participating PSPs to ensure risk to the payment system is well managed.

The standards, procedures and rules form an integral part of the framework that ensures efficient and secure transmission of payment information as well as clearing and settlement.

3.3 Payments participants

- **Central Bank of Kenya (CBK)**: The overall payments mandate for the CBK stems from Section 4A of the CBK Act, which is the foundational statute that anchors various CBK regulatory, supervisory and enforcement powers. Within the CBK Act, the regulator is charged with the responsibility of formulating and implementing policies which best promote the establishment, regulation and supervision of efficient, effective payment, clearing and settlement systems. CBK also owns and operates the Kenya Electronic Payment and Settlement System (KEPSS; which is Kenya's RTGS) and the Regional Payments and Settlement System (REPSS).[2] CBK also houses the Nairobi Automated Clearing House (NACH) for cheque clearance and EFTs.
- **Settlement participants**: Institutions that discharge payment obligations between two parties. These include both domestic settlement (i.e. KEPSS) and cross border settlement, that it, East African Payment Systems (EAPS) for East African Community payments, Regional Payment Settlement System (REPSS) for COMESA payments and SWIFT for other international payments.
- **Clearing participants**: Both bank and non-bank institutions that exchange payment instructions between PSPs. They include the NACH, network switches and aggregators, international card schemes and PSPs.

- **PSPs**: Include commercial banks, MFBs, MFIs, SACCOs, mobile payment service providers and international money remittance providers
- **Industry associations**: Organised groups of industry bodies whose main purpose is to bring together their members to articulate issues of common interest, promote adoption of best practices and advocacy.
- **End users**: These consumers made up of the Government, financial institutions, businesses and individuals who utilise payments infrastructure and channels to make and receive payments. The Vision and Strategy is aimed at ensuring that the needs of all types of payment consumers are satisfactorily met (customer-centric approach).

3.4 Payment instruments

Table 1: Payment instruments in Kenya

Instrument	Associated PSPs	Payment channels	Description
Paper based Instruments			
Cash	• Commercial banks • MFBs • E-money issuers • SACCOs • MFIs • IMTs	• Branches • ATMs • Agents	Cash is composed of notes and coins issued by CBK
Cheques	Commercial banks MFBs SACCOs	• Branch • ATM (acceptance)	Clearing of the cheques is done automatically at the NACH. Clearing takes T+1 days. The maximum payment value per transaction for local currency cheques is Ksh. 999,999
Electronic instruments			
Cards	Commercial banks MFBs E-money issuers SACCOs IMTs	• ATMs • POS devices • QR Code • USSD • Online (e-commerce)	Cards (debit, credit or prepaid) are primarily used for making purchases of goods and services, and for withdrawing cash at an ATM or bank agent. Card payments may involve a physical plastic card or a digital virtual representation often loaded on a smart phone to support QR or NFC payments

2. REPSS is the cross border settlement system for Common Market for Eastern and Southern Africa

Instrument	Associated PSPs	Payment channels	Description
Account to Account	Commercial banks MFBs SACCOs	• Branches • Internet banking • Mobile platforms	This is made up of a number of instruments: • EFTs (push payment) that are cleared through the NACH. They are restricted to a maximum payment value of Ksh. 999,999 • RTGS (push payment) used for large value transactions (above Ksh. 1 million). These push transactions are settled on a real-time basis through KEPSS. The system also settles time critical payments below the Ksh. 1 million • Cross border SWIFT transactions include telegraphic transfers, EAPS for EAC payments, and REPSS for COMESA payments • Bank P2P (push payment) initiated by the payer. The maximum payment value per transaction is Ksh. 999,999 • Intra-bank (push payment) transactions occurring from one account to another account within the same PSP • Standing orders (push payment) for fixed and regular payments. Executed using either EFT or RTGS payments • Direct debits (pull payment) executed using either EFT or RTGS payments
E-money	E-money issuers	• Mobile money agent • Mobile banking • SIM Tool kit • Mobile application • USSD	The main issuers of mobile money are mobile PSPs. The maximum payment value per mobile money transaction is Ksh. 70,000, with a cumulative total daily maximum transaction value of Ksh. 140,000 and a maximum account balance of Ksh. 100,000. However, these figures were revised in response to COVID-19. See Box 6 for more details

3.5 NPS strategy 2004 - 2008

The first NPS Framework and Strategy was developed in 2004. Its main objective was to modernize the payment system and provide basis for reforming the legal framework that was to later follow through the development of the NPS Act that was enacted in 2011. At the time, the payments system suffered the following problems and weaknesses:

- High risks associated with the payment system mainly due to lack of a real-time settlement system. This exposed the system and its participants to risks including credit, custodial, foreign exchange, settlement, legal, liquidity, operational, systemic and reputation risk.
- A high affinity to cash and lack of trust on cheque payments due dishonoured cheques and cheque fraud especially for high-value payments.
- Due to limited interoperability and coordination across the payments infrastructure, there was limited sharing of information, thereby affecting the efficiency and accessibility of different payment platforms.
- Lack of coordinated public awareness among the payment system stakeholders, resulting in limited use of electronic payment instruments
- Inadequate regulatory framework to support modern payment systems

Table 2: Strategic initiatives under the 2004-2008 NPS Strategy

Overarching goals	Initiatives / projects	Status
Systemic risk reduction	Introduction of an on-line settlement system for banks to effect interbank funds transfer in real-time.	Completed: An RTGS system (KEPSS) went live on July 29, 2005.
	Implementation of risk-reduction measures in inter-bank and multilateral netting schemes	Completed: Capped domestic cheques to Ksh. 999,999, and foreign currency to USD35,000, £15,000 and €30,000 in 2009
	Introduction of cheque truncation.	Completed: in August 2011.
	Introduction of same day settlement.	Completed: Files received during operating hours in KEPSS are settled on the same day since 2012.
	Collateral requirement and related management processes.	Completed: The Master Repurchase Agreement and Intra-day liquidity facility agreement were developed in 2006.
	Payment oversight	Completed: National Payments Act was enacted in 2011 and operationalised in 2014, together with the NPS Regulations
Legal and regulatory framework	Review the statutory powers of CBK regarding payments systems.	Completed: The review was completed in 2003/2004, and the Act amended to give CBK oversight over the NPS.
	Adaptation of the legal framework to ensure legal enforceability of payment service agreements and legal certainty in respect of industry practices.	Completed: The NPS Bill 2010 was enacted in 2011, and operationalised in 2014.

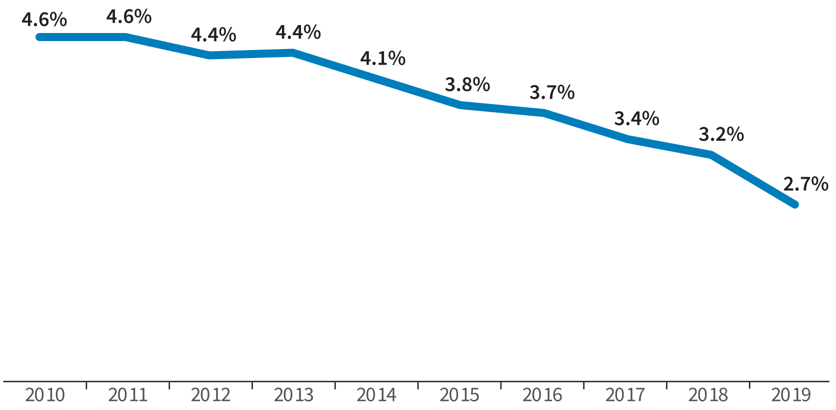
Overarching goals	Initiatives / projects	Status
Interface between trading system and the NPS and payment practices	Review of financial market practices from an NPS perspective.	Completed: The settlement in financial markets takes place in one day through KEPSS, since 2012.
	Encouragement of electronic trading and payment mechanisms in the trading systems.	Partially completed: The Delivery-versus-Payment (DvP) and Payment-versus-Payment (PvP) principles have not been fully adopted.
	Introduction of mechanism to relay information associated with a payment to the beneficiary	Deferred: This has not yet been achieved across all the banks.
	Review of cross border/ foreign currency market practices from an NPS perspective.	Partially completed: EAPS and REPSS have been launched but need to increase uptake. Also, a domestic foreign currency cheque (DFCC) clearing house (CH) was developed. However, an integrated mechanism for cross border retail payments for the two regions of EAC and COMESA is still not in place.
Payment practices	Introduction of a regulatory framework for PSPs	Completed: Achieved through NPS Act, 2011 and NPS Regulations 2014
	Creating public awareness.	Completed: CBK participated in a number of public awareness activities
Management of the NPS	Establishment of a Kenya NPS forum.	Implemented through CBK's engagement with industry players
	Establishment of NPS standards.	Implemented through issuance of various guidelines and circulars

3.6 Recent developments

Despite rapid digitalisation, cash usage remains high. However, though the nominal cost of transacting in cash is nil, it has its associated risks in terms of safety, and costs of handling. Following the advancement in financial and digital inclusion, the dominance of cash, even in low value payments, is reducing, albeit at a modest rate as consumers increasingly use digital payments to make P2P, P2B and P2G payments. This notwithstanding, Kenya has continued to record a steady decline in currency in circulation as a share of gross domestic product (GDP) **(Figure 2).**

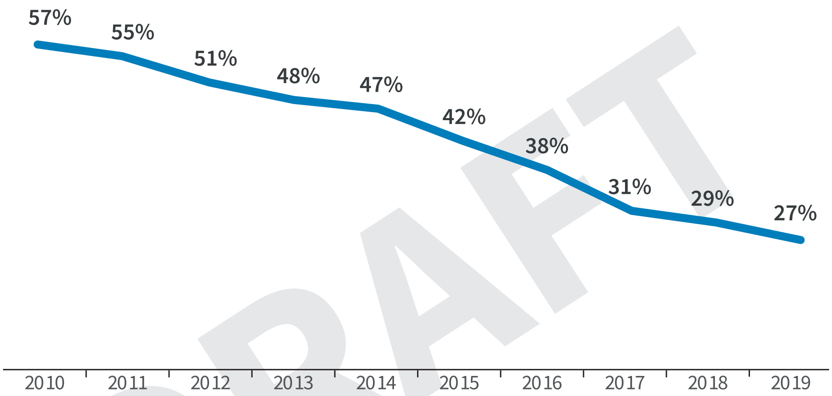
Cheque transaction volumes and values continue to fall in relative terms, as individuals and businesses make greater use of electronic payment instruments. In 2010 the value for cheques was Ksh. 1.8 billion or 57% of GDP. While the absolute values of cheques increased gradually overtime, as a share of GDP, that has halved to about 27% in 2019 **(Figure 3).**

Figure 2: Currency in circulation as a share of GDP (%)



Source: *CBK statistics, 2020*

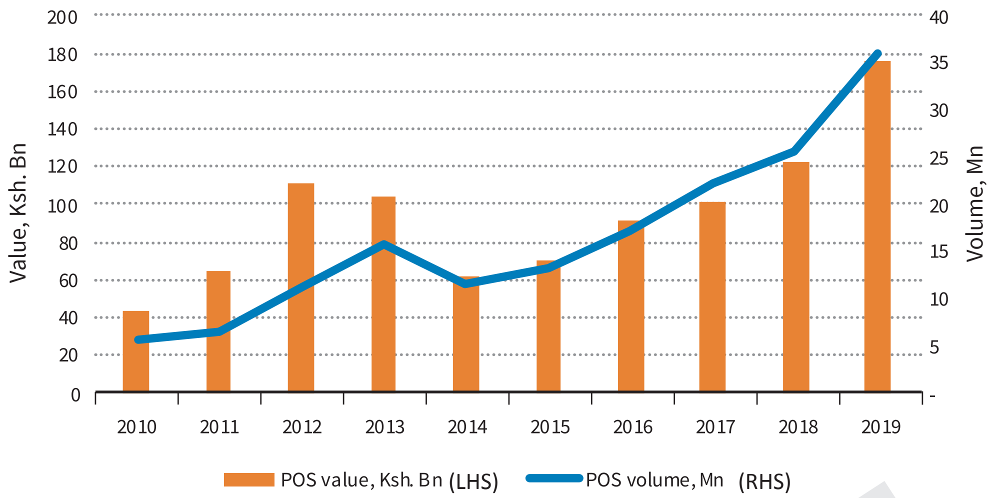
Figure 3: Cheque values as share of GDP (%)



Source: *CBK statistics, 2020*

The volumes and values of card transactions have been increasing over time. From 2010, both card transactions at point of sale have increased in value and volume terms. Volumes have increased from 5.5 million in 2010 to 36 million in 2019, while value has increased from Ksh. 44 billion to Ksh. 175 billion over the same period **(Figure 4).** This said, usage of cards in Kenya is still relatively low. This may be due to the poor network of POS terminals nationally, resulting from the high cost of POS terminals and cost of acceptance for the merchant, negative perception of consumers due to incidents of fraud and poor stability of card payment systems. It may also be the case that mobile money transactions – particularly as a means of making payment to a merchant – have become a substitute for card payments.

Figure 4: Trends in point of sale transactions

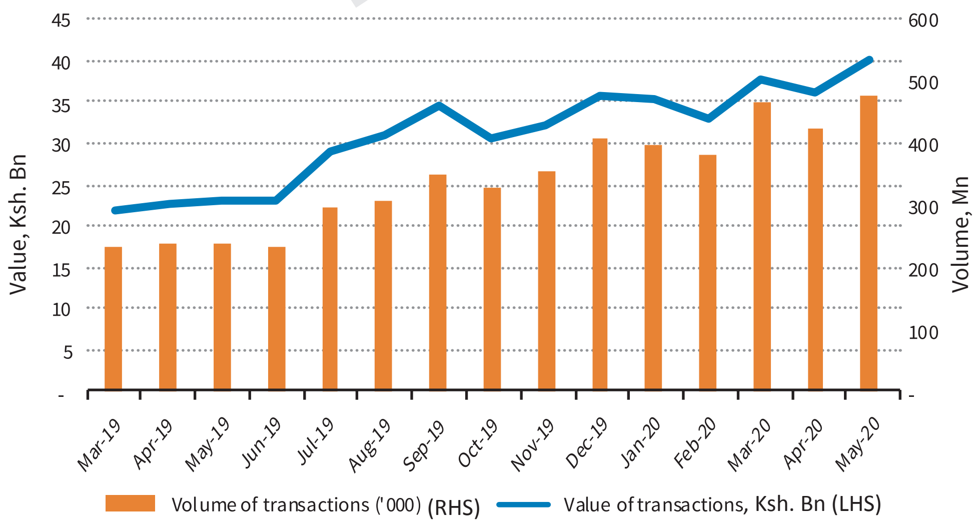


Source: *CBK statistics, 2020*

Bank P2P, which was launched in 2017, enables 24/7 real-time payments of up to Ksh. 999,999 across banks. For the period March 2019 to May 2020 bank P2P has witnessed a modest but steady increase in both volume and value **(Figure 5)**, a trend that is likely to grow as more users adopt the use of this service, especially lower sized value bands.

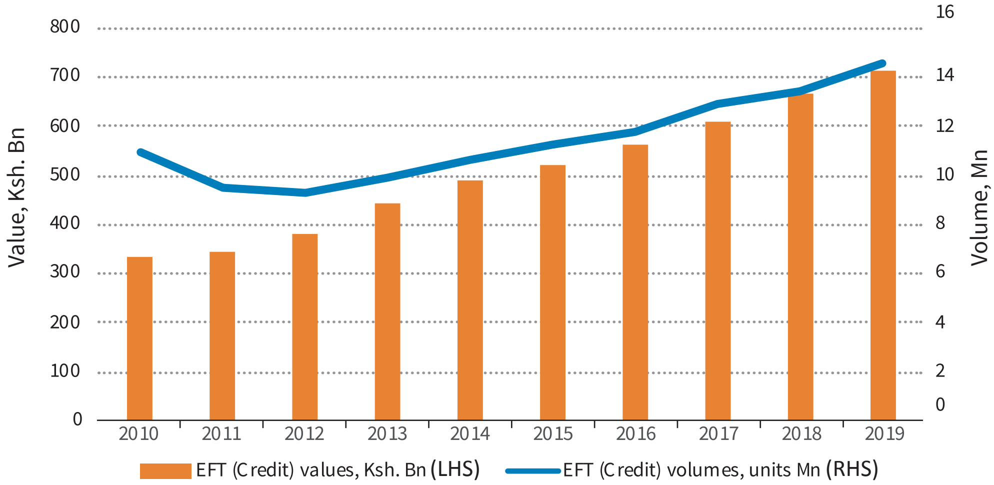
After an initial drop between 2010 and 2013, EFT volumes have been steadily increasing since then, as has been EFT values from 2010 to 2019 **(Figure 6 and 7).** The development of bank P2P that are real-time and less expensive than EFTs is likely to lead to reduction in EFT usage going forward.

Figure 5: Bank to bank P2P



Source: *CBK statistics, 2020*

Figure 6: Trends in EFT total transaction



Source: *CBK statistics, 2020*

The growth in volume of RTGS transactions has grown steadily over the past decade, as more payments shift to RTGS; volumes have grown faster than value of RTGS payments. As a result, average transaction values has dropped from Ksh. 19 million in 2013 to Ksh. 6.5 million in 2019 **(Figure 8 and 9).** This is likely attributed to the time efficiency of this instrument, as consumers prefer same day settlement even for low transaction values.

Figure 7: EFT values as share of GDP

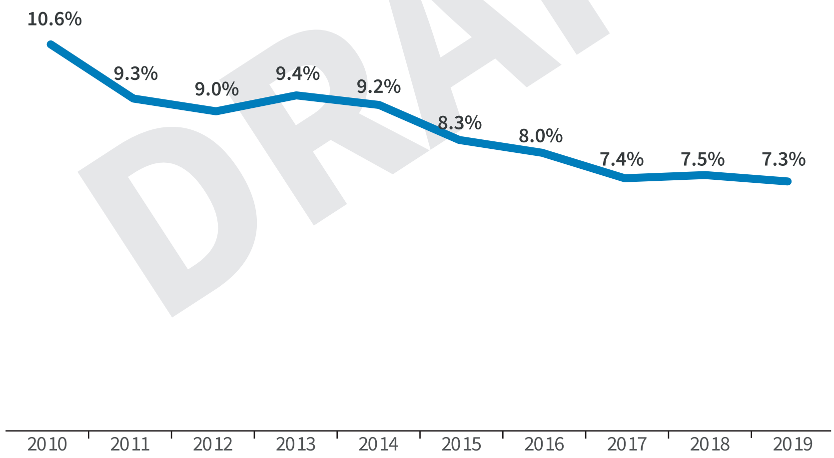
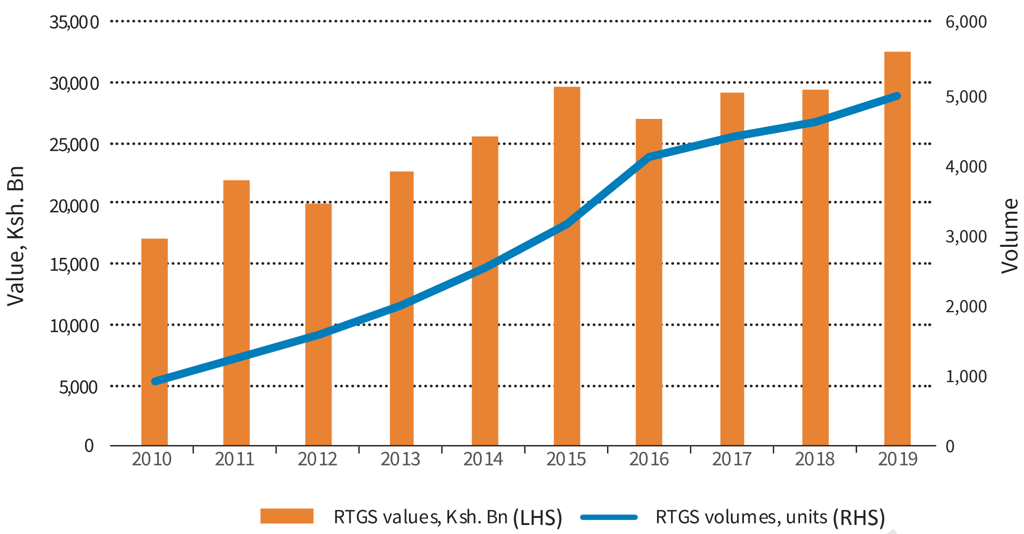


Figure 8: Trends in RTGS total transaction



Source: *CBK statistics, 2020*

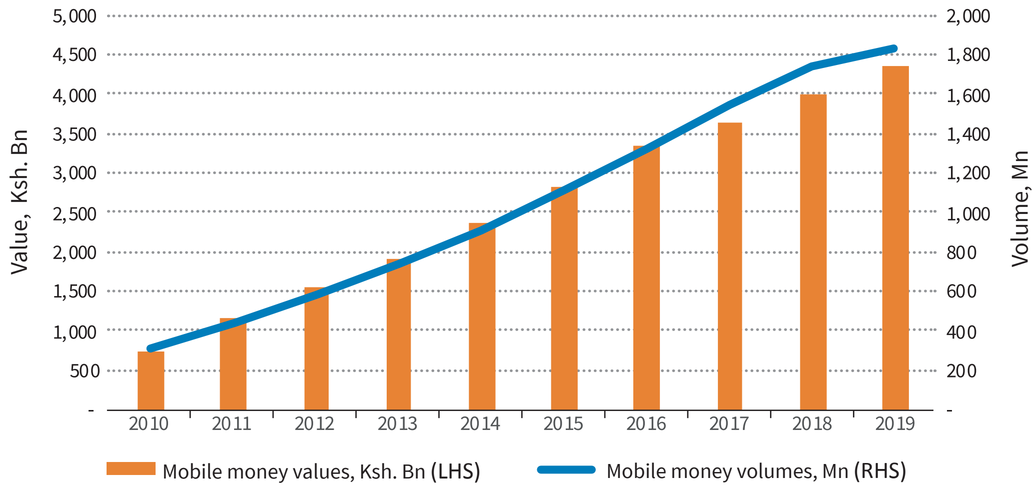
Mobile money transactions volumes and values have shown the largest growth since the inception of this payment instrument. Initially emerging as a means of sending money between individuals, merchant payments were later enabled in 2013. Since then, the total volume and value of payments has increased rapidly. For the period 2011 to 2019 total volume of mobile money payments grew by 22% while that of value was 23%. Though the industry moved to enable interoperability of mobile wallets in 2018, this is limited to only P2P payments, and is yet to be expanded to both merchant and agent interoperability and even to work seamlessly at P2P. If effected, this will enable mobile money users of any network to cash in or cash out from any mobile money agent irrespective of the network they represent and to make merchant payments at any merchant no matter the network with which the merchant has a mobile money account or payment instrument.

Although the Kenya's payments landscape has undergone dramatic changes in the last ten years, there are still areas with considerable opportunities and improvement such as growth of the electronic payment instruments, i.e. cards, Bank P2P, EFT and RTGS.

There have been significant developments over the last 5 years, particularly in growth and acceptance of digital payments. Collaboration amongst industry players led to the launch of several products in the market. In addition, in 2014 the Communications Authority of Kenya licensed 3 Mobile Virtual Network Operators (MVNOs).

In the public sector, the launch of government-to-person (G2P) payments in 2013 (eCitizen) was a major milestone. This enabled a range of public services to be paid through mobile money and for delivery of public services online. The most recent being the launch of the Government's ***Inua Jamii*** cash transfer program in 2018. The expected roll out of the National Integrated Identity Management System (NIIMS) and the ***Huduma Namba*** will provide a key impetus to further deepen the adoption, safety and robustness of digital payments.

Figure 9: Trends in mobile money transactions



Source: *CBK statistics, 2020*

3.7 Pricing of payment services

While the recent improvements in various payments channels have been commendable, the same has not been reflected in terms of pricing of various payments services. Aside from the COVID-19 support measures that were designed to cushion the economy, the benefits of digitisation of payments are yet to be fully passed on to customers. Prices and tariffs of some payment services are high in relative terms, while others are too complex to be understood by the average consumer. Further, where institutions utilise payments rails, services are availed to end-consumers with multiple charges. The inability to put in place effective and easy-to-access mechanisms to address price related complaints, particularly on digital channels, has undermined trust. The CBK is determined, working with the industry, to change this reality and ensure that benefits of digitisation translate to affordable, transparent and customer-centric payment services. The main initiative will be the gradual roll out of pricing principles (see Annex 3) that were introduced by the CBK in December 2020 across the payments ecosystem.

3.8 Global payments landscape

In its annual report for 2020, the Bank for International Settlements (BIS) noted that digital innovations are radically changing payments systems globally, and that central banks can play a pivotal role in influencing that change.[3] This is quite consistent with the predominant drivers that have impacted payments at the global level. The prominence of these drivers varies by region. In Asia, for example, the region has witnessed rapid growth in alternative forms of payments, partly due to the entry of bigtech firms into the payments space. According to the 2019 McKinsey Global Payments Map report, transactions in electronic payments in the Asia Pacific region have grown by more than 15% annually. In China in particular, mobile payments experienced a 123% cumulative

3. Bank for International Settlements, *Central banks and payments in the digital era,* special chapter in the Annual Report 2020, June 2020

annual growth rate in the period 2013 to 2018, fuelled by large payment ecosystems such as Alipay and WeChat Pay.[4] In India, the ***Aadhaar*** system has enabled rapid innovation and integration of key enabler systems such as electronic identification, reducing the cost and extending digital payments to millions of customers. Currently, there are more than 1.2 billion Indians who use the ***Aadhaar*** number.[5]

Across Europe, countries are moving to instant retail payments across various payment instruments, creating more choice, reducing the primacy of cash, while also strengthening gross settlement systems for safety and resilience of large-value payment systems. In the UK, 19% of retail shopping is taking place online, compared to just 11% five years ago. In the Nordic region, countries like Sweden, Norway and Denmark have reduced the use of cash at point of sale to near-single digit levels.[6] In other markets, mobile and digital payments accounts for a rising share of e-commerce spending: 71% in China, 32% in India and 24% in the U.S.[7]

It is likely that COVID-19 related impacts will drive this trend even higher, while accelerating the rate of adoption of mobile-based payments e-commerce in emerging and developing countries.

As Kenya implements this NPS Vision and Strategy, we shall seek to learn from relevant jurisdictions in terms of the journey they have taken on areas that we need to improve, but tailor that experience to Kenya's needs. More importantly, we shall seek to share our own experience and innovation spirit with the rest of the world, ensuring that Kenya is also influencing changes and trends at the global payments scene.

3.9 Payments in the post-COVID world

No other development will have emphasized the importance of digital payments than the advent of the COVID-19 pandemic. When Kenya confirmed its first coronavirus case in March 2020, the CBK announced and rapidly rolled out a number of emergency measures to support the wider economy in general, and the financial sector in particular (see Box 6). Since March 2020, the country has witnessed rapid increase in mobile and digital payments. Between February and October 2020, volumes of P2P payments increased by 87%, with an additional 2.8 million customers using mobile payments. Volumes and value of transactions below Ksh. 1000 increased by 114% and 200% respectively.

COVID-19 will no doubt have lasting impact in how economies operate and individuals transact; Kenya will be no exception. The role of the Kenya NPS will be vitally important in cushioning individuals, businesses and the economy against some of these major adjustments. The principles around which this vision document is built (trust, security, usefulness, choice and innovation) will be harnessed to increase usage, confidence and cost-effectiveness. For existing and new users of digital payments, they will need assurance

4. McKinsey & Company, *Global Payments Report* 2019, September 2019
5. Bank for International Settlements, *The design of digital financial infrastructure: lessons from India*, BIS Paper No.106, December 2019
6. *Future of Finance: Review on the outlook for the UK financial system: What it means for the Bank of England*, Huw van Steenis review, June 2019
7. World Pay, *Global Payments Report: The pathways of people and payments,* January 2020

that the system remains safe and secure, and where customers have complaints, that these can be resolved quickly and satisfactorily. The overall aim of implementing this strategy in the post-COVID context will be to ensure that the payments system becomes a safety net and key enabler, supporting users recover and overcome the effects of the COVID-19 pandemic, and to be better prepared for whichever shocks confront us in future.

Box 3: Alignment to global standards

In preparing this document, CBK reviewed a number of global standards such as the Principles for Financial Market Infrastructures (PFMIs), the International Organization for Standardization (ISO) standards on messaging, the Payment Card Industry Data Security Standards (PCI DSS), among others. We also sought to align this document with global initiatives touching on wider financial inclusion and financial sector development such as the Maya Declaration and its Accords, the G20 High Level Principles on Digital Financial Inclusion, the Financial Action Task Force (FATF) Standards including its 2011 Guidance on Anti-money laundering and terrorist financing measures and the Financial Inclusion and 2020 guidance on digital identity. Finally, reference was made to the report of the United Nations Secretary-General Task Force on Digital Financing of the Sustainable Development Goals in order to align our work with its focus on fostering a people-centred approach to digital payments and financing of a sustainable future.

The Principles for Financial Market Infrastructures (PFMIs)

The PFMIs are set of 24 principles on the safety, efficiency and effectiveness of financial market infrastructures, including payment systems that are systemically important. PFMIs also set out five core responsibilities that are offered for consideration by central banks and other regulators who oversee payment systems. The PFMIs provides that systems should identify plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. The Principles also focus on efficiency and effectiveness aspects, meeting the requirements of their participants and the markets they serve, while maintaining appropriate standards of safety and security. The system should provide comprehensive and appropriately detailed disclosures to improve the overall transparency of the system, its governance, operations, and risk-management framework.

Overall, the NPS Vision and Strategy document seeks to align CBK's payments oversight by implementing initiatives that bolster payments oversight as anchored on the explicit payments mandate in the CBK Act [Section 4A(1)(d)] and NPS Act (PFMI Principle 1, legal basis), undertaking continuous improvement if the NPS regulatory framework (PFMI Principle 2, governance) and enhancing safeguards against operational, market and technology risks (other PFMI Principles such as 15-17 on management of risks and 18-22 on efficiency and access of the payment system). As detailed in the initiatives at Chapter 5, initiatives will include strengthening of the NPS regulatory framework through development of guidelines in a number of key areas, enhancing oversight over systemic systems and providers, and continuous roll out of the enhanced features of the new RTGS platform that enables, among other benefits, better AML/CFT disclosures.

The International Organization for Standardization (ISO) Standards

The PFMIs advocates for the use of standardized messaging formats and reference data standards for identifying financial instruments and counter parties in line with the ISO Technical Committee TC68 Standards (i.e. ISO 20022 on messaging). The use of internationally accepted standards for message formats and data representation generally improves the quality and efficiency of the clearing and settlement of financial transactions. The NPS Vision and Strategy document will accelerate on-going efforts to adopt the ISO 20022 messaging standard across the payments industry in order to enhance disclosures that will improve transaction and AML/CFT reporting among payment participants.

The Payment Card Industry Data Security Standards (PCI DSS)

PCI-DSS is an information security standard for organizations that handle branded payment cards. The standard was created to increase controls around card holder data and reduce credit card fraud. The NPS Vision and Strategy document will ensure attainment of highest levels of security standards in the payments card industry in Kenya by adoption of international best standards on security in relation to the payment cards.

G20 High Level Principles on Digital Financial Inclusion

The G20 High-Level Principles for Digital Financial Inclusion are a catalyst for action for the G20 to drive the adoption of digital approaches to achieve financial inclusion goals, as well as the related G20 goals of inclusive growth and increasing women's economic participation. The Principles call for the need to balance promoting innovation to achieve digital financial inclusion with identifying, assessing, monitoring and managing new risks. That is, they recognize the need to actively balance the promise of digital innovation with the new risks that rapidly evolving technology introduces. The NPS Vision and Strategy document will enable CBK renew its focus on improving the entire payments system in the country with a view to enhancing participation of women and youth through initiatives such as on financial education, enhancing digital infrastructure and identity, particularly for women who currently are excluded from financial activity due to lack of basic/traditional identity documents.

Financial Action Task Force (FATF) Standards

The Financial Action Task Force (FATF) is an inter-governmental body that sets standards to promote implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system. In collaboration with other international stakeholders, the FATF also works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

The NPS Vision and Strategy document will accelerate CBK's work on enhancing the security and integrity of payment systems. This will include strengthening AML/CFT safeguards for digital payments through development of a guideline that is purpose-built for AML/CFT risk mitigation in digital payment ecosystems, enhancing data and AML/CFT reporting and improving vigilance and surveillance through implementing awareness programmes among payment participants and users.

Maya Declaration, selected Accords and Bali Principles

Maya Declaration, launched in 2018, is the first global and measurable set of commitments by developing and emerging countries to unlock the economic and social potential of the poor people through greater financial inclusion. Several other Accords have also been agreed, providing focus on particular areas in financial inclusion; these include SMEs (2015 Maputo Accord), gender (2016 Denarau Action Plan), green finance (2017 Sharm El Sheikh Accord), FinTech (2018 Sochi Accord). The Bali Fintech Agenda was launched by the IMF and World Bank in 2018. It comprises 12 policy statements aimed at advancing the benefits of financial technology (fintech) while mitigating its inheren risks.

The NPS Vision and Strategy will build on CBK's work that has been implementing activities aligned to the Maya Declaration and Bali principles. At 83% financial inclusion, focus is now shifting from financial access to usage especially among women and youth. Improving the affordability, safety and innovation of payment services will enable usage of financial services also puts a lot of emphasis on Financial Inclusion. Overall, the Vision and Strategy document seeks to enhance security of the entire payment system in Kenya. This will have the effect of promoting trust and by confidence in the payment systems leading to increased usage of retail payment services by all users in particular, women and youth.

| 4 Vision statement, principles and strategic objectives

4.1 Vision

The main purpose for the NPS Vision statement presented here is to present a future ambition of where Kenya's NPS aspires to reach in five years. The vision statement presented below embodies the key elements, issues and suggestions that filtered through the various stakeholder engagements, including a detailed market analysis. It also provides the direction of travel that CBK desires to see as the payments sector takes as Kenya enters a new phase of its payments journey. Overall, the statement should be taken as a rallying call for all payments stakeholders to play their roles in making it a reality.

The vision statement is built upon three main elements. The first part of the vision is about articulating this "big picture" by providing the answer to the question: where should the Kenya NPS be in five years? CBK desires to see Kenya as a global leader in digital and mobile payments. Secondly, the vision statement addresses the "how to" achieve that global ambition – that is, by building a world class, secure, resilient and collaborative payments system. Thirdly, the vision statement addresses the question: what is the end purpose of that ambition – it is to power Kenya's economy and its journey towards cash-lite.

4.2 Principles

Just like the vision statement, the vision principles have been sifted from numerous comments and feedback received. The principles capture some of the key features that were identified during the stakeholder engagement; key ones include security, usefulness and trust. Therefore, the principles should be seen as the pillars and the bridge between the future Kenya desired end-state as captured in the vision statement and what will be implemented in the coming years, in line with the strategic objectives. In many ways, the

To enhance Kenya's global leadership in digital payments by building a world-class, secure, resilient and collaborative payments system that powers Kenya's economy and its journey towards cash-lite.

– NPS vision statement

principles are articulated to be inter-linked, that is, progress on one (e.g. innovation or security) will enable achievement of others (e.g. trust and usefulness). This interconnectedness will be evident in complementarity between the strategic objectives and corresponding strategic initiatives **(chapter 5).** A thriving payments innovation ecosystem will enable increasing choice of value-adding payments services that are both affordable and relevant to users' payment needs. Finally, CBK expects that from its regulatory perspective, key principles such as trust and security will cut across all activities that will take place in the course of implementing this strategy. The five core principles upon which the Kenya NPS will be built are:

- ***Trust*** – a system which guarantees that payments will be made and received in a timely and reliable manner.
- ***Security*** – a resilient system that safeguards all payments and channels in an increasingly digital world.
- ***Usefulness*** – a system that meets the payment needs of individuals, businesses and government in a cost effective manner.
- ***Choice*** – availability of feasible options resulting from collaboration among different service providers.
- ***Innovation***– an ecosystem that produces value-adding solutions which also compete at the global stage.

4.3 Strategic objectives

Articulation of these strategic objectives has been informed by several considerations. Firstly, the objectives have been distilled from the extensive material and consultation that was conducted prior to finalisation of this vision and strategy. Secondly, the objectives have been informed by CBK's view of how the Kenya NPS needs to evolve, based on is wider regulatory and payments mandate. Thirdly, the strategic objectives have been informed by the need to accelerate on-going activities that are being led by CBK such as the gradual adoption of the ISO 20022 messaging standard across the payment industry.

The strategic objectives will be used to define and anchor the activities that will be implemented, including the monitoring framework. The articulation and use of this logic (vision statement, vision principles, strategic objectives and strategic initiatives) provides this document with both the clarity and agility required to shift emphasis as new challenges, technologies and realities emerge in the course of implementation.

The four strategic objectives for Kenya NPS for the next five years (2020 - 2025) are:

1. To facilitate payments systems that meet the diverse needs of users and supports the country's development agenda.
2. To ensure payments systems are secure through influencing industry and global standards, and adopting safe technologies.
3. To power an ecosystem based on collaboration leading to launch of premier and globally competitive innovations.
4. To implement a supportive policy, legal and regulatory framework that is firmly enforced across all existing and emerging players.

Box 4: Kenya's payment journey, new RTGS platform and progression to 24/7 economy

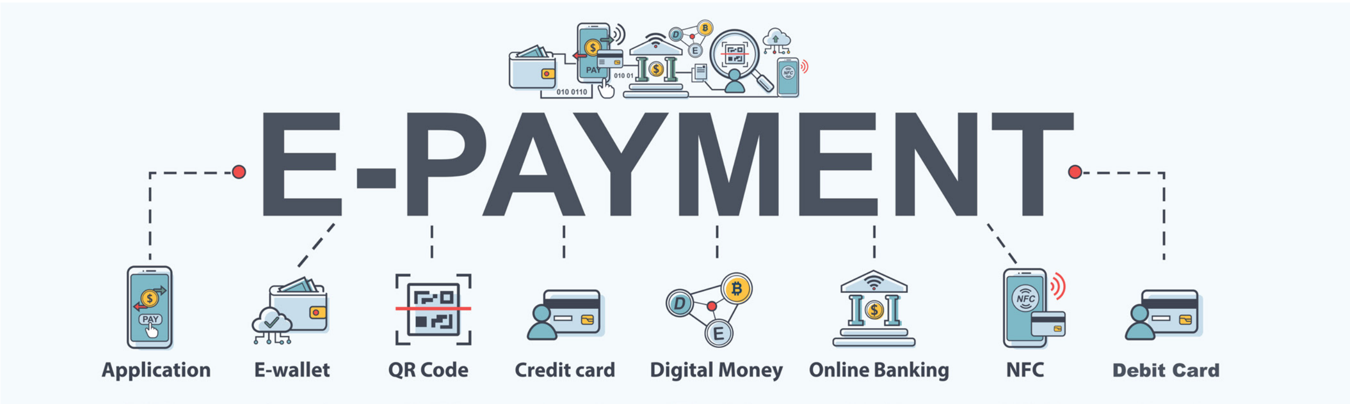
Kenya's Payment Systems have come a long way, beginning with the manual systems that existed in early 1990s to the present-day automated, electronic payment systems. The development trajectory from the 1990s to date can be explained broadly by a number of some key milestones:

- Amendment of the Central Bank of Kenya Act to include Section 4A 1 (d) that gave CBK an explicit mandate to "formulate and implement such policies as best promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement systems";
- Creation of the National Payments System Division to spearhead initiatives to modernize the national payment system, including formulation of the first National Payments System Framework and Strategy document
- Development of Kenya's Real Time Gross System (RTGS) System in June 2005 that revolutionized the country's interbank settlement as well as enabled the country to establish regional links thus creating regional settlement systems
- The continued expansion of the payment card industry and the introduction of the mobile money services in 2007, and in partnership with banks, launch of various mobile banking services
- Enactment of the National Payment System Act 2011 and the National Payment Systems Regulations in 2014
- Support and emergence of FinTech and similar innovations launched using a test-and-learn approach, for example M-Akiba that allows purchase of Government securities over mobile phones

Over the recent past, CBK has continued with this trajectory of modernising the NPS in line with CBK's vision of being "A World Class Modern Central Bank", and also in line with the wider Government of Kenya agenda on emergence of a fully digitised economy. Once such improvement was upgrade and launch, on June 5, 2020, of a new platform for the Real Time Gross Settlement System (RTGS) otherwise known as the Kenya Electronic Payment and Settlement System (KEPSS). The KEPSS system is a critical infrastructure in the economy that processes large value and time critical payments in the country. Currently, the system is processing a daily average of 19,000 transactions with a value of more than Ksh. 103 billion. This represents more than 80 percent of the total value of transactions settled within the Kenyan payment systems. The migration that was concluded in June 2020 marked an important milestone in the modernization of Kenya's payment system. The migration was necessitated by CBK's desire to support a more digitized economy that continuously seeks new payment instruments and innovations that are safe, efficient and effective.

The new RTGS platform adds key additional benefits to the payments sector and financial system as a whole. It can process up to one million transactions per day and a capability to support the industry on a 24/7 basis. It is also ISO 20022 SWIFT messaging standard compliant and has AML/CFT capabilities. Other key benefits of the upgraded KEPSS include: more user friendly and accessible through all browsers; additional functionalities to the existing system such as alerts for monitoring purposes; enhanced transaction listing with a flexible filtering criterion for reporting purposes; improved and flexible timetable mechanism to run either automatically (scheduled) or on a manual basis; seamless integration with other systems to facilitate on-boarding of other payment channels; and enhanced liquidity management features for the participants to use to optimize the available settlement funds.

In line with the Government of Kenya's policy on the need to create a fully digitised economy and further to support The National Treasury and Planning Ministry's Digital Finance Policy, CBK will be gradually rolling out the enhanced features of the new RTGS platform, in order to continue the journey of modernising the NPS and support the emergence of a 24/7 economy in line with wider Government agenda of a fully digitized and 24-hour based economy.



5 Strategic initiatives

As stated in the preceding chapter, the vision statement, principles and strategic objectives constitute the core elements of the NPS Vision and Strategy. To ensure optimal synergy and coherence, the strategic initiatives that follow have been organised based on the five vision principles (trust, security, usefulness, choice and innovation). This has in turn produced five clusters of strategic initiatives that will form the basis for implementation and monitoring (chapter 7).

The clustering of strategic initiatives around the five principles gives a degree of overlap, which shows the inter-linkages between initiatives. For example, implementation of common standards (e.g. on safety) or improvements in infrastructure will impact on both security as well as usefulness of payment services. Common standards on data sharing are also likely to improve the environment for innovation among fintechs. These inter-relationships show that success or outputs from one initiative will impact another initiative. The format in which these strategic initiatives have been presented is to precede them with a snapshot of the key challenges to be addressed. The setting of each initiative is meant to be high-level with the relevant initiatives listed in the implementation matrix (**section 7.4**). However, at the same time, the various strategic initiatives are quite specific and clear in terms of the intended action and the overall direction of travel. At this stage, this clarity is vital in providing a firm basis and overall guidance for implementation.

Finally each principle has been accompanied by a short statement communicating CBK's understanding of that principle. This is not meant to be a generic definition as such. Rather, it is aimed at communicating CBK's expectation that should be attained as a result of successful implementation of the initiatives and their corresponding activities. Specific activities, including milestones and indicators will be developed by the respective technical working groups that will be constituted by CBK soon after launch of this strategy.

5.1 Trust

Outcome:

A system which guarantees that payments will be made and received in a timely and reliable manner

A payment system can be well built from a technology point of view, offering the best experience in terms of efficiency, technology integration and real-time receipt of value. However, if it cannot be trusted, its ability to support the economy is significantly impaired. Trust is a subjective concept. CBK's view, amplified by what we heard during the consultation process, is that trust in the context of payment systems is about ***certainty*** and ***reliability***. In short, a payer having the ***assurance*** that his or her payment will promptly and securely reach the intended payee, with next to zero friction.

However, trust in a payment system may mean more than this, particularly from the perspective of large users, and the regulator. For a large PSP or commercial bank that is making a time-critical payment, trust is about having ***confidence*** that the payment will reach the intended beneficiary on time, with no chance for failure or error. For the large PSP or bank, that certainty is a matter of fulfilling a contractual obligation to a client. For the government and certainly for a regulator like the CBK, trust is having the confidence that the payment system will not be abused to become a conduit for money laundering or financing of criminal and terror activities. Overall, trust, just as security further below, will be the backbone of the Kenya NPS.

Challenges related to the trust principle

Consumers:

- They **lack adequate assurances** that payments will reach the intended recipients at the right time, thereby reducing their willingness to use digital payment services
- Frequent **system failures** and **channel downtime** causing delayed payment, reducing the chance a user will trust that channel next time

> ***"Kenyans are fast to adopt to new financial products that are simple, reliable, trusted, affordable and that bring more efficiency"***
>
> – Fintech

> ***"To enable wider usage, there must be confidence that the system is safe and affordable.***
>
> – Fintech

- **Limited financial literacy** also undermines trust as users are easily affected by fraud and scams when there is limited understanding of products and risks
- **Fraud** in particular, socially engineered fraud and SIM fraud, especially among first time users
- **Lack effective complaints recourse**. Where this exists, it is unclear and complex due to existence of various consumer protection frameworks. Further, no recourse mechanism has been purpose-built for digital channels
- **Lack of data protection regulations**. Even with the enactment of the Data Protection Act, 2019, it is likely unauthorized use of a customers' data in digital payments is undermining trust unless strong safeguards and financial sector data protection regulations are developed and enforced
- **Lack of transparent tariff setting practices** affects customers' willingness to use digital payment services. This further impacts trust as they fear being charged hidden fees and charges

Businesses:

- **Lack of sufficient assurances** that businesses are making payment to the correct account. This is very important to businesses which make high-value and time-critical payments
- As with consumers, **system failures** and **channel downtime** affect businesses' confidence in the use of digital payment services
- Business owners identified **high incidences of fraud** particularly in relation to mobile money and cards payments. This raises risks and operating costs of business

Payment industry participants:

- **Cyber threats and fraud** are the widest threats raised among PSPs. Fraud, cybercrime and lack of latest security standards raises the cost of operations, expose PSPs to numerous risks and inhibit uptake of digital payment services
- **Varying standards of operation and service delivery** between different categories of providers (e.g. between banks and mobile PSPs) undermines trust. For example, digital service downtimes between digital and physical channels are governed differently

Government:

- Inability to **promptly, correctly and cost-effectively confirm the identity** of a beneficiary. This has been a particular challenge and likely to accelerate due to increased use of digital and mobile payments in the wake of COVID-19 pandemic
- **Fraud, cybercrime, money laundering** and **financing of terrorism** undermine the trust and integrity of the payment system
- As the majority of transactions remain in cash, the **government has limited visibility of most transactions.** This affects the government's ability to collect all revenue due to it, thereby limited fiscal capability and planning for its citizens

Strategic initiatives on Trust

5.1.1 Adopt relevant global standards

CBK will develop a roadmap for the adoption of global standards that are essential for enhancing trust among participants, and more critically, between PSPs and customers. This serves to address challenges on trust that emanate from lack of the latest and robust standards on areas such as security, dispute resolution and anti-fraud safeguards. Therefore, key standards to be adopted relate to data security (|PCI-DSS), consistent messaging for financial transactions (ISO20022), among others (see Box 3). This will also improve standardisation of product, user experience and use of common standards/interface to boost confidence and trust.

5.1.2 Encourage integration of digital identity

CBK will encourage the integration of digital identity information including adoption of electronic Know Your Customer (e-KYC), working in partnership with relevant Government MDAs. This will be aimed at enhancing customer identification and verification processes, enhance safeguards against fraud and identity theft, and strengthen anti-money laundering and counter terrorist financing (AML/CFT) policies. The development of e-KYC systems to increase customer centricity and innovation will borrow the experience on leading jurisdictions that have adopted digital identity systems, but tailor that experience to Kenya's context. Particular efforts will be made to ensure that marginalised segments of the population are not denied access to digital payment services due to lack of e-KYC or identity information. This will also include review of the existing payments infrastructure to assess its ability to integrate with digital identity systems, and develop a plan to remedy the infrastructure gaps that this review will identify.

5.1.3 Protect digital payment users

CBK will lead the process to develop a robust framework for digital payments consumer protection in order to address consumer protection framework gaps particularly for digital payments services. This will include harmonization of existing frameworks, or development of new frameworks. A robust digital payments consumer protection framework will have key elements such as systems for raising and addressing complaints on a timely basis, complaints handling, dispute resolution mechanisms with sufficient clarity on liability and compensation where necessary. This will borrow from international best practice frameworks such as the G20 High Level Principles on Digital Financial Inclusion and the AFI Policy Model on consumer protection for digital financial services.

5.1.4 Protect payments data and privacy

CBK will support development of a comprehensive framework for financial data protection and governance. The Data Protection Act, 2019 provides a framework for handling and protecting user's data and financial information. To complement this framework, the CBK will determine how to best approach the development of the comprehensive regulations needed to provide clarity and strengthen the data protection framework especially from the perspective of financial and payments data. This will include how financial, payments and other digital payments data is collected, held, stored and shared, and the kind of consumer consents and protections needed. The overall objective will be to ensure payments data is used safely and securely to enhance a users' privacy and customer-centricity.

5.1.5 Enhance consumer awareness among digital payment users

CBK will develop tailored approaches and guidelines for consumer education particularly for retail and low-income consumers. The desire is to have providers use approaches and content that is neither complex nor cumbersome. For a long time, consumer education has failed to deliver the desired outcomes, so it will be important for consumer education content to be tailor made to drive end user customer awareness and financial capabilities using tailor-made content, appropriately delivered. CBK will work with relevant agencies, industry and private sector players to develop effective and usable financial education and consumer awareness framework and content.

5.1.6 Facilitate effective pricing standards and practices

CBK will continue to gradually roll out the implementation of pricing principles to ensure that tariff and pricing of all digital payments is fully aligned to the principles. The primary aim for this will be to ensure that tariff and pricing of retail, wholesale and regional payments are aligned to the principles on customer centricity, transparency and disclosure, fairness and equity, choice and competition, and affordability. This will also include alignment to the business and corporate tenets aimed at complementing achievement of the purpose and objectives of the principles (see Annex 3). This initiative will be closely related with work on consumer protection and awareness in order to ensure that customers are aware of their rights and responsibilities when dealing with players in the payments ecosystem.

5.2 Security

Outcome:

A resilient system that safeguards all payments and channels in an increasingly digital world.

Security in the context of national payments is an all-encompassing concept, capturing dimensions of safety, resilience and integrity. Security is an essential feature for any modern payment system. This is both for the sake of how the system operates with robust safeguards, and how it mitigates current and future threats from cyber-risk, AML/CFT and general fraud risks.

Security is also linked to the principle of trust. Indeed, cyber threats and fraud were among the top two major concerns from the industry and stakeholders. The more Kenya secures its NPS against current and future threats, the more users it will draw to itself, driving uptake and reducing system and product dormancy.

The CBK will seek to adopt the latest and relevant security standards. Equally, Kenya will contribute to building international protocols and standards leveraging learnings from our domestic context. In the long-term, this will provide supplementary support for driving down costs of payment systems for players who currently invest resources for end-user protection (in turn pushing this cost down to users). Therefore, from a CBK regulatory perspective, security will be the backbone of the current and future Kenya NPS.

> ***"Security is required to build and to safeguard payments***
>
> – Fintech

> ***"An efficient, affordable and secure payments system is a win-win for the economy***
>
> – Microfinance Bank

Challenges for the security principle

Consumers:

- As stated above, fraud not only undermines trust, but it also makes the **users vulnerable to fraudsters** who conduct their criminal activities either through socially engineered fraud, SIM card swaps and other means

Businesses:

- Payment systems that are not secure represent **direct loss of revenue** to businesses due to fraud, either perpetrated by fraudsters or from employees. Building fool proof security systems adds significant costs to PSP and business operating costs

Payment industry participants:

- Cyber-attacks on payments systems represent a major **threat to the payments systems**, both large, retail and cross-border systems. Lack of harmonized and coordinated cyber reporting undermines collective efforts to put in place sufficient safeguards

Government:

- Insecure payment system not only **undermines financial system integrity**, but also **undermines national security and public safety**

Strategic initiatives on Security

5.2.1 Adopt common security standards

CBK will evaluate and require industry participants to adopt the latest and relevant global security standards. This includes the Principles for Financial Market Infrastructure (PFMI) that are issued by the Bank for International Settlement's Committee on Payments and Market Infrastructures (CPMI), COBIT-5 governance and management of IT frameworks and other guidance on cyber resilience for financial market infrastructures.

These international standards are crucial for PSPs to safeguard risks on cyber-risks and other threats that originate from global sources. In addition to adopting these standards, CBK will utilise its global presence in various standards setting bodies and global fora to influence development of standards and principles.

5.2.2 Create robust security reporting

CBK will enhance timely, full and accurate reporting of financial and payments fraud and crime incidents in a harmonized manner. This will ensure a clear understanding of the incidents and nature of financial crimes and in order to support effective surveillance, mitigation and enforcement. CBK will also work towards enhancing use of data driven models on surveillance and enforcement.

5.2.3 Enhance security data analytics

CBK will enhance existing fraud and crime monitoring and detection frameworks by deploying an analytics-led approach. This will ensure safety and security of payment systems, particularly digital channels. This will be done in partnership with relevant agencies. To support law enforcement, surveillance and early threat containment, this mechanism will have the ability to provide near real-time information on confirmed, attempted, suspected threats.

5.2.3 Facilitate cooperation on complaints resolution

CBK will work with other agencies to develop tailored and continuous capacity building for security stakeholders to better understand crimes related to payments. The objective for this will be to facilitate timely resolution of payments related crime and litigation, thereby providing relief to consumers and certainty of business environment for the industry. This will also seek to ensure effective prosecution and adjudication of perpetrators as a form of recourse and a deterrent in the payments industry. Key to this will be continuous scouting for the latest global threats and mitigation measures to ensure Kenya stays ahead of modern trends. Efforts will be required to ensure the curriculum is continually updated to meet international standards and the dynamic nature of payments industry technologies and threats.

5.3 Usefulness

Outcome:

A system that meets the payment needs of individuals, businesses and government in a cost-effective manner.

> **_Payments is an integral part in the economy thus affordability and usefulness of the payment options in the market is critical_**
> – Bank

A payment system can only contribute with a wider economic and social development, if customers find it useful. While being a subjective concept, we take usefulness to mean users' payments needs are reliably met in an affordable or cost-effective manner. Evidently, needs vary across different users. To a low-income or retail customer whose payments matter for day to day survival, usefulness is about affordability and trust; the assurance that a low-value payment can be made at minimal cost, with the confidence that it will reach the intended recipient on time. During the stakeholder engagement, people spoke of the importance of security functionality if they were to shift from using cash to e-value. It is not uncommon for customers to make several attempts before payments are successful. At this point, the need for usefulness and trust in payment channels and instruments converge.

To an SME, usefulness is also about affordability and cost effectiveness, as it is about the payment system presenting variety of choices in payments solutions and channels. For SMEs, this dimension of usefulness ensures that they are able to present different payment options to their customers and suppliers. Here, usefulness understood in this manner provides a competitive edge and advantage to retain customers. To a large business or multinational, usefulness is predominantly about security. For these users, usefulness is about a guarantee that large payments will reach the right beneficiaries securely in order to enable these large entities meet contractual terms with their customers, and comply with AML/CFT obligations.

Challenges for the usefulness principle

Consumers:

- **The lack of interoperability has increased the complexity, time and costs associated with making payments**. Although there is some level of interoperability (depending on use case and product), it tends to be cumbersome with a user journey riddled with friction (hence cost and delays). Eventually, this has given rise to proliferation of different, closed loop infrastructure, system and payment channels

- **System failures and channel downtime** associated with digital payment instruments affects consumers' willingness to make use of digital payment services, hence increasing account dormancy and dominance of cash, especially for low-value retail payments
- While mobile and digital channels are convenient, **the costs across various channels remain relatively high**, particularly at the retail end of the market where scale and numbers can potentially allow lower costs
- **Low levels of financial literacy affect consumers' ability to use digital payments.** This is further exacerbated by complex and non-intuitive steps to effect payments, thereby inhibiting use of digital payment services
- Low uptake of East Africa Payment System (EAPS) and Regional Payments and Settlement System (REPSS)
- **Younger population segments are unable to participate in the payment systems in their own right and under their own name**. As a result, guardians or parents register additional accounts or SIM cards in their name and provide access for their dependants

Business:

- The **time taken to effect payments can be a hindrance to businesses**. Real-time clearing and settlement are limited to mobile money, Bank P2P and RTGS. In addition, payments across different types of PSP institutions often require additional steps to complete
- **Payment reconciliation can take a long time to effect.** Businesses rely on specific invoicing and receipting requirements for their internal reconciliation. Transaction notifications from different payment providers

Box 5: Examples of closed loop payments streams

Mobile push payments at POS

These are not standardised industry-wide. Therefore, Till Numbers and Paybill Numbers from one MMO are restricted only to users of that one MMO network

Cardless cash withdrawals

These are dependent on a specific bank implementing a custom process for its own ATMs (and possibly POS) or a switch operator implementing the process on a network under its control

Domestic card transaction payments

There are two local proprietary Chip and PIN/EMV standards-compliant card scheme. Usage of the cards is limited to the systems of the members of each switch. They do not interoperate on each other's switch networks despite it being technically possible

Proximity NFC payments

For NFC contactless cards and mobile device NFC currently issued by isolated participants, there is no industry-wide agreement on standards and the roll out of functionality

NFC tag presentment

There is no standardisation of NFC tags across the industry, making the industry-wide use of tags and optimal use of the acquiring infrastructure unfeasible. For example, those used by MMOs cannot be read by bank NFC readers

QR code payments

QR code-initiated transactions, using either a Merchant QR code or a Customer QR code, are currently issued by isolated participants differ in the market, making it difficult for businesses to reconcile the payments

- **Lack of interoperability between different stores of value** means that businesses require multiple devices for multiple channels. An example of this includes mobile money and bank agents that require multiple handsets, POS devices and separate virtual floats required for each PSP. This raises the operating costs for businesses and limits the service
- As with end users above, **system failures and downtimes** limit the usefulness of digital payment services for businesses

Payment industry participants:

- **Low level of return on investment due to low uptake of digital payment products**. Digital payment services require capital investments, internal reorganization of operations, training of staff and significant marketing efforts to launch. To ensure adequate returns, these products often rely on achieving scale. Save for mobile money in recent years, a number of new payment services have failed to attain significant scale due to low adoption
- **Closed loop payment systems and bilateral agreements between PSPs creates a lack of transparency.** The lack of transparency leads to higher transaction costs for end users and makes it hard for PSPs to attain scale thereby diminishing their return on investment. Together these reduce innovation and choice

Government agencies:

- **A large number of MDAs do not offer their services on the digital payment platform, eCitizen**. As such, a large number of collection services for government are carried out in cash. This raises the risk of revenue leakages for the government
- **As with businesses, the government is affected by the lack of interoperability between stores of value**. This also means that multiple devices for multiple channels are required thereby raising operating costs and risks for government collection agencies
- **System failures and downtimes as described above affect the confidence** that government agencies would have to accept and use digital forms of payment
- **Lack of a modern and robust system for identification making it hard and costly to securely identify beneficiaries**, a major prerequisite for gaining access to digital forms of payments for government payments

Strategic initiatives on Usefulness

5.3.1 Enhancing interoperability

CBK will facilitate interoperability across various payment systems, anchored on the vision, its principles and strategic objectives. This will enable users to affordably access their stores of value from different channels and providers so as to seamlessly pay for goods and services and facilitate economic activities. CBK will work with industry stakeholders in order to outline the framework required to develop and implement the appropriate model, governance and infrastructure integration for efficient interoperability. CBK will set the required regulatory oversight framework to ensure interoperability meets customer expectations and facilitates broader economic activity in terms of payments for goods and services.

5.3.2 Facilitating efficient and effective clearing infrastructure

CBK will facilitate efficient and effective clearing infrastructure for all payment systems. This will be required to enable different participants interoperate and efficiently clear transactions. All settlements will continue to be done in KEPSS. In addition to facilitating efficient clearing, efforts will be undertaken to continue shifting payments to digital and electronic instruments, roll out of the ISO 20022 to cheque and KEPSS payments infrastructure in order to continue improving the retail, wholesale and regional payments infrastructure on a holistic basis.

5.3.3 Adopt common user standards

CBK will develop, and where necessary review and adopt, common standards that can be used to enhance usefulness. The adoption of common user experience standards will make the use of various payment instruments easier to use. This will include standards and procedures on payments such as QR code payments, NFC payments, mobile push payments, domestic card payments and cardless withdrawals, to name a few. Additionally, this will include adopting the ISO20022 messaging standard for financial transactions, which is recognised as the global, common language of financial communication. This will not only enable international interoperability, but will additionally promote the richness of payment data creating a more holistic approach to digital payments.

5.3.4 Improve interchange fee arrangements

CBK will facilitate the emergence of effective interchange fees frameworks where it is required to enable or promote interoperability. For each payment stream and channel, an interchange framework may be needed to enable the continued financing of the acceptance infrastructure and the issuance of the instrument. Various models will be considered defining interchange fees and a strategic interchange fee model. Stakeholders' views will be incorporated to ensure that the outcome is not dominated by the interests of any one group or lead to anti-competitive practices.

5.3.5 Improving efficiency of real-time gross and cross-border payments

Following enhancements of Kenya's KEPSS platform, CBK will continue to undertake stabilisation of the system. In addition KEPSS rules and procedures will be reviewed in order to align them with the enhanced platform.

5.3.6 Encouraging government digital payments

CBK will facilitate and encourage continued adoption of digital payments for public services. This will build on the current Government Digital Payments platform (eCitizen) and extend this further in terms developing the required digital infrastructure to support MDAs that want to link receipt of payments to digital payments platforms. Efforts will be undertaken to ensure equitable access and acceptance of payments channels to eliminate discrimination based on varying payment channels where some public agencies accept selected mobile payment channels and not all of the options available to citizens.

5.3.7 Boosting regional and cross-border payments

CBK will increase efforts to enhance regional and international payments and remittances offering to drive increased growth. This will require continued collaboration with other regional governments to identify current challenges faced and develop solutions so as to promote regional trade. It will also require a review of the EAPS and REPSS regional payment platforms to identify how their usage can be increased. Similarly, the CBK will review the risk associated with privately provided cross-border mobile money payments and ensure they conform to appropriate payment system standards. This will also include review of how efficiency and cost effectiveness of international payments and remittances can be improved.

5.3.8 Review the need for universal agent categorisation

A review on the need for universal agent categorisation will be undertaken in order to identify efficient cash in and cash out services across all PSPs. Agent networks are a crucial component of digital financial services as they provide important backbone infrastructure. They are critical in linking providers and customers. A review will be undertaken to assess feasibility of a universal CICO agent model for bank and mobile money users through an interoperable agent network platform, in order to determine the design, operation and oversight for such an agent platform.

5.3.9 Promote accessibility to marginalised groups

CBK in partnership with relevant stakeholders will explore ways in which various payment instruments can be easily accessed by currently under-served segments. These include persons living with disabilities, rural groups and the elderly. CBK is cognisant that digitalisation can also lead to digital exclusion especially for regions and groups lacking access to digital infrastructure. To this end, focus will be on ensuring that digital payment technologies do not have the unintended consequences excluding citizens from participating in digital payments, economic activities and accessing public services that are paid for using electronic payments.

5.4 Choice

Outcome:

Availability of feasible options resulting from collaboration among different service providers.

A key feature of a competitive market is availability of viable payments options. These options need to be priced at the appropriate point that meets the needs of consumers, encourage uptake but also retains market interest for investment. From the stakeholder engagement that was conducted, it was clear that most users associate choice with convenience of payments options. To achieve the shift to digital that this Strategy is encouraging, digital payments need to become an equal if not better competitor to cash. To be sure, this does not call for a policy that eliminates the use of cash, as that could lead to adverse unintended consequences. Rather, it is a desire to present digital payments as a better alternative to cash given the benefits associated with use of digital payments.

The major lesson is that for different forms and channels of payments, they have to compete with the features that make cash the most preferred choice: it offers instant payment; it is widely acceptable; at the point of making a payment it costs very little to use cash to settle a low-value transactions. To significant progress on our cash-lite journey, PSPs must deliver digital and mobile payment options that exceed these benefits that cash confers.

Choice will be an important feature of the Kenya NPS ecosystem in order to encourage uptake and efficiency. Encouraging competition will be a key enabler for effective and viable payments options. Finally, there are segments in the payments architecture where competition and choice may be limited for legitimate regulatory reasons; that is, areas that have “public good” features. In these areas, the key aim of the CBK will be effective oversight to ensure that lack of choice in these segments does not lead to overpricing or exploitation.

“

Payments is an integral part in the economy thus affordability and usefulness of the payment options in the market is critical
– Bank

Challenges for choice

Consumers:

- **Significant concentration of market power and market concentration can limit choices to consumers**. This is a major concern even across the globe, as bigtech firms enter the payments sector.
- **Different payments streams and channels provide viable choices, but these tend to be costly and out of reach for most consumers.** For example, off-us ATM pricing is very high in Kenya, limiting the use of shared ATM infrastructures and resource waste as each provider replicates its own nationwide ATM network
- **Consumers are unable to migrate their payment history from one payment provider to another**. As such individuals are bound to incumbent providers – even when cheaper options exist – as the cost of building a new history with another payment provider is costly and time consuming

Business:

- **Market power where industry participants determine interchange fee that acts as a floor price in the provision of merchant services**. This price floor raises costs to businesses that can inhibit their willingness to accept payment channels such as cards which in turn limits the payment options available to consumers
- **Limited competition for merchant acceptance in mobile money space**. This is also due to limited acceptance of competitor payment instruments
- **The lack of interoperability in the mobile money merchant acceptance space** limits payment options available to consumers as well.

***Payment industry participants**:*

- **Lack of open and secure application programming interface (APIs)** means that dominant players maintain their market position at the expense of smaller players
- **Lack of payment system participation for non-bank financial service providers** means that they are reliant on banks or E-money issuers to settle their payments, despite holding a large share of customers' liquidity
- **Complexity of on-boarding for different payment platforms** affects competitiveness within differing platforms too.

Government agencies:

- **Market dominance in the mobile money space has had major impact** on the cost of delivering government services as both a large payer and recipient of payments.

9. `The network effect is a phenomenon whereby increased numbers of people or participants improve the value of a good or service.
10. `A two-sided market, also called a two-sided network, is a market which has two distinct user groups that provide each other with network benefits (for example consumers and merchants).

Strategic initiatives for Choice

5.4.1 Fostering effective competition

To encourage effective competition and choice, CBK will conduct periodic reviews on the level of competition within the payment system. These reviews will be aimed at ensuring that there is adequate competition across various payments segments and that the level of pricing and market behaviour is not impeding consumer choice, switching, or merchant aggregating, issuing and acquiring. CBK will engage CAK through our joint Memorandum of Understanding (MoU) to effectively monitor pricing practices where the regulator observes that pricing practices or distortions are not driven by service/business model considerations, and that pricing is not transparent with effective disclosure.

5.4.2 Pricing principles and switching

CBK will continue to gradually roll out pricing principles (see Annex 3) in order to facilitate choice and competition among various providers and services. This will include requiring PSPs to present pricing information transparently and in a way that enables frictionless choice and switching. Presentation of information on total cost of services will also enable information-based decisions between competing services.

5.4.3 Open, standardised and secure APIs

CBK will work to define standards for effective and appropriate API development and mandate robust but secure data portability in the market. The use of secure APIs by digital financial providers makes it easier for third parties, mainly fintechs that offer tailored, innovative solutions, to connect in a seamless, fast and secure self-service manner. This enables end users to have access to a wider range of relevant and easily usable products. Data sharing and portability will be done while taking into account the Data Protection Act, 2019, in order to ensure that all aspects of data governance (sharing, storage, privacy, etc.) take into account the unique needs of financial and payments data and data users. The use of APIs will need to be evaluated against the risks that it also introduces into the payments ecosystem.

5.4.4 Encouraging market entry

CBK will explore ways of providing guidance on how players with innovative services can apply for authorisation, in cases where potential applicants are able to demonstrate that their services bring value-adding innovation, new capabilities in the payment system while sufficiently mitigating risks to the payment system and its users. This work will be target new service offering among fintechs, innovation among existing PSPs and, subject to detailed review, consideration on the need to widen the scope of players who can be authorised to participate in the NPS ecosystem to increase competition and choice.

5.5 Innovation

Outcome:

An ecosystem that produces value-adding solutions which also compete at the global stage

Innovation in payments involves developments that increase access to digital forms of payment particularly for those that were previously excluded, while enhancing the convenience to users. Innovation can therefore occur at multiple areas across the payments value chain; ranging from the underlying infrastructure, the clearing and settlement processes employed by PSPs, channels and the nature of the products and services offered to end users.
The high usage of cash and the disparity in usage by particular demographic groups shows that there is a need for further innovation to serve this unmet demand.

> **"*Kenyans are fast to adopt to new financial products that are simple, reliable, trusted, affordable and that bring more efficiency, if the ecosystem can innovate around cashless solutions that provide these, then the uptake to a cashless society will happen.*"**
>
> – Fintech

For Kenya to enhance its global reputation in digital payments, the country will develop and drive uptake in new payment solutions. CBK as the regulator will provide a conducive environment to promote exploration of new models. As described above, an increasingly digitised world, presents new risks that could be systemic in nature. CBK will take up an approach that considers testing and learning within clearly defined and closely monitored environments, in order to ensure that innovation does not lead to build up of risks or instability.

Innovations will be explored not only in the product being developed but in new infrastructures, and channels that are better suited to meet consumer needs.

Challenges for Innovation

Consumers:

- **Speed of payment initiation and processing can be slow depending** on the type of payment instrument being used. Some payment interfaces take longer than others due to the number of steps required or the speed of processing
- **Availability of some payment instruments is limited**. For example, EFT or RTGS is not available over the weekend; while even with near real-time instruments like mobile money and QR codes, initiation speeds can vary. This does not support Kenya's vision for 24/7 economy and encourage instant payments

- **Managing multiple PINs and passwords for different payment platforms can be cumbersome for consumers**. Similarly, managing the process of retrieving PINs and passwords if forgotten can be a challenge as well. All this is due to lack of integrated payments services, lack of secure data sharing, and lack of an open architecture for identity and authentication

Businesses:

- **Uptake of secure pull payments has had constrained growth**. To date, pull payments have mainly been used for credit product payments with limited growth for retail payments such as bill presentment
- **Payment reconciliation can take a long time to effect** due to the transaction messaging that is not standardised. This adds cost and time for businesses
- **Businesses are unable to have accounting and business systems easily integrated with payment platforms**. This would ease business operations where transactions generated in internal systems and having gone through the prerequisite authorisation, would then automatically be carried out through the PSP
- **The reliance on multiple acceptance instruments raises complexity and costs** of digital payment acceptance. This increases costs for digital payments for businesses, and in turn encourages the use of cash especially for small businesses
- **Further efforts are required to clean up the registry to ensure accuracy of data**, even though the government has made efforts to digitise the company registry.

Payments industry participants:

- **There are no industry wide standard open API arrangements** to allow customers to permit a third-party financial service provider access to that customer's existing payments relationship with other financial service providers
- **This has the effect of entrenching large participants and excluding small participants**. The opening of APIs has been on a bilateral basis thereby limiting competition, innovation and choice
- **Mobile PSPs are yet to fully open up access to their APIs with the intent of opening up the industry**. This has limited innovation and ability of new products to be rolled out, at scale and affordable cost
- **A lack of common standards for key payment technologies, procedures and security features** has meant that similar innovations for example for QR payments from two different PSPs are not often compatible

Government:

- **Large number of MDAs and county governments services are not yet included on the eCitizen** even though the government has made efforts to digitise government acceptance through the platform
- **Different MDAs and county governments have different paybill numbers to accept payments**. This adds to confusion and complexity for consumers when making payments to government
- As with businesses, the government would benefit from having **internal accounting and business systems integrated to digital payment systems** in order to ease

operations such as reconciliation

- **Lack of an efficient and fast payment interface for mass transit in the country**. This would support efforts to increase efficiency of public transport

Strategic initiatives for Innovation

5.5.1 Open but secure API standards

CBK will facilitate development of industry wide standard for open but secure APIs in a way that guarantees access, safety and integrity of data sharing systems. These standards will include API specifications for identification, verification and authentication; customer account information/data access; transaction initiation; and formats and coding languages for APIs. Due to the risk associated with opening up data from financial institutions to third-parties, CBK will define clear risk management frameworks and standards, including providing clarity on liability and consumer protection.

5.5.2 Regulatory support for innovation

CBK will explore the feasibility of a regulatory and authorisation framework that continues to support experimentation, test and learn. The main objective for this will be to build on CBK's legacy of facilitating test and learn in order to promote innovation that is consistent with CBK's wider policy and regulatory objectives and mandates. This framework will provide a conducive environment for innovation in payment services while ensuring the protection of consumers and public interest is upheld.

5.5.3 Expanding innovation in government

CBK will work with MDAs and county governments to champion and drive use of digital payment instruments in government services. The government is the biggest payer and receiver of different payments. Given the scale and size of government payments, gradual but full digitisation of government payments can act as a major catalyst for digitisation of payments across the board. In this regard, CBK will work closely with National Treasury and other agencies in order to achieve full digitisation of majority of payments to and from government.

5.5.4 Global influence and learning

To enhance learning and sharing of knowledge the CBK will monitor payments developments at the global stage. The aim for this will be to borrow best practices and influence global standards and practices. Through major activities such as the Afro-Asia Fintech Festival, and partnerships such as the cooperation between CBK and the Monetary Authority of Singapore, CBK will ensure that the industry keeps pace with global initiatives to enhance safe innovation, customer centricity, and global relevance of Kenya's payment system.

6 Regulatory approach

Outcome:

A supportive policy, legal and regulatory framework that is firmly enforced across existing and emerging players.

As indicated at the Section 3, the primary anchor for CBK legal and regulatory mandates emanates from the set-up of the CBK in the Constitution of Kenya (2010), and the specification of payments as an object of the CBK in the CBK Act. Consequently, supervisory and other oversight requirements are set out in the NPS Act, 2011, NPS Regulations, 2014 and other guidelines. This framework was instrumental in ensuring that developments in the payments industry over the last decade or so were adequately regulated.

While the current framework has allowed CBK to facilitate emergence of a vibrant payments sector, the payments sector has, and continues, to rapidly evolve. Payments are now being delivered by non-traditional players; bigtech firms are entering the payments space, and new challenger institutions are seeking to disrupt traditional ways of doing payments business. The role of data and new technologies will continue to present unique challenges. Finally, addressing the current and future impact of the COVID-19 pandemic will require agile and resilient regulatory frameworks and oversight.

> ***"Good policies & adherence to them will ensure the country achieves [this] vision."***
>
> – Microfinance Bank

With this in mind, the CBK is seeking to position itself to adequately meet these challenges. The CBK is committed to continue supporting payments industry development and innovation. However, innovation for innovation sake will not be useful. New and innovative products must meet the needs of customers adequately, affordably and safely. The legal and regulatory framework that will be developed on the basis of this vision and strategy will seek to achieve particular overarching aims and principles.

First, while CBK will seek to encourage payments innovation and market development, we will put increasing emphasis on market discipline underpinned by the need to see emergence of a culture of effective compliance. The last few years have witnessed market developments that have led to inappropriate practices that have been harmful to consumer and wider public interests. We think of effective compliance not in terms of tick-box exercise or creative compliance, but genuine commitment and a business culture that delivers outcomes that meet regulatory standards, consumer and wider public interests.

Similarly, while no regulatory framework can fully keep pace with rapid changes in technology, CBK will build a robust and agile framework underpinned by key principles that will permit us to effectively oversee payments providers, platforms (in the broadest sense to include technology platforms) and payments products (and services) as they evolve based on technology changes and market trends. This combination of seeking to effectively regulate providers, products and platforms will enable the framework to be both agile and adaptable to different types of payments activities that CBK will judge as being necessary to come under our regulatory ambit. Finally, CBK will seek to enhance its regulatory and supervisory tool kit to acquire a wide range of tools that are suitable and proportionate to current and future contexts.

To achieve these outcomes, the current legal and regulatory framework will need to be reviewed and updated. This will ensure that the framework responds to changes in the market and provide a firm basis for all of CBK's regulatory, supervisory, compliance and enforcement work needed to support this vision. While the review of the framework needs to be done comprehensively, it will be undertaken on a gradual and phased approach, ensuring that reforms are paced and anchored on CBK's policy objectives and regulatory priorities. The review, once completed, will ensure that the NPS legal and regulatory framework is both fit for purpose and fit for future.

Strategic initiatives for regulatory principles and design

6.1 Review of the payments legal and regulatory framework

CBK will undertake a comprehensive review of the NPS legal and regulatory framework. This will include review development of a range of guidelines (discussed below) to provide clarity and direction in new and emerging areas, and at the appropriate time, review of the NPS Act, 2011, and NPS Regulations, 2014. The overall objective of these processes will be to update the NPS framework to make it fit for purpose, and fit for future. This review will build on past gains, address current gaps in the payments laws, borrow best practices from other relevant country experiences.

6.2 Develop guidelines and standards on key areas

To complement and operationalise the revised NPS law, the CBK will develop a range of guidelines and standards to provide clarity on areas that are best addressed in guidelines and standards. CBK will effectively tier the use of regulations, guidelines and standards, as each of these regulatory instruments have varying degree of agility and require different processes to bring them into operation. This approach will enable the framework retain the needed flexibility to deal with rapidly evolving issues such as new technologies, digital payments consumer protection, big data and artificial intelligence.

6.3 Strengthening oversight, compliance and enforcement

CBK will enhance its oversight, compliance and enforcement to ensure that regulation and supervision delivers the desired consumer outcomes, resilience and stability. CBK will seek to ensure that compliance is not just seen as a "tick box" exercise, but a process that can actually create competitive advantage for PSPs that comply with set regulations and standards. In terms of enforcement, CBK will ensure that there is appropriate deterrence, and that these deterrence build a culture of effective compliance across the board. Finally, the CBK will utilise its capacity, data and tools for effective surveillance to ensure pro-active approach in identification of risks, promotion of market integrity and support for overall financial and payment system stability.

6.4 Regulatory reviews, dialogue and cooperation

CBK will undertake dialogue with industry to ensure the NPS policy, legal and regulatory framework remains adaptive, relevant and responsive. This dialogue will be undertaken locally, regionally and at global level, utilising various platforms and affiliations where CBK has representation and influence. This includes forums such as the Joint Financial Sector Regulators Forum, various EAC organs and international bodies such as the Alliance for Financial Inclusion (AFI) and others engagements that take place on a bilateral or multilateral basis. CBK will also seek to be active in international engagements with other regulators, central banks and payments regulators across the globe.

Box 6: Measures to facilitate mobile money during the COVID-19 pandemic

Immediately after Kenya declared its first COVID-19 positive case on March 12, 2020, the CBK announced and rapidly implemented a number of emergency measures to support the financial sector in its role of financing the economy. In particular, a range of measures were announced relating to payments. For the payments sector, the aim of these measures was to reduce the risk of transmission of COVID-19 (Coronavirus) by handling banknotes, and reduce the use of cash in the economy over the medium term. The measures took effect from midnight of March 16, 2020 and were implemented for an initial period running to June 2020 and later extended to December 2020. These measures included:

- Removing charges for mobile transactions up to KSh1,000
- The transaction limit for mobile money was increased from Ksh. 70,000 to Ksh. 150,000
- The daily limit for mobile money transactions was increased to from Ksh. 140,000 to Ksh. 300,000
- The mobile money wallet limit is increased from Ksh. 140,000 to Ksh. 300,000
- The monthly total limit for mobile money transactions was eliminated
- The tariff for mobile money transactions that applied for the hitherto Ksh. 70,000 limit was to apply for transactions up to Ksh. 150,000
- PSPs and commercial banks were mandated to eliminate charges for transfers between mobile money wallets and bank accounts
- All PSPs and banks were urged to continue applying current frameworks on anti-money laundering and countering financing of terrorism (AML/CFT)

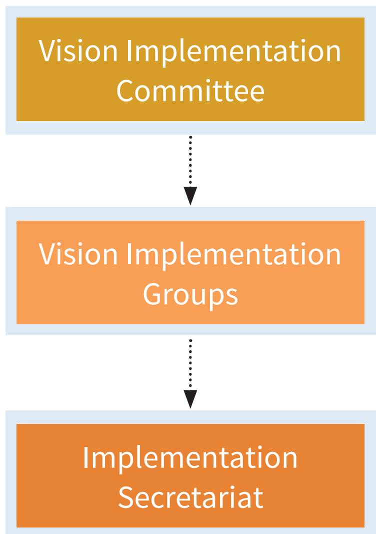
Since February 2020, a month before these measures were implemented, there has been a significant increase in the use (in both volume and values) of mobile money channels by individuals and businesses, demonstrating the efficacy and timeliness of CBK's response. Between February and October 2020, the volume and value of transactions below Ksh. 1000 increased by 114 percent and 200 percent, respectively, with the monthly volume of P2P transfers increasing by 87 percent over the same period. There have been 2.8 million additional 30-day active customers using mobile money, with some PSPs recording even higher numbers for their entire product offering. Finally, the same period also recorded similar increase business-related transactions (tills), increasing by 82 percent and 53 percent in volume and value terms, respectively.

The pandemic is still evolving, and its future impacts still remain unclear. However, it is clear that measures that CBK, indeed like many other global central banks undertook, have been effective in supporting our economies grapple with the shocks brought about by the pandemic. The strategic initiatives outlined in this document will build on the gains made thus far, and support wider Government of Kenya initiatives aimed as boosting post COVID-19 recovery, including protecting vulnerable businesses and sectors that are still grappling with COVID-19 related impacts.

Finally, to ensure there is a gradual withdrawal of the COVID-19 measures, CBK will continue to monitor the implementation of pricing principles (see Annex 3) that were announced in December 2020, which are aimed at facilitating the development of an efficient, safe and stable electronic payments ecosystem where the customer and public interests are adequately protected.

7 Implementation approach

Rapid execution – CBK is cognizant that several years have lapsed since the previous NPS Strategy was completed. In the intervening period, various reforms and initiatives have been implemented in the payments industry. More recently, the CBK has sought to improve the efficiency and operation of settlement operations through a recent upgrade of the KEPSS RTGS system (see Box 4), in order to improve settlement durations and cycles. Nevertheless, given the rapid changes taking place in the sector, and the need to support the industry on various initiatives, CBK will seek to undertake rapid execution of the various strategic initiatives outlined in this document.



Prioritization – the number of strategic initiatives (and corresponding activities) is large. This means that CBK and industry stakeholders have to take a pro-active approach in prioritizing key initiatives. The prioritization will be based on urgency, need to complete on-going activities, resourcing requirement, and need for effective sequencing. In this light, CBK will prioritize initiatives such as current industry engagements to improve interoperability (need and urgency), which in turn will mean putting significant focus on improving payments infrastructure and development of standards to support initiatives such as data security and sharing.

Clustered approach – the strategic initiatives in this document have been organized around each of the five vision principles. At this stage, the strategic *initiatives* have only been outlined at a high/broad level. The approach CBK will follow is to have these strategic initiatives broken down further through strategic *activities*, including key performance indicators (KPIs). Implementation Groups (IGs; see implementation structure below) will be commissioned for each vision principle, meaning the five IGs will outline the priority activities to deliver respective strategic initiatives, and design the corresponding KPIs. This clustered approach is aimed at ensuring flexibility, synergy, participation and accountability.

Consultative approach – in undertaking rapid execution, the CBK will take a consultative approach where necessary, in order to facilitate involvement of various stakeholders in the changes and initiatives required to achieve the vision. In taking this approach, the CBK will however seek to ensure there is rapid progress, and provide strong leadership on issues and domains that remain a preserve of the regulator.

7.1 Implementation structure

The implementation structure will be as follows:

7.1.1 Vision Implementation Committee

The Vision Implementation Committee will have overall responsibility for providing *leadership*, *direction* and *governance oversight* for the vision implementation process. It will also be the organ to approve all initiatives and activities under this vision document. It will be chaired by CBK Management and will comprise the following departments:

a) Banking and Payment Services
b) Information Technology
c) Financial Markets
d) Bank Supervision

The Vision Implementation Committee will meet quarterly, or on a needs basis. Its meetings will be organized and supported by the Vision Implementation Secretariat, who will be responsible for taking minutes, documentation and any other needed support.

7.1.2 Vision Implementation Groups

The Vision Implementation Groups will be the main technical groups for the vision implementation process. Their overall responsibility will be identification and implementation of the activities under various initiatives, including where mandated to do so, oversee the consultative and implementation processes. All activities and initiatives will be approved by the Vision Implementation Committee. There will be up to five implementation groups, with each one responsible for the design and delivery of activities under each of the five vision principles. The implementation groups will have representatives from various payments industry players. Serving on the implementation groups by industry players will be for industry participation, and not a forum to drive individual or organizational agenda. The Vision Implementation Groups will be chaired by the CBK, and report to the Vision Implementation Committee for effective oversight and accountability. The Implementation Groups will be meeting monthly, or on a needs basis.

7.1.3 Implementation Secretariat

The Digital Payments Services Division within the Banking and Payments Services (BPS) Department will be secretariat for the vision implementation process. The main objective of the Secretariat is to ensure effective coordination, smooth implementation, communication and reducing duplication or unnecessary overlaps in the implementation process. It will also provide secretariat and meeting support to the Vision Implementation Committee and have overall custody of all documentation, reports and other vision material.

7.2 Time frame

As outlined above, this vision is a 5-year vision, from 2021 to 2025. It has been broken down into strategic objectives and strategic initiatives that can be monitored based on a high-level implementation plan. The high-level implementation plan detailed below outlines the overall time lines for implementing activities for the five-year period. Detailed implementation work plans for all strategic initiatives and corresponding activities under each principle will be developed by respective Implementation Groups in the immediate period following launch of this document. All activities and time frames will be approved by the CBK Vision Implementation Committee.

7.3 Budgeting

The funding for the implementation of activities in this Vision and Strategy will be obtained from two primary sources. First, the CBK will fund particular initiatives and activities as part of its routine process of undertaking improvements in the Kenya NPS, as witnessed in the recent upgrade of the KEPSS system. Budgeting for these activities will be done on an annual basis, once the various implementation technical groups finalize their annual work plans for the coming year, and following approval of these work plans and proposed budgets by the CBK Steering Committee.

Secondly, CBK will seek support from like-minded partners who are aligned to this Vision and Strategy. This might be in the form technical support, capacity building, knowledge sharing and research. Commencement of budgeting for the first year of implementation (2020/2021) has started, but will be concluded immediately after the Steering Committee and Implementation Groups are fully constituted, and specific activities and budgets are finalized and approved.

Even though the strategic initiatives and corresponding activities will run for the first five years (2021 - 2025), planning, budgeting and monitoring will be done on an annual basis, in line with CBK's annual budgeting process and overall Strategic Planning cycle.

7.4 High-level implementation matrix

The plan below highlights the high-level implementation approach for the defined strategic initiatives. Note that short term is defined as strategic activities that need to be completed within the first two years of the strategy period (2021 – 2022), medium term as activities that will be completed in the third and fourth year (2023 – 2024), and long-term as activities concluding in the fifth and final year of the strategy period (2025).

Vision principle	Strategic Initiatives	High-level KPI	Responsibility	Timeline
1. Trust	1.1 Adopt relevant common standards	Standards on data security and consistent messaging for financial transactions completed/reviewed and brought into effect	CBK working with industry	Short term
		SLAs related to customer experiences per channel and payment product developed and brought into effect	CBK working with industry	Short term
	1.2 Promote digitization and integration of identity information	Integration of business and user identity information with other government databases completed	CBK working with relevant MDAs	Medium term
		E-KYC and tiered-KYC regulations/ guidelines completed and launched	CBK working with relevant MDAs	Medium term
	1.3 Protect digital payment users	Consumer protection framework for digital payments completed and launched	CBK	Short term
	1.4 Protect payments data usage and privacy	Financial/payments data regulations completed and promulgated	CBK	Short term
	1.5 Enhance consumer awareness among digital payment users	Effective and tailored consumer education designed and implemented, and refreshed periodically	CBK working with industry	Medium term
	1.6 Facilitate effective pricing standards and practices	Tariff and pricing review completed and measures implemented	CBK	Short term
2. Security	2.1 Adopt common security standards	Standards on IT and cybersecurity completed/reviewed and brought into effect	CBK	Short term
	2.2 Create robust security reporting	Framework for security data reporting and publication completed and launched	CBK working with relevant MDAs	Medium term
	2.3 Enhance security data analytics	Development of data analytical capacity and capabilities	CBK working with relevant MDAs	Medium term
	2.4 Facilitate cooperation on complaints resolution	Content and material developed and refreshed periodically Training implemented	CBK working with relevant MDAs	Medium term
3. Usefulness	3.1 Fast-tracking interoperability	Full interoperability completed	CBK and PSPs	Medium term
	3.2 Facilitate efficient and effective clearing infrastructure	Common clearing infrastructure per payment stream developed	CBK and Industry players	Medium term

Vision principle	Strategic Initiatives	High-level KPI	Responsibility	Timeline
3. Usefulness	3.3 Adopt common user experience standards	Standards on new payment channels and common messaging for financial transactions completed/reviewed and brought into effect	CBK working with industry	Short term
	3.4 Improve inter-change fee arrangements	Review of existing interchange fee arrangements	CBK and Industry	Medium term
		Framework for interchange pricing completed	CBK	Medium term
	3.5 Clearing infrastructure integration	Integration of infrastructure completed	CBK working with industry	Medium term
	3.6 Tiering payment instruments	Review payment instrument maximum value thresholds	CBK working with industry	Medium term
		Develop and implement tailored incentives per payment instrument to increase uptake of digital forms of payment	CBK	Medium term
	3.7 Encourage government digital payments	Number of MDAs and county governments on eCitizen platform double	CBK, National Treasury, MDAs and county governments	Short term
		Increase proportion of services offered on eCitizen platform per each MDA and county government	CBK, National Treasury, MDAs and county governments	Short term
	3.8 Streamlining authorization and licensing	Framework for authorization and licensing completed	CBK	Medium term
	3.9 Boosting regional and international payments and remittances	Review regional and international payment platforms, and cross border mobile money payments to identify areas for enhancement	CBK, Regional Central Banks, PSPs and industry players	Short term
		Implement recommendations to enhance regional and international payments	CBK, Regional Central Banks, PSPs and industry players	Medium term
	3.10 Review the need for universal agent categorization	Review and develop universal independent CICO agent model	CBK working with industry	Short term
	3.11 Promote accessibility to marginalized groups	Develop and implement strategies to increase access to and usage of digital forms of payments to marginalized groups	CBK	Medium term

Vision principle	Strategic Initiatives	High-level KPI	Responsibility	Timeline
4. Choice	4.1 Fostering effective competition	Periodic market inquiry on competition completed	CBK with relevant MDAs	Long term
	4.2 Interoperability for choice	Effective interoperability completed	CBK	Medium term
	4.3 Open, standardized and secure APIs	Framework for APIs completed	CBK	Short term
	4.4 Encouraging market entry	Develop and implement standardized service charter for new entrants	CBK	Long term
		Authorising new payment solution(s) annually	CBK working with industry	Long term
5.Innovation	5.1 Open but secure APIs standards	Security review for application programme interface (APIs) completed	CBK	Medium term
	5.2 Regulatory framework for innovation	Regulatory framework for innovation	CBK	Medium term
	5.3 Expanding innovation in government	Digitizing the back end of government service	CBK, National Treasury, MDAs and county governments	Medium term
		Increase proportion of government services paid digitally	CBK, National Treasury, MDAs and county governments	Medium term
	5.4 Global influence and learning	Engagement at regional and global forum/influencing global debates and processes	CBK	Long term
	6.1 Review of the payments legal and regulatory framework	Draft Guidelines, NPS Bill, and NPS Regulations	CBK, National Treasury	Short term
	6.2 Development of guidelines and standards on key areas	Number of guidelines and standards brought into legal effect	CBK	Medium term
	6.3 Strengthening oversight, compliance and enforcement	Number of oversight, compliance and enforcement activities/inspections	CBK	Long term
	6.4 Regulatory reviews, dialogue and cooperation	Feasibility on the payments apex body	CBK	Short term
		Regulatory reviews, dialogues and cooperation engagement	CBK	Continuous

7.4 Risks and mitigation

Risk type	Description	Mitigation
Institutional capacity	• Limited capacities across all concerned institutions slows down the rate of execution of strategic initiatives and activities	• Continual focus on adding internal talent where applicable • Focused efforts to attract relevant skill
Poor coordination	• Most initiatives and activities require very strong coordination among public and private sectors	• Effective communication across all stakeholders • CBK taking proactive approach in coordination and leadership
Industry adoption	• Likelihood of industry not embracing change in areas that upset existing business models	• Close collaboration and robust engagement with the industry • Strong leadership from CBK to offer overall guidance
Technology **complexity**	• Key actors not being able to keep pace and managed rapid technology changes	• Collaboration with global standards setters and industry to ensure Kenya keeps pace with emerging technology • Continuous research and learning • Capacity building and skills development
Customer related	• Customer needs may differ from proposed solutions, resulting in limited impact and uptake	• Continued interaction with consumers through surveys and other tools to ensure relevance and impact of activities
Legal and regulatory	• Delays in enacting various legal and regulatory reforms delay in implementation of the strategy	• CBK to take pro-active and pragmatic approach in engaging National Treasury, and where necessary, Parliament
Other external risks	• COVID-19 pandemic and its impact extends for a prolonged or indefinite period into the future • Political environment deteriorates as a result of pre-election and other political activities	• Develop gradual, phased approaches and prioritisation that focus on few but critical activities

8 Conclusion

This NPS Vision and Strategy document and its Vision Statement – *To enhance Kenya's global leadership in digital payments by building a world class, secure, resilient and collaborative payments system; powering Kenya's economy and its journey towards cash-lite* – seeks to align the entire payment systems activities towards achieving the highest levels of trust, security, usefulness, choice and innovation. It is the second planning framework that CBK is embarking on, since the start of Kenya's payment systems modernization in the mid-1990s.

The full and successful implementation of this Vision and Strategy will be vital in taking Kenya's NPS to the next level. As outlined above, the system will need to be one that is trusted, secure, useful, and presents value-adding choices and innovative solutions for the benefit of its users in Kenya and beyond. For this reason, the CBK urges all payments players and industry participants to utilize this document as the framework to guide their work to improve the payments system and make the vision and its principles a reality.

The CBK welcomes an implementation process that is collaborative among various payments industry participants, based and guided by core values and principles that have been outlined in this document. Appropriate structures will be swiftly established to facilitate implementation, monitoring and evaluation. The CBK looks forward to guiding this new phase of Kenya's payments journey, working hand in hand with the like-minded partners and stakeholders for successful implementation.

To move forward, the CBK will be building on a strong foundation established over the last few years, in terms of collaborative efforts that have enabled payments innovation. Key infrastructures for both the wholesale and the retail payments platforms are already in operation, owing to the significant efforts and investment made in the previous periods. Overall, this has helped eliminate many payment systems risks in the Kenyan financial sector in relation to safety and efficiency in the overall payment systems. In particular, the enactment of the NPS Act, 2011 and subsequent Regulations, 2014 and guidelines helped in creating a robust legal and regulatory framework.

Innovation in the retail payment system ushered a new phase of payments with the introduction of mobile financial services platforms in 2007. Other payments changes that followed thereafter have revolutionized Kenya's payments scene, including spurring innovation in many other sectors such as education, health and agriculture. Today, technology continues to evolve leading to integration of payments systems with fintech and bigtech. All this is made possible through CBK's leadership and increased investments and innovation by industry players.

As we usher in a new phase for the Kenya's NPS, we expect this innovation and collaboration to continue, led and guided by the CBK. In particular, mitigating the effects of the COVID-19 pandemic will call for a new way of working. One that enables resilience and agility in payment systems support to businesses, individual users and the economy. The payment system will be critical in enabling businesses gradually – and safely – re-open and the economy recover from the effects of the pandemic and its knock-on effects.

Finally, for strategy initiatives to be anchored on a strong and forward-looking legal framework, the CBK will be reviewing the NPS Act, 2011 and Regulations, 2014, with view to making these laws fit for purpose and fit for future. That will also pave the way for development of further guidelines where necessary. This will give the CBK necessary powers for enhanced oversight of payment systems and creating an enabling environment in which the industry can innovate and create opportunities for continued growth.

9 Annexes

Annex 1: Summary of stakeholders engaged and findings from the market analysis

As outlined in Box 2, the NPS Vision and Strategy was developed through a participatory and consultative process drawing on feedback from the payments industry stakeholders. Based on this engagement, the CBK sifted through a vast amount of feedback and responses, distilling it to initiatives that have been presented in this document. The key consultative stages and institutions involved are outlined in the table below.

Activity	Participants
Data collection for market analysis	**Mobile money providers:** Safaricom, Airtel and Telkom **Banks:** Bank of Baroda, Credit Bank, Dubai Islamic Bank, Ecobank, Guaranty Trust Bank, Gulf African Bank, I&M Bank, KCB Bank, Mayfair Bank, M-oriental Bank, Standard Chartered Bank, Victoria Commercial Bank, Bank of Africa, Stanbic Bank, Co-operative Bank, Citi Bank, NCBA Bank (previously NIC Bank and CBA Bank) **Microfinance banks**: Caritas, Daraja, Faulu, Maisha, Rafiki, Remu, Sumac, U&I Microfinance bank
Market analysis dissemination workshop	Commercial banks, industry associations, deposit taking micro-finance institutions, mobile money providers, payment switches, card schemes, payment aggregators, fintechs, retailers, academia, utility providers, Government Ministries Departments and Agencies, Money Remittance Providers
Vision development questionnaire	**Banks:** National Bank of Kenya, NCBA Bank, Co-operative Bank, Bank of Baroda, Credit Bank, Dubai Islamic Bank, Gulf African Bank, Habib Bank, Stanbic and Citi Bank **Fintechs:** Craft Silicon, Data Integrated Limited, Imaginarium, Interswitch, Mkopa, Raise Impact **Government MDAs**: National Drought Management Authority (NDMA) **Microfinance banks:** Caritas, Daraja, Faulu, Rafiki, Remu, U&I Microfinance bank **Mobile money providers:** Safaricom, Airtel and Telkom **Money remittance providers:** Dahabshill, Flex, Iftin, Mobex, Real Value, Kendy, Juba **Payment experts:** 5 global payment consultants
Consumer Focus Group Discussions (FGDs)	9 focus groups based on the following criteria: income level, occupation, and age FDGs were conducted in Nairobi City County and Machakos County
Stakeholder meetings and interviews	National Treasury and Planning, Government Digital Payments (eCitizen), Ministry of Labour and Social Protection, Ministry of Information and Communication Technology, Interswitch, Central Depository and Settlement Corporation, Communications Authority, Tangaza, Kenya Power and Lighting Company, Integrated Payments Service Limited, Kenya Bankers Association, VISA, Airtel, Standard Chartered Bank, Stima Sacco, Equity Bank, Kenya Women Microfinance Bank, Kenswitch, National Transport and Safety Authority, Safaricom, KCB Bank, Telkom, Diamond Trust Bank, Cellulant and others

Sub-sector specific mini-workshops	**Retailers:** Retail Trade Association of Kenya (RETRAK, Naivas, Food Plus) **Government agencies:** Nairobi Water & Sewerage, Kenya Power and Lighting Company, State Department of Social Protection, Nairobi City County, Association of Micro Finance Institutions (AMFI) and Money Remittance Providers **Fintechs**: Art of Learning, Circle, DIL, MKopa, Tala, Twiga Foods, **Payment processors and aggregators:** Integrated Payments Service Limited, Web Tribe, Kenswitch, Kopo Kopo **Academia:** Strathmore Business School, University of Nairobi, Daystar University, Technical University of Kenya, Jomo Kenyatta University of Agriculture and Technology, **Industry bodies**: Kenya Credit and Debit Card Association (KCDCA) and its members
Technical working groups	Stakeholder engagements were conducted in a number of working groups on: - • Innovation • Cyber security • Infrastructure • Policy and regulation

To complement the stakeholder and industry involvement, CBK with support from its technical partner (FSD Kenya) carried out an evidence-based review of the current state of Kenya's payment systems. As outlined in Box 2, this involved a review of the implementation of the previous NPS strategy; an evaluation of the current payment landscape; and an interrogation of published payment statistics that was supplemented with detailed survey to key payment service providers (PSPs), government agencies and utilities. In total, 39 banks, 11 microfinance banks (MFBs), three mobile money operators (MMOs), six deposit taking savings and credit cooperative societies (DT SACCOs), three government agencies and one utility provider submitted data for this analysis.

The market analysis was structured to evaluate how well the current system addresses key challenges users face. These were captured in six strategic themes. Their definitions, initial hypothesis, key findings and recommendations being integrated in the strategic initiatives that will be implemented under this strategy.

Trust	
Definition	Refers to the confidence consumers have that they can effect payments in a correct and secure manner.
Hypothesis	Whereas consumers seem to trust mobile money, there is limited trust in bank and e-payments
Key research findings	1. Cyber crime and counterfeit notes, coins and cheque fraud have seen a rise in recent years 2. Some consumers harbour fears of using e-payments due to past experiences or the believed increased chance of disclosures of their incomes being made
Recommendations	1. Reporting of actual and attempted fraud should be enhanced to identify and communicate adverse trends, and develop tailored solutions 2. Enhance regulator visibility in identifying and addressing cases of fraud

Accessibility	
Definition	Refers to the ease with which consumers can access different payment instruments and channels. This considers both physical and digital access.
Hypothesis	The advent of mobile money and the growth of agents (both bank and mobile money) have had a considerable impact in improving financial inclusion in the country
Key research findings	1. Formal inclusion is on the rise 2. Historic disparities by gender, education, income, urban or rural and county have persisted 3. PSPs have successfully leveraged low cost channels to grow network density
Recommendations	1. Continued efforts are required to understand and address the distinct challenges faced by historically underserved segments such as women and youth 2. A targeted county approach is required to address significantly underserved counties and roll out of effective consumer awareness programmes

Usefulness	
Definition	The degree to which current payment instruments and channels meet the payment related needs of end users.
Hypothesis	Consumers have a growing number of options of electronic forms of payments
Key research findings	1. Some e-payments have experienced significant growth, while others have stagnated 2. Paper based payments usage (i.e. cash and cheques) remains high, despite a slight decline
Recommendations	1. Adopt more **dynamic monitoring and evaluation approaches** 2. Continued efforts are required to **encourage increased usage of digital payment instruments** to discourage the use of cash

Affordability	
Definition	This relates to the cost taken to effect payments by end users
Hypothesis	Costs of financial services remain high for low income individuals
Key research findings	1. Customers have **more cost options** due to the introduction of new payment instruments 2. Nevertheless, **costs remain high for low income groups,** which is further affected by low transparency of pricing
Recommendations	1. Continued efforts are required to **expand interoperability** thereby bring down the costs for both service providers and consumers **2. Increased competition** should be encouraged to bring down the costs to end consumers

Stability	
Definition	This relates to the reliability of the payment instruments and channels from system failures or channel downtime, and the redressal mechanisms available to customers
Hypothesis	Stability of PSP instruments varies widely
Key research findings	1. There is a general decline in the average reported downtime of payment channels. However, each instance is likely to impact consumers negatively 2. There are no industry wide standards for uptime and failed transactions
Recommendations	1. There is a need to **enhance industry wide standards** in relation to uptimes and failed transactions, with a mechanism for enforcement

Efficiency	
Definition	Refers to the time and level of effort required to transact using a payment instrument for end-users, as well as the ability of PSPs to leverage existing infrastructures thereby reducing the cost to serve existing and new customers.
Hypothesis	Interoperability of physical channels and across different payment instruments remains limited
Key research findings	1. Interoperability remains limited 2. Approval and authorisation of applications needs to be streamlined
Recommendations	1. Continue efforts to **expand interoperability** within the market 2. Where possible, fast-track authorisations and approval of PSP and product applications 3. There is a need to **develop and enforce payment standards** such as messaging and APIs

Annex 2: Summary of findings from country reviews

As outlined in Box 2, the NPS Vision and Strategy was developed though a consultative process involving contribution and feedback from the payments industry and other stakeholders. Based on this engagement, the CBK sifted through vast amount of feedback, distilling it to initiatives that have been presented in this document. In particular, participation and feedback was obtained from various institutions during key stages of the process, as outlined in the table below.

United Kingdom

Vision: Our Vision is for the future architecture of the UK retail interbank payment systems to enable; i) simpler access; ii) ongoing stability and resilience; iii) greater innovation and competition; and iv) increased adaptability and better security. This serves to meet the needs of current and future generations of payments service users.

India

Vision: Building best of class payment and settlement systems for a 'less-cash' India through responsive regulation, robust infrastructure, effective supervision and customer centricity

Vision objective: To facilitate provision of a payment system for the future, that combines the much-valued attributes of safety, security and universal reach with technological solutions which enable faster processing, enhanced convenience, and the extraction and use of valuable information that accompanies payments.

South Africa

Vision: Enhance the safety, efficiency and accessibility of the national payment system in a manner that promotes competition and minimises risk to the payments ecosystem by leveraging technological developments to extend the availability of digital payment services to all sectors of society while meeting domestic, regional and international requirements for the benefit of all members of South African society.

Canada

Vision: A modern payment system that is fast, flexible and secure, promotes innovation and strengthens Canada's competitive position.

Singapore

Vision Statement: Creating payment solutions that are swift, simple, secure, accessible to all and accepted by all, the MAS will help achieve the Smart Nation Vision.

An evaluation of the country NPS visions identified a number of cross-cutting themes. These themes and findings were incorporated in the Kenya NPS Vision and Strategy document, but tailored to suit our unique context, needs and applicability. These themes include:

- Simple, open and risk-based access and participation to the payment system (United Kingdom, South Africa, Canada, Singapore)
- Activity based oversight and emergence of institution-agnostic oversight, applied

consistently based on activity (United Kingdom, South Africa, Canada, Singapore)

- Adoption of the ISO20022 messaging standard to reduce complexities around innovation, enable ongoing in interoperability and ensure data richness (United Kingdom, India, South Africa, Canada)
- Industry (transaction and fraud) data sharing and analytics to identify fraudulent and criminal payment activities and inform policy action using emerging trends (United Kingdom, India, South Africa)
- Potential use of legal entity identifiers (LEI) to enhance monitoring of institutions by uniquely identifying them (United Kingdom, India)
- Explore the use of application programming interface (APIs) to promote innovation and competition in payment services (United Kingdom, South Africa)
- Appropriate consumer protection/redress across all PSPs and a more joined up approach to customer awareness and education (United Kingdom, India, South Africa, Singapore)
- Infrastructure improvements by upgrading existing systems or building new systems (United Kingdom, India, South Africa, Canada, Singapore)

Annex 3: Principles on the pricing of mobile money services

Purpose
To facilitate the development of an efficient, safe and stable electronic payments ecosystem where the customer and public interests are adequately protected.

Specific objectives
(a) To increase access, usage and equity in provision of digital payments services;
(b) To improve transparency and disclosure in provision of digital payments services;
(c) To foster a business culture underpinned by the primacy of customer's interest;
(d) To promote competitiveness and sustainable growth of digital payment services.

Basis
These principles are issued by the Central Bank of Kenya (CBK) based on its mandate of promoting an efficient and effective payment system, and to issue advice and direction while paying due regard to, among other things, efficiency, integrity and public interest.

Principles

(a) Customer centricity
Adequate consideration of a customer's needs, preferences and circumstances in the design, pricing and roll out of mobile money services. The primacy of the customer interest must be evident in how services are developed, priced and marketed.

(b) Transparency and disclosure
Clear description of charges, fees and charges that a customer will incur at the point of sale, and during use of the service. Terms and conditions should be in simple and legible language. Conflicts of interest ought to be disclosed, where there is a risk this will lead to mis-selling of inappropriate services to obtain commissions or fees.

(c) Fairness and equity
Provision and pricing of mobile money services in a manner that is proportional to the service provided and benefit obtained. Pricing policies and practices should pay due regard to the profile of customers and purpose of the underlying payment.

(d) Choice and competition
Customers should be presented with cost-effective options. Customers must be presented with mechanisms and channels that enable frictionless comparison, choice and switching, including resolution of complaints, particularly price-related ones, without undue delays.

(e) Affordability
Provision and pricing of services in a manner that is proportional to low-value and other "public good" related payments. Pricing policies need to strike a balance between short-term commercial targets and long-term sustainable growth.

Corporate and business tenets

To complement these principles, PSPs need to shift their corporate and business culture in line with the purpose and objectives above. In this regard, CBK expects that Boards of PSPs will ensure that corporate culture and practices are underpinned by the following tenets: -

(a) Care and diligence
Upholding the principle of duty of care and diligence in terms of how PSPs are run, and how they relate with customers and the public.

(b) Management control
Effective control of corporate structures, business partners and agents who interact with customers, in order to prevent excessive pricing, multiple charges and fraud.

(c) Financial prudence
Pricing practices underpinned by prudent financial policies, to avoid customers shouldering the burden of ineffective financial practices through excessive pricing.

(d) Safety of client assets
Ensuring that customer funds are adequately protected at all times, including the safety of customer mobile money deposits, data and other assets.

(e) Integrity of trust funds
Trust funds are sufficiently managed in line with the NPS regulatory framework, including adequate reporting to the regulator.

(f) Effective market conduct
Dealing with customers in a respectful manner, based on good market conduct practices and treating customers fairly.

(g) Robust management of conflicts of interest
Conflicts of interest to be avoided, and adequate safeguards applied to mitigate adverse impact on customers.

(h) Regulatory compliance
Effective and timely compliance with regulatory requirements, and maintaining a posture of cordial engagement with the regulator.

Responsibility
Responsibility for alignment and implementation of these principles rests on the Board of Directors of Payment Service Providers (PSPs). PSP Boards are required to: -

(a) Champion these principles in their governance and oversight duties by setting the appropriate "tone from the top" that is aligned to the principles;
(b) Ensure formulation of internal policies and procedures that actualise the principles across their entire business operations;
(c) Hold management accountable for adherence to these principles by staff, business partners and agents associated with the PSP;
(d) Ensure timely and accurate submission of information, data and returns to the CBK as required from time to time.

Implementation and monitoring
CBK has developed these principles as it embarks on the journey to anchor review of mobile money tariffs and charges based on the intended purpose and objectives above. Implementation will be carried on a gradual basis with the overall aim of rolling out the principles across the payments ecosystem. CBK will be periodically engaging PSPs to ensure alignment, identify and promote best practice in implementation.

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