

Central Bank of Kenya

THE KENYA ELECTRONIC PAYMENT AND SETTLEMENT SYSTEM (KEPSS)

**ASSESSMENT OF OBSERVANCE OF THE CPSS-IOSCO
PRINCIPLES FOR FINANCIAL MARKET
INFRASTRUCTURES (PFMIS)**

December 2024

Prepared by:
CENTRAL BANK OF KENYA (CBK)

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The assessment was conducted on the Kenya Electronic Payments and Settlement System (KEPSS), Kenya's Real-Time Gross Settlement System (RTGS), to assess its compliance with the Principles for Financial Market Infrastructures (PFMI) published by the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements (BIS) and the IOSCO (full) in April 2012.

GLOSSARY

The abbreviations used in this report have the meaning as detailed below:

Abbreviations	Terms
BAC	Bank Audit Committee
BPSD	Banking & Payment Services Department
BSD	Bank Supervision Department
CBK	Central Bank of Kenya
CCP	Central Counter Parties
CDSC	Central Depository and Settlement Corporation
CMA	Capital Markets Authority
CSD	Central Securities Depository
COMESA	Common Market for Eastern and Southern Africa
CPMI	Committee on Payment and Market Infrastructure
CPSS	Committee on Payment and Settlement Systems
DPD	Digital Payment Services Division
DRC	Disaster Recovery Centre
EAPS	East African Payment System
EFT	Electronic Funds Transfers
FMI	Financial Market Infrastructure
IAD	Internal Audit Division
IARMD	Internal Audit & Risk Management Department
ILF	Intraday Liquidity Fund
IMS	Information Management System
IT	Information Technology
ITD	Information Technology Department
IOSCO	International Organization of Securities Commissions (IOSCO)
KBA	Kenya Bankers Association
KEPSS	Kenya Electronic Payment & Settlement System
LVPS	Large Value Payment System
LVRPS	Low Value Retail Payment Systems
MAC	East Africa Monetary Affairs Committee
MFI	Micro-Finance Institutions
MOU	Memorandum of Understanding
NPS	National Payment System
NACH	Nairobi Automated Clearing House
OLF	Overnight Loan Facility
PFMI	Principles of Financial Market Infrastructure

POCAMLA	Proceeds of Crime and Anti-Money Laundering Act
REPSS	Regional Payment & Settlement System
RMCD	Risk Management & Compliance Division
RMC	Risk Management Committee
RTGS	Real Time Gross Settlement System
RTO	Recovery Time Objective
SIPS	Systemically Important Payment Systems
SSS	Securities and Settlement Systems
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TR	Trade Repository

Table of Contents

I: EXECUTIVE SUMMARY	8
1.1 Background.....	8
1.2 Summary of the Assessment.....	9
2: GENERAL BACKGROUND OF THE FMI	12
2.1. General Description of the FMI and the Market it Serves.....	12
2.2. General Organization of the FMI	13
2.3. Legal and Regulatory Framework.....	14
2.4. KEPSS System Design and Operations	15
2.4.1. FMI Performance Statistics.....	16
2.4.2. Operational Reliability.....	16
2.4.4. Collateral Management.....	17
2.4.5. FMI Fees and Charges.....	17
2.4.6. Settlement finality.....	17
2.4.7. KEPSS Interface.....	17
2.4.8. Reporting.....	18
2.4.9. KEPSS Operations and Support.....	18
3. DETAILED ASSESSMENT REPORT	19
3.1 Assessment of KEPSS against the Principles PFMI.....	19
Principle 1: Legal Basis	19
Principle 2: Governance	29
Principle 3: Framework for the Comprehensive Management of Risk.....	46
Principle 4: Credit Risk.....	55
Principle 5: Collateral.....	61
Principle 6: Margin.....	67
Principle 7: Liquidity Risk.....	67
Principle 8: Settlement.....	79
Principle 9: Money Settlements	84
Principle 10: Physical Deliveries	87
Principle 11: Central Securities Depositories	87
Principle 12: Exchange-of-Value Settlement Systems.....	88
Principle 13: Participant-Default Rules and Procedures.....	88
Principle 14: Segregation and Portability.....	97

Principle 15: General Business Risk	97
Principle 16: Custody and Investment Risks.....	101
Principle 17: Operational Risk.....	104
Principle 18: Access and Participation Requirements.....	122
Principle 19: Tiered Participation Arrangements.....	128
Principle 20: FMI links.....	131
Principle 21: Efficiency and Effectiveness	132
Principle 22: Communication Procedures and Standards.....	136
Principle 23: Disclosure of Rules, Key Procedures, and Market Data.....	138
Principle 24: Disclosure of Market Data by Trade Repositories	144

List of Tables

Table 1 Summary of KEPSS compliance with PFMI	23
Table 2 Rating Description	27

Chartes and Figures

Chart 1: Features of KEPSS	31
Figure1: Structure of Banking and Payment Services Department.....	15
Figure 2: KEPSS Transactions (volumes & values).....	34

Preface

In its role as the operator of the Kenya Electronic Payments and Settlement System (KEPSS) Real-Time Gross Settlement (RTGS) system, which facilitates the settlement of domestic transactions in Kenya, the Central Bank of Kenya (CBK) publishes this first KEPSS assessment report. The assessment has been conducted based on the Principles for Financial Market Infrastructures (PFMI) issued by the Committee on Payments and Market Infrastructures (CPMI) – previously the Committee on Payment and Settlement Systems (CPSS) – of the Bank for International Settlements (BIS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) in a publication titled Principles for financial market infrastructures published in April 2012.

The report outlines the observance of the PFMI based on the status of the operations of the KEPSS -RTGS as of 31 December 2022. The report is based on the methodology set out in the associated *Disclosure Framework and Assessment Methodology* and has been compiled in line with the disclosure framework outlined in *Principle 23* of the PFMI.

As the process relating to compliance with the PFMI and adherence to the disclosure framework matures, the CBK expects to achieve full transparency in discharging its obligations for the benefit of all stakeholders. The next self-assessment will be undertaken in 2026 in line with a BIS requirement that a self-assessment against financial market infrastructure (FMI) principles be conducted every two years. A revised report will then be published to disclose the updated status of compliance with the PFMI.

Banking & Payment Services Department

Central Bank of Kenya

I: EXECUTIVE SUMMARY

1.1 Background

The CBK hereby publishes its self-assessment of the real-time gross settlement system (RTGS), the Kenya Electronic Payment and Settlement System (KEPSS) against the *Principles for Financial Market Infrastructures* (PFMI), the international risk management standards for systemically important financial market infrastructures (FMIs). The PFMI was published by the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements (BIS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) in April 2012. This Publication is the Central Bank of Kenya's (CBK) disclosure and assessment of the RTGS services against the principles for financial Markets Infrastructures (PFMI). The assessment assesses the RTGS services as at December 2022. This is the first assessment the Bank has completed for publication. Consistent with the objectives of the PFMI, the assessment has been completed by the Bank in its role as operator of the RTGS services, and not as a user of those services, or in its broader roles as supervisor.

The principles are designed to broadly apply to all systemically important FMIs. However, settlement systems at central banks differ from other FMIs in a number of ways. Central banks are inherently sound; they have an exclusive right to issue the means of payment and do not face liquidity risk vis-à-vis other system participants. Central banks, as creatures of statute, also play other important roles in society in areas such as monetary policy and financial stability. This has implications for; *inter alia*, FMI governance and organizational structure. These considerations affect the assessment against specific principles, some of which do not apply, or are applied differently to central bank operated FMIs.

The CBK derives its mandate to provide payment and settlement services and ensure the safety and efficiency of the payment system from the Central Bank of Kenya Act [Amended, 2015] and the National Payment System Act [2011] (NPS Act). The KEPSS, a systemically important payment system (SIPS) is owned and operated by the CBK. It constitutes the backbone of the payment infrastructure, settling high-value, time-critical payments across participants' settlement accounts maintained in the central bank. Transactions are settled individually; in real-time, provided the payer's account has sufficient funds, thus mitigating settlement risk. The types of risks that arise in, or are borne by the KEPSS include operational risk, legal risk, liquidity risk and reputational risk. Risk management is conducted in line with the CBK's Risk Management Policy.

KEPSS is Kenya's high-value payments system, which is used by banks and other payment service providers to settle their payment obligations on a real-time gross settlement (RTGS) basis. The Bank seeks to ensure effective oversight of KEPSS by separating its operational and oversight functions, as well as by producing transparent assessments against international standards.

1.2 Summary of the Assessment

The Central Bank of Kenya hereby publishes its self-assessment for 2022 of the Bank's settlement system, the Kenya Electronic Payment System and Settlement (KEPSS) against the Principles for Financial Market Infrastructures (PFMIs) formulated by CPMI/IOSCO and published in April 2012. The assessment was performed by the Banking and Payment Services Department (BPSD), in particular the Oversight and Compliance Section (OC) team that worked closely with, and drew on information provided by KEPSS Services Operations Team—the functional area to which the system ownership of KEPSS has been assigned. In addition, feedback was sought from other departments within the Bank, including the Information Technology (IT) Department responsible for providing technology services for KEPSS, Financial Markets Department (FMD), Legal Services Department (LSD), and the Internal Audit and Risk Management (IARMD) of the CBK. An internal assessment against the principles has been performed previously, but this is the first assessment to be published.

This assessment was carried out against the *Principles for Financial Market Infrastructures* (PFMIs) and is based on the methodology set out in the associated [Disclosure Framework and Assessment Methodology](#). The objective of publishing this assessment is to increase the transparency over the Bank's management of the RTGS services, and increase visibility over the associated governance, operations, and risk management framework among a broad audience. The audience includes current and prospective RTGS account holders and other market participants, authorities, and the general public. The assessment also serves to facilitate the implementation and ongoing observance of the PFMIs. This public disclosure does not include information that is confidential to the Bank and legally privileged or restricted for security reasons.

The principles are designed to broadly apply to all systemically important financial infrastructures. This assessment is based on all the principles relevant to the Bank's RTGS services. Some principles are relevant only to characteristics associated with specific types of FMIs, and hence were not considered relevant to KEPSS services. No specific issues of concern have been identified that warrant immediate action. However, changes will continue to be monitored as the legal basis for KEPSS is constantly evolving, and new solutions are continually being developed in response to threats and emerging risks. Compliance with the principles will therefore be subject to ongoing review in line with the recommendations.

Currently, the Bank considers KEPSS as the only domestic systemically important payment system for which an assessment against international principles is necessary. The assessment includes a description of the KEPSS operations and describes how, as an operator the CBK complies with each Principle applicable to the FMI. This view reflects the fact that KEPSS processes an aggregate value of Kenyan shillings payments that is high relative to other payment systems and mainly handles time-critical and high-value payments.

The assessment observed that seven (7) of the 24 principles are not considered relevant to the settlement of payments at the Bank (nos. 6, 10, 11, 12, 14, 20 and 24), while the remaining 17 are considered relevant. Of the 17, KEPSS observes eleven (11) principles, and six (6) principles were broadly observed. The table below summarizes the findings of the assessment.

Table 1: Summary of the Findings

Level of Observance	Assessment of Principle
Observed	Principles 2 -Governance, 4 – Credit risk, 7 – Liquidity, 8 – Settlement finality, 9 – Money settlements, 15 – General business risk, 16 – Custody and investment risks, 18 –Access and participation requirements, 19 – Tiered participation arrangements, 21 -Efficiency and effectiveness, 22 -Communication procedures, and standards
Broadly Observed	Principles: 1 -Legal basis, 3 Framework for the comprehensive management of risks, 5 – Collateral, Principle 13 –Participant-default rules and procedures, 17 - Operational risks and 23 – Disclosure of rules, key procedures, and market data
Partially Observed	N/A
Not Observed	N/A
Not Applicable	Principles 6 –Margin, 10 – Physical deliveries, 11 – Central securities depositories, 12 – Exchange-of-value settlement systems, 14 – Segregation and portability, FMI links 20 and 24 – Disclosure of market data by trade repositories

Table 2. Rating system

In its assessment, the assessor has applied the rating system used in the CPMI-IOSCO Disclosure Framework. Under this framework, observance of each of the applicable Principles is rated according to the following scale:

Observed	Any identified gaps and shortcomings are not issues of concern and are minor, manageable and of a nature that the FMI could consider taking them up in the normal course of its business.
Broadly Observed	The assessment has identified one or more issues of concern that the FMI should address and follow up on in a defined timeline.
Partially Observed	The assessment has identified one or more issues of concern that could become serious if not addressed promptly. The FMI should accord a high priority to addressing these issues.
Not Observed	The assessment has identified one or more serious issues of concern that warrant immediate action. Therefore, the FMI should accord the highest priority to addressing these issues.
Not Applicable	The principle does not apply to the type of FMI being assessed because of the legal, institutional, structural, or other characteristics of the FMI. ⁴

2: GENERAL BACKGROUND OF THE FMI

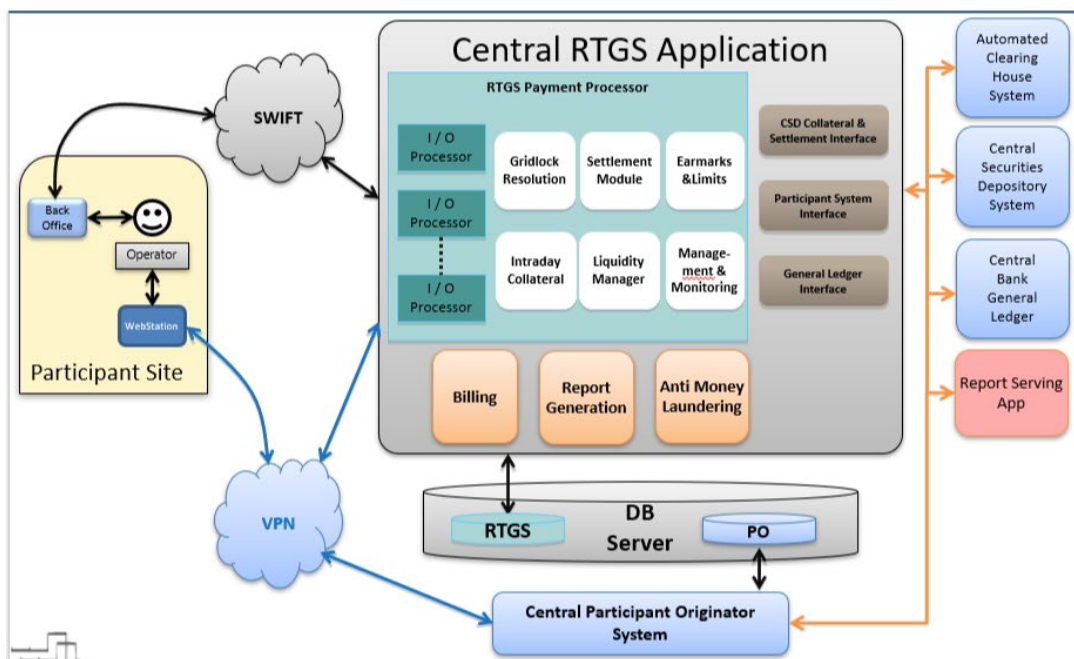
2.1. General Description of the FMI and the Market it Serves.

The National Payment Systems (NPS) in Kenya is a widespread concept which not only entails systems to clear payments (cheque, electronic and card payments) between banks, but also encompasses the total payment process. This includes all the systems, mechanisms, institutions, agreements, procedures, rules, and laws that come into play from the moment an end user issues an instruction to pay another person or a business, to the final settlement between banks at the CBK. The NPS therefore enables transacting parties to exchange value to conduct business efficiently. The key role players within the Kenyan NPS are recognized in different layers of participation – from the highly regulated participants, consisting of KEPSS settlement participants (settlement banks), payment services providers (PSPs) that do not have settlement accounts may be sponsored by settlement participants, and this process is managed outside the KEPSS system as the system only caters for direct participation.

The KEPSS system is at the core of the systems for payment clearing and settling in Kenya and settles on a prefunded basis in central bank money. Payments and transfers between banks and/or CBK are settled with finality when they are posted to banks' accounts in KEPSS. Final and irrevocable settlement is achieved by simultaneous crediting and debiting commercial banks and Micro-finance bank accounts held at Central Bank of Kenya. Payments are directly entered into the KEPSS, delivered via SWIFT. A majority of payments is included in daily clearings between banks and the net positions are settled bilaterally to their respective accounts at a settlement bank. CBK is the ultimate settlement bank.

KEPSS also plays a role in the settlement of interbank payment obligations arising from net settlement systems, for example, those relating to cheques, and cards transactions arising from the Low Value Settlement Service. However, the purpose of this Assessment is limited to its interaction with the core (wholesale) KEPSS system. An internal assessment against the principles was performed previously in 2017, but this is the first self-assessment to be published.

The chart below illustrates the key features of the Kenyan payment system.

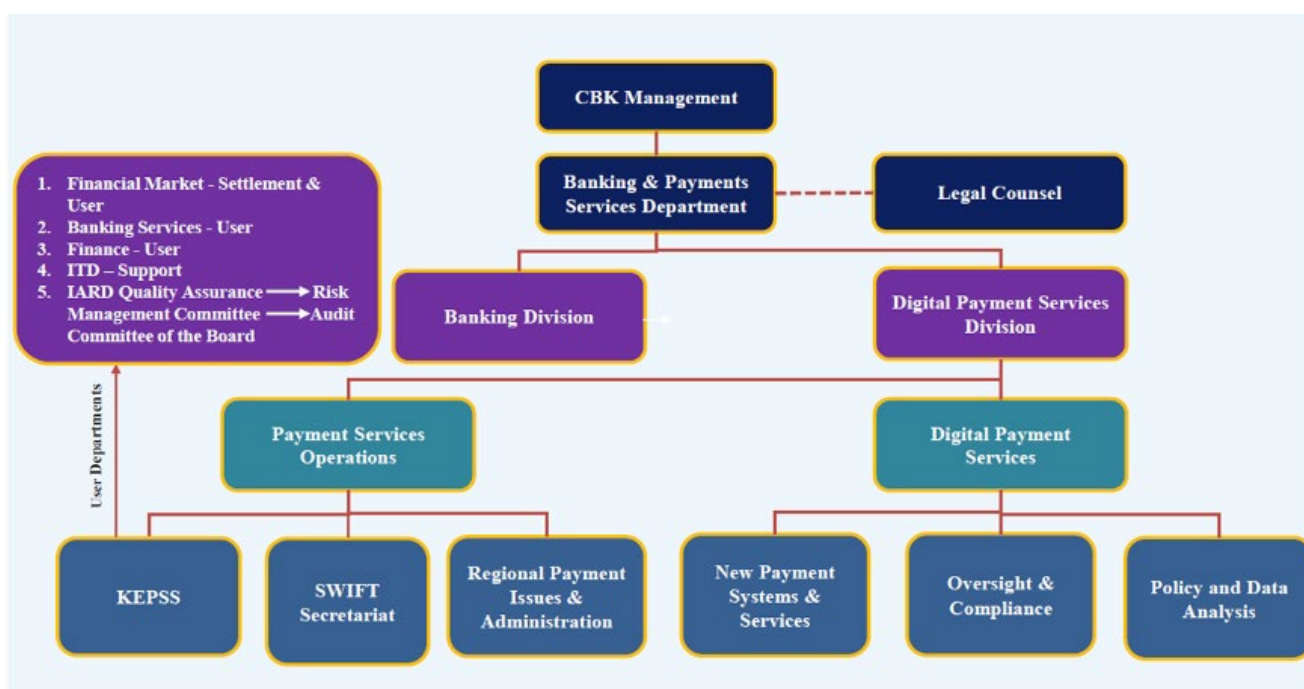


2.2. General Organization of the FMI

Settling payments in KEPSS is one of the Bank’s core tasks as central bank. The CBK Board of Directors has ultimate responsibility for settlement operations and formulates the strategy for the development of the National Payments System and the policies for its safety and efficiency. In accordance with the Central Bank Act, the Governor is responsible for the management of the Bank and is therefore ultimately responsible for the operation of KEPSS.

The diagram depicting the governance structure of the BPSD is illustrated below:

Figure 1: Structure of the Banking and Payments Department and other Departments



As indicated in the above diagram, the responsibility for day-to-day settlement operations and development initiatives is delegated to the system ownership, which has been delegated to a dedicated KEPSS Service Operations Section under the Banking and Payment services Department (BPSD). The day-to-day tasks performed by the section include the operation of the settlement of payments, the management and development of the system solutions used and administrative tasks such as following up of agreements with external service providers, risk analyses and management reporting, and contingency plans and exercises. The Oversight and Compliance Section is responsible for ensuring that operational risk assessments are conducted and that the FMI complies with the risk management process as outlined in the Group Risk Management Policy.

2.3. Legal and Regulatory Framework

A well-established legal framework primarily based on rules, operating procedures, contractual agreements, laws, and regulations supports the settlement service. The CBK Act mandates the CBK to oversee the supervise and regulate the NPS and to ensure its safety, soundness, and efficiency. The NPS Act provides the legal framework for the payment system, which includes the management, administration, operation, regulation, and supervision of the payment, clearing and settlement systems in the Republic of Kenya. KEPSS’s legal arrangements are based on a contractual basis through several bilateral agreements which are meant to provide legal certainty for each material aspect of its activities. The participants Agreement to settle through KEPSS is signed by each participant and the CBK as the KEPSS operator. The KEPSS Service Agreement is executed by the CBK as the operator of the KEPSS system.

2.4. KEPSS System Design and Operations

KEPSS is the real-time gross settlement (RTGS) system where Kenya's large value payments are conducted. The KEPSS system is owned and operated by the CBK and was implemented on July 29, 2005. The RTGS system is systemically important and has established arrangements to manage financial and operational risks. Apart from handling large-value interbank and customer payments, it settles the net clearing obligations from the retail payment systems privately operated.

Final settlement of financial obligations between participants is executed by entries to their settlement account held at the CBK. Credit and liquidity risks are managed for participants as transactions are settled (subject to funds availability) on a gross basis, in real time, in central bank money, and with finality. KEPSS participants have access to intraday liquidity facilities (ILF), which is fully collateralized against government securities held in the CSD system and Bank Deposits. (BD). Liquidity management is also facilitated by a gridlock mechanism. To encourage the early submission of payment instructions, RTGS transactions are charged with an ascending fee schedule. Operational disruptions are managed with measures to ensure high system availability, while the disaster recovery site (DRS) site or near site (NS) helps to ensure business continuity.

Apart from handling large-value interbank and customer payments, the system is also used for the settlement of obligations arising from the other payment streams such as – Electronic Funds Transfers, Government payments, online internet banking automated clearinghouse, the Automated Clearing House (ACH) for checks and electronic funds transfers (EFTs) and licensed payment switch service providers.

The NACH is owned by the commercial banks through the Kenya Bankers Association (KBA). Credit and liquidity risks associated with this system are managed for participants as transactions are settled (subject to funds availability and settlement is done in real time, in central bank money, and with finality. Participation in the NACH is open to commercial banks and microfinance banks that are licensed under the Banking Act.

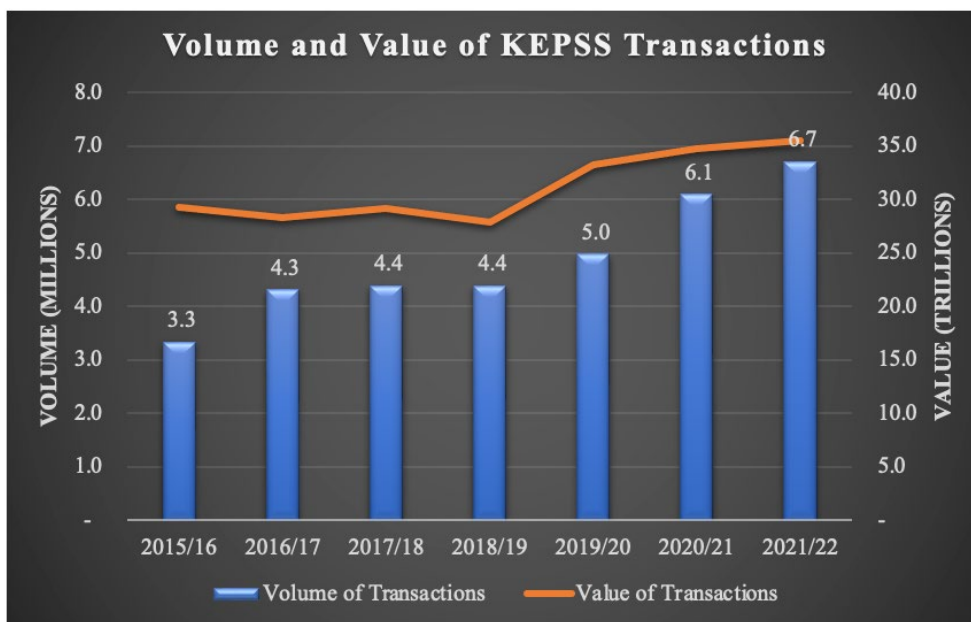
2.4.1. Settlement Schedule

The KEPSS settlement schedule is based on five days a week, eight hours a day settlement system. KEPSS is closed on weekends (i.e., Saturday and Sunday) as well as on Kenyan public holidays. KEPSS system is available to participants in 2 windows, the 1st window runs from 8.25 AM to 4.00 PM. This enables the participants to submit all payment instructions for settlement. The 2nd window runs from 4.00 PM to 4.30 PM and only enables participants to normalize their accounts to settle outstanding obligations and for Cash Reserve Ratio (CRR) purposes. A Help-Desk Service managed by the Payment System Operations Section is provided by the CBK to support participants and address any issues arising from the days' business operations.

2.4.2. FMI Performance Statistics

The KEPSS continues to record increased activity in both the volume and value of transactions. For FY2021/22, KEPSS processed 6.7 million transaction messages valued at Ksh.35.5 trillion, compared to 6.1 million transaction messages valued at Ksh.34.7 trillion in FY2020/21 (Figure 2 below). Direct settlements through KEPSS by commercial banks accounted for an average of 99.0 per cent of the total activity through KEPSS while the Net Settlement Instruction (NSI) activity through the NACH to KEPSS accounted for an average 1.0 per cent.

Figure 21 KES Volume and Value of transactions processed by KEPSS



For public consumption, the CBK publishes statistics on the CBK website on the value and the number of instructions settled in KEPSS on monthly basis.

2.4.3. Operational Reliability

A key operational target is for KEPSS to be available to its members at a minimum of 99.99 per cent of the time. Availability is measured relative to the total number of hours that the system is normally open for settlement. In 2022, KEPSS availability was at 100.00 per cent due to the high uptime system architecture design implemented during the system upgrade exercise.

2.4.4. Collateral Management

The system provides for automated liquidity provision by providing loans secured by financial instruments reserved in the KEPSS system. Acceptable financial instruments are Government securities in the form of Treasury bills and Bonds. Collateral is automatically pledged for securing KEPSS loans, on the conditions determined by the CBK from time to time to facilitate settlement through the KEPSS system if there is a shortage of funds in a bank's settlement account. The Bank provides intraday credit through the Intraday Liquidity Facilities (ILF). If

a participant fails to repurchase the collateral at the end of the day, the ILF is converted into an overnight loan with a penalty. The facility is available only to KEPSS participants who have entered a Master Repurchase Agreement (REPO) with the CBK.

2.4.5. FMI Fees and Charges

The processing periods are based on the processing window in which the processing was done. KEPSS operational costs are highlighted in the KEPSS rules and procedures under Schedule E. The cost is recovered from the participants through an annual maintenance transaction fee, settlement charges and penalties as highlighted in *Schedule E* of the KEPSS Rules and Procedures

2.4.6. Settlement finality

All transactions settled in KEPSS are deemed final and irrevocable. The NPS Act, which was enacted in 2011 and operationalised vide the NPS Regulations in 2024, provides an explicit basis for settlement finality in its section 9. In case of bankruptcy, clearing and settlement through KEPSS will be processed under the rules of the system and shall not be revoked, reversed, modified, stopped, or set aside.

2.4.7. KEPSS Interface

KEPSS interfaces with two regional payment systems, (1) the East African Payment System (EAPS) which facilitates cross border payments in the East African Community (EAC) and (2), the Regional Payment and Settlement System (REPSS) which provides payment and settlement for transactions within the COMESA region. For EAPS, the participant central banks that include Kenya, Uganda, Tanzania and Rwanda prefund their accounts in the other central banks in the settlement currencies of the participant EAC Partner States' local currencies i.e., Kenya Shillings (KES), Ugandan Shillings (UGX), Tanzanian Shillings (TZS) and Rwandese Franc (RWF), in their RTGS systems. For REPSS, clearing takes place at each participating central bank where the participants maintain prefunded accounts in the settlement currencies of the system i.e. the US Dollar (USD) and the Euro (EUR). The REPSS is a net deferred settlement system with the final settlement-taking place at the Bank of Mauritius. The oversight and support arrangements for REPSS is provided by the COMESA Clearing House (CCH), which is currently based in Harare, Zimbabwe. CCH acts as the Secretariat for the REPSS User Group that is actually charged with the oversight of REPSS and reports any recommendations from the User Group to COMESA Committee of Governors for ratification and final decision making

2.4.8. Reporting

A comprehensive set of reports are available in the KEPSS system. Some of the reports covering KEPSS include

- a. Monthly Economic Review – This is to track performance of KEPSS on a monthly basis
- b. Financial Stability Report – A report that captures the future trends and risks in KEPSS

2.4.9. KEPSS Operations and Support

KEPSS has a fully dedicated Business and Technical KEPSS HELPDESK teams that are available to monitor the system during business hours and address any issues that may arise in the course of business. These teams ensure the following:

1. Business Validation:

- a) All KEPSS processors are up and running.
- b) Possible system errors are escalated and attended to
- c) Message flows from or to KEPSS are monitored.
- d) Incidents reported to the KEPSS technical support team are resolved and escalated as per operations procedures if need be
- e) Problems reported by any of the participants are promptly attended to.

2. Technical Validation:

- a) Technical reports are prepared and submitted when required
- b) Technical problems are identified and attended to by the KEPSS IT support team
- c) SWIFT connections are up and running

3. DETAILED ASSESSMENT REPORT

3.1 Assessment of KEPSS against the Principles PFMI

The Assessment focuses on KEPSS's role as a wholesale RTGS system. In its assessment, BPSD has applied the rating system used in the CPMI-IOSCO Disclosure Framework. For each PFMI, the assessment has explained and commented on the regulations, arrangements, procedures and measures relevant to KEPSS and an overall assessment of how the principle is observed has been provided. The structure with key considerations and associated questions is retained. The principles, guidance, key considerations, and questions from the PFMI document are included in italics. Where the answers to multiple questions in the same area are identical, the answers are identical, or reference is made to the reply to a related question. This is to make the report easier to read. Under the Disclosure Framework, observance of each of the applicable Principles is rated according to the following scale:

Principle 1: Legal Basis

Assessment Rating	Principle 1 is Considered to be Broadly Observed.
<p>As a robust legal basis for an FMI's activities in all relevant jurisdictions is critical to an FMI's overall soundness, this principle should be reviewed holistically with the other principles.</p>	
<p><i>An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions</i></p>	

Material Aspects and Relevant Jurisdictions

Q.1.1.1: What are the material aspects of the FMI's activities that require a high degree of legal certainty (for example, rights and interests in financial instruments; settlement finality; netting; interoperability; immobilization and dematerialization of securities; arrangements for DvP, PVP or DvD; collateral arrangements (including margin arrangements); and default procedures)?

The material aspects of the System, as well as the rights and obligations between the Bank and the participants regarding funds transfers under the Systems, are set out by the Bank in the KEPSS rules and Procedures which stipulate that the rights and obligations arising from them are governed by Kenyan laws. The laws, rules and procedures provide a clear and enforceable legal basis for the settlement of transfers in KEPSS and for the use of collateral to mitigate credit risk. The material aspects of KEPSS's activities requiring legal certainty are rights and interests in financial instruments, collateral arrangements and settlement finality and netting arrangements.

Material Aspects

The material aspects of the KEPSS that require a high degree of legal certainty include:

- i) The mandate to provide the settlement service and powers to issue regulations, instructions, rules, procedures, and other similar regulatory instruments to participants. The CBK, as the KEPSS operator, has set out regulations to specify both access and exit criteria for participants. Financial institutions or other institutions that would like to participate in the system must meet the qualifications as specified in the KEPSS Rules and Procedures.
- ii) Legal recognition of electronic funds transfers and the ordering of such transfers via electronic means. In the court of law in Kenya, an electronic payment transaction made is binding based on the contractual relationship between the operator of a payment system and its participants. This is covered under the Kenya Communication and Information's Act that provides the legal framework for the use and recognition of electronic signatures as evidence for payment transactions in a court of law.
- iii) Settlement finality irrevocability of payments settled through the KEPSS system. The timing of final settlement of payments is set out in Section 3.2 of the KEPSS RULES and Procedures pursuant to Section 9 (2) and (3) of the NPS Act. The KEPSS Rules and Procedures specify that a payment order is regarded as entered in KEPSS and settled with finality when it has been

<p>Key Consideration 1.1</p> <p><i>The legal basis should provide a high degree of certainty for each material aspect of an FMI`s activities in all relevant jurisdictions.</i></p>	<ul style="list-style-type: none"> iv) debited from or credited to one of the bank’s accounts in CBK, the bank or a third party may not recall the payment order after this time.; v) The rights to assets (financial instruments) that are used as collateral for loans provided in the KEPSS. vi) Netting - Although all settlement instructions within the system are processed on a gross basis, netting arrangements are also relevant to the KEPSS as their potential unwinding in the event a KEPSS participant with a net debit position from a netting arrangement is unable to settle, has the potential to disrupt other aspects of settlement in KEPSS. <p>Q.1.1.2: What are the relevant jurisdictions for each material aspect of the FMI's activities?</p> <p>The relevant jurisdiction for each material aspects of the FMI's activities is established through the legal foundation of the Central Bank of Kenya Act, Cap. 49 (CBK Act), the Payment Systems Act 2011 (NPS Act), and the confirmation of participation agreement that all participants of KEPSS sign binding themselves to the operating rules and procedures. The bi-lateral Agreement for KEPSS Service Usage signed by participants legally binds participants with the KEPSS's rules and operating procedures. The CBK operates the KEPSS system within Kenya for payments in Kenya shillings and the Kenyan law governs the Terms and Conditions for participating in KEPSS. Its real-time settlement services do not extend to international jurisdictions.</p> <p>Legal Basis for each Material Aspect</p> <p>Q.1.1.3: How does the FMI ensure that its legal basis (that is, the legal framework and the FMI's rules, procedures, and contracts) provides a high degree of legal certainty for each material aspect of the FMI's activities in all relevant jurisdictions?</p> <p>The KEPSS system is governed by different rules and regulations in terms of the Acts, legislation, directives, circulars, policies, government gazettes and internationally recognized standards (i.e. SWIFT message standards). Pre-defined contracts are endorsed between the FMI operator and the direct participants. As illustrated under Q.1.1.2, the following provide the legal basis for the FMI activities:</p>
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Key Consideration 1.1

The legal basis should provide a high degree of certainty for each material aspect of an FMI`s activities in all relevant jurisdictions.

The CBK Act

The CBK Act mandates the CBK to oversee the supervision of the NPS to ensure its safety, soundness, and efficiency. The CBK Act was amended in 2005 to clarify the role and responsibility of the CBK in the domestic payment system. Following this amendment, the role and responsibility of the CBK were entrenched in law as described in **Section 4A 1(d) that empowers the Bank to “formulate and implement such policies as best promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement systems”** This provided the Bank with the basis and authority/mandate to discharge its functions as a monetary authority and/or as overseer of payment systems thereby making oversight of payment systems an integral part of the wider responsibilities for monetary and financial stability. The Bank’s objective is to promote the good of the people of Kenya by maintaining monetary and financial stability. This objective informs the operation of the KEPSS services and ensures that the Bank places a high priority on the safety and efficiency of the KEPSS services.

NPS Act

The NPS Act, 2011 was enacted in 2011 and operationalised in 2014 through the NPS Regulations. The Act provides the legal framework for the payment system that includes the designation, settlement finality, regulation, and supervision of the payment, clearing, and settlement systems. The Act further prescribes a dispute resolution mechanism among participants, gives validity to, protects netting arrangements (Section 16 of the NPS Act) in the event of the liquidation or winding up of a participant, and provides a clear legal basis regarding when settlement finality occurs. The NPS Act furthermore provided for the regulatory and supervisory powers of the CBK to manage and control payment system risks. Although the Act provides for the formation of a Payment System Management Body (PSMB), this has not been established.

KEPSS Service Agreements

The basis of this agreement is that the CBK, while performing its functions as the Central Bank of Kenya, shall provide the KEPSS participant with a facility to settle financial obligations through the KEPSS system. The service agreement is entered into prior to the participant go-live in the KEPSS system. The purpose is to record the contractual terms and conditions applicable to the parties (KEPSS participant and the CBK) in the provision of the payment settlement services by the CBK to the participant and the utilization of the facilities provided by the CBK

<p>Key Consideration 1.1</p> <p><i>The legal basis should provide a high degree of certainty for each material aspect of an FMI`s activities in all relevant jurisdictions.</i></p>	<p>to the participant; thus, each creating a legally binding relationship to receive KEPSS system services.</p> <p>The KEPSS service agreement stipulates where settlement instructions should be delivered, and the process followed for settlement. It also contains settlement procedures as well as finality and irrevocability. The Operational Manual and SLA, which is an addendum to the KEPSS service agreement, specifies the technical and business requirements.</p> <p>Service Level Agreements (SLAs)</p> <p>To document the roles and responsibilities, an SLA is entered into by the BPSD with each of the following internal departments within the CBK:</p> <ul style="list-style-type: none"> a. Information Technology Department (ITD); b. Financial Markets Department (FMD); c. Bank Supervision Department (BSD); and d. Internal Audit & Risk Management Department (IARMD) <p>The SLAs provide for the BPS to share or receive services from these departments in order to deliver a robust and reliable KEPSS service to the industry.</p> <p>a) For an FMI that is a CSD, how does the CSD ensure that its legal basis supports the immobilization or dematerialization of securities and the transfer of securities by book entry?</p> <p><i>This is not applicable to the KEPSS system.</i></p> <p>b) For an FMI that is a CCP, how does the CCP ensure that its legal basis enables it to act as a CCP, including the legal basis for novation, open offer or other similar legal device? Does the CCP state whether novation, open offer or other similar legal device can be revoked or modified? If yes, in which circumstances?</p> <p><i>This is not applicable to the KEPSS system.</i></p> <p>c) For an FMI that is a TR, how does the TR ensure that its legal basis protects the records it maintains? How does the legal basis define the rights of relevant stakeholders with respect to access, confidentiality, and disclosure of data?</p> <p><i>This is not applicable to the KEPSS system.</i></p>
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<p>Key Consideration 1.1</p> <p><i>The legal basis should provide a high degree of certainty for each material aspect of an FMI`s activities in all relevant jurisdictions.</i></p>	<p>d) For an FMI that has a netting arrangement, how does the FMI ensure that its legal basis supports the enforceability of that arrangement?</p> <p>This is not applicable to the KEPSS system as it settles on a gross settlement basis.</p> <p>e) Where settlement finality occurs in an FMI, how does the FMI ensure that its legal basis supports the finality of transactions, including those of an insolvent participant? Does the legal basis for the external settlement mechanisms the FMI uses, such as funds transfer or securities transfer systems, also support this finality?</p> <p>The timing of final settlement of payments is set out in Section 9 (2) (3) of the NPS Act and Section 11.1 and 11.2 and 11.3 of the KEPSS Rules and Procedures. The KEPSS Rules and Procedures specifies that Payment instructions in KEPSS are deemed to be final and irrevocable once the Forwarding bank's account is debited and the Executing bank account is credited with the amount specified in the payment instruction and once a payment has been settled across the KEPSS accounts, the Forwarding bank shall not have an ability to cancel the payment. It is not possible to revoke a payment order that has been finalized.</p>
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<p>Key Consideration 1.2:</p> <p><i>An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.</i></p>	<p>Q.1.2.1 How has the FMI demonstrated that its rules, procedures, and contracts are clear and understandable?</p> <p>The Bank’s legal documentation for the RTGS services is clear, understandable, and consistent with the Kenyan law. The FMI operator is readily available to provide consultation on any issues that are not clear. The rules (and any amendment thereto) are formulated to address any concerns the participants or the public may have, which in turn reduces uncertainty and misinterpretation of the rules. The legal basis for the CBK’s activities includes certain rules, operating procedures, and contractual agreements with which participants in the settlement service are required to abide. The material aspects of the activities in which the Bank engages in providing the settlement service are supported by these rules and contractual provisions which, together with relevant laws and regulations in the Kenyan jurisdiction, establish the terms upon which the settlement service is provided to its participants. The FMI operator is readily available to provide consultation on any issues that are not clear.</p> <p>The FMI collaborates with stakeholders regarding any rules, procedures and contracts to ensure that they understand and agree to them. KEPSS participants are consulted prior to the implementation of new rules. The FMI operator CBK LSD are involved in drafting and implementing rules and procedures and reviewing of the contracts and ensuring they comply with Kenyan laws. In addition, KEPSS Operational User Manual is provided to the KEPSS participants to guide and supplement the KEPSS legal documentation. These provide clear and understandable descriptions of the KEPSS services consistent with its legal frameworks.</p>
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Key Consideration 1.2:

An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

Q.1.2.2 How does the FMI ensure that its rules, procedures, and contracts are consistent with relevant laws and regulations (for example, through legal opinions or analyses)? Have any inconsistencies been identified and remedied? Are the FMI's rules, procedures and contracts reviewed or assessed by external authorities or entities?

Consistency of Rules and Procedures with Relevant Laws

The assumption of agreements and formulation of rules for KEPSS take place in consultation with legal experts at the Bank. Where necessary, external experts are consulted. The KEPSS Terms and Conditions refer to relevant legislation setting out important rules on the settlement of payments at the Bank. In the event of changes, the agreements, rules, and terms are updated accordingly. The KEPSS system owner has first-line responsibility for rules, procedures, and agreements for KEPSS being consistent with relevant laws and regulations that make up the legal basis for KEPSS. The participants submit an annual report (Schedule H) to the Bank on the status of compliance.

The role of the Oversight and Compliance (OC) Section of BPSD at the Bank is to help ensure that the Bank does not incur public sanctions, financial loss or loss of reputation because of failure to comply with applicable laws, regulations, and internal rules. The OC Section is to support the system owner and take second-line responsibility by identifying, assessing, monitoring, and reporting on the risk of non-compliance with applicable rules. As a third line of defence, KEPSS's operations are audited by the Internal Audit Unit on the basis of a set audit plan. It is the auditor who decides which issues in KEPSS are to be reviewed in each audit. In addition, KEPSS is subject to supervision by the Bank's external auditor, who may also be engaged to review specific issues in KEPSS. To-date there have not been any inconsistencies identified with the relevant laws and regulations

Q.1.2.3 Do the FMI's rules, procedures and contracts have to be approved before coming into effect? If so, by whom and how?

The FMI regulations are governed by the NPS Act. The KEPSS Rules and Procedures and the relevant laws, directives, and circulars issued by the CBK are subject to legal clearance from the CBK Legal department. For the purposes of this documentation, these regulations can be considered as FMI rules of participation and are binding to the CBK, KEPSS, participants. Amendments to the rules and procedures are made pursuant to guidelines provided under section 16.1 (b) of the KEPSS Rules and Procedures in consultation with the participants and all stakeholders.

<p>Key Consideration 1.3:</p> <p><i>An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and where relevant, participants' customers, in a clear and understandable way.</i></p>	<p>Q.1.3.1: How does the FMI articulate the legal basis for its activities to relevant authorities, participants and, where relevant, participants' customers?</p> <p>The Bank articulates the legal basis for its activities in the KEPSS Terms & Conditions as well as its contracts with the participants and the documents governing the Bank's provision of settlement arrangements. All documents are governed by and enforceable under, Kenyan law. The documentation is clearly set out and made available to relevant stakeholders, with most documents available on the Bank's website. When a participant opens a settlement account or commences the use of the KEPSS, the Bank notifies the participant in writing or through its website of rules pertaining to the Systems. Such rules are also published on the Bank's website. In addition, when amending the rules due to IT system improvements or changes in the surrounding environment, the Bank notifies participants of the amendment in writing or through its website, and thus participants are in a position to easily access the latest information.</p> <p>Vision and Strategy Document</p> <p>The CBK conveys the NPS's vision and strategy to the public, considering new and complex challenges faced by the NPS stakeholders. The first Kenyan National Payment System Framework and Strategy document was developed in the year 2004, prior to the implementation of the KEPSS system in July 2005. With most of the envisaged strategies being successfully implemented, the strategy document was reviewed, refined, and adjusted for future developments to create a vision and strategy for the period 2021-2025. This was published in 2022. This document contains a high-level vision and strategies to maintain a world-class payment system and meet domestic and regional payment system requirements. In this document, new objectives and strategies have been developed and its purpose was to provide high-level strategic guidance and direction for the payment system for the next five (5) years from 2021 up-to 2025. In this document, new objectives and strategies have been developed which includes to:</p> <ul style="list-style-type: none"> a) facilitate a payments system that meet the diverse needs of users and support the country's development agenda. b) ensure payments systems that are secure through influencing industry and global standards and adopting safe technologies. c) power an ecosystem based on collaboration leading to the launch of premier and globally leading innovations. d) implement a supportive policy and regulatory framework that is firmly enforced across all existing and emerging players. At a high level, the legal basis for KEPSS is articulated in a clear and understandable manner on the CBK's website.
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<p>Key Consideration 1.4:</p> <p><i>An FMI should have rules, procedures and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed or subject to stays.</i></p>	<p>Enforceability of Rules, Procedures, and Contracts</p> <p>Q.1.4.1 How does the FMI achieve a high level of confidence that the rules, procedures, and contracts related to its operations are enforceable in all relevant jurisdictions identified in key consideration 1 (for example, through legal opinions and analyses)?</p> <p>The rules, procedures and agreements concerning KEPSS are formulated, approved, and entered into in accordance with the legal basis for the Bank's activities as a settlement Bank. The Bank's contracts with account holders are governed by and enforceable under, Kenyan law. the FMI is subject to the legal foundation for the payment system in Kenya. The documentation is reviewed regularly and in advance of any changes to KEPSS to ensure they remain enforceable and provide robust legal protection. All the agreements or contracts between the FMI and the participants are reviewed by all parties before they are signed to ensure they are enforceable.</p> <p>Degree of Certainty for Rules and Procedures</p> <p>Q.1.4.2: How does the FMI achieve a high degree of certainty that its rules, procedures and contracts will not be voided, reversed or subject to stays? Are there any circumstances in which an FMI's actions under its rules, procedures or contracts could be voided, reversed or subject to stays? If so, what are those circumstances?</p> <p>The KEPSS Rules and Procedures section 8.1 and 8.2 establish the rights and responsibilities of the CBK and RTGS members. KEPSS's legal arrangements are based on a contractual basis through several bilateral agreements which are meant to provide legal certainty for each material aspect of its activities. The participants Agreement for the operation of KEPSS is signed by each participant and the CBK as the KEPSS operator. The KEPSS Service Agreement is executed by CBK as the operator of the KEPSS system.</p> <p>The CBK is clear on what is expected to qualify as a participant in KEPSS. The KEPSS rules and procedures clearly states the rules and legislative requirements that a new entrant should adhere to. All new entrants must comply with the standards adopted as prescribed in the KEPSS rules and procedures document. No <i>actions under its rules, procedures or contracts could be voided, reversed or subject to stays</i> as participants are required to execute the "Agreements for participation" agreeing to be irrevocably bound by it and its Rules and Procedures and undertake user acceptance tests to determine systems compatibility and user capabilities to Participant in KEPSS (section 3.3) prior to being on boarded.</p>
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	<p>Q.1.4.3: Has a court in any relevant jurisdiction ever held any of the FMI's relevant activities or arrangements under its rules and procedures to be unenforceable?</p> <p>No court has ever held any of the KEPSS activities under its rules and procedures to be unenforceable. In addition, there has been no precedent transactions settled in KEPSS being challenged in a court.</p>
<p>Key Consideration 1.5:</p> <p><i>An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict.</i></p>	<p>Q.1.5.1: If the FMI is conducting business in multiple jurisdictions, how does the FMI identify and analyze any potential conflict-of-laws issues? When uncertainty exists regarding the enforceability of an FMI's choice of law in relevant jurisdictions, has the FMI obtained an independent legal analysis of potential conflict-of-laws issues? What potential conflict of-laws issues has the FMI identified and analyzed? How has the FMI addressed any potential conflict-of- laws issues?</p> <p>CBK does not conduct business as a settlement bank in multiple jurisdictions. This key consideration is not therefore considered relevant for KEPSS.</p> <p>However, KEPSS has two modules, EAPS and REPSS, which handle payments routed within East Africa and the COMESA regions, respectively. The settlement of these cross-border transactions is based on pre-funded accounts domiciled in the CBK. For EAPS, an MOU for EAC Central Banks on currency convertibility and repatriations (signed off in 2014) is in place. REPSS is implemented as a module of KEPSS, and a participation agreement is in place, which highlights obligations of direct and indirect participants.</p>
<p>Key Conclusion</p>	<p>The Bank has implemented appropriate and robust legal coverage for the RTGS services. The Bank draws on in-house legal experts and external legal services when necessary to produce legal documentation and to review any legal agreements that the Bank enters into as operator of KEPSS services. Where there exists a risk for legal certainty, the Bank commissioned legal opinions to help assess the potential legal risk and to consider any appropriate mitigants.</p> <p>The laws, rules and procedures provide a clear and enforceable legal basis for the settlement of transfers in KEPSS and for the use of collateral to mitigate credit risk. Internal or external legal experts are involved when concluding or amending agreements concerning KEPSS. This provides an assurance that CBK's interests will be addressed in a legally sound manner and that the agreement takes account of the formal requirements of laws, regulations and other rules and procedures. CBK's activities as a settlement bank offer participants a high degree of legal certainty.</p>

Principle 2: Governance

Assessment Rsting	Principle 2 is Considered to be Observed.
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An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations and the objectives of the relevant stakeholders.

In reviewing this principle, it should be noted that if an FMI is wholly owned or controlled by another entity, the governance arrangements of that entity should also be reviewed to ensure that they do not have adverse effects on the FMI's observance of this principle. As governance provides the processes through which an organisation sets its objectives, determines the means for achieving those objectives and monitors performance against those objectives, this principle should reviewed holistically with the other principles.

Special guidance issued by CPMI/IOSCO in August 2015 specifies that in cases where an FMI is operated as an internal function of the central bank, key considerations 3 and 4 are not intended to constrain the composition of the central bank's governing body or that body's roles and responsibilities.

<p>Key Consideration 2.1:</p> <p><i>An FMI should have objectives that place high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interests.</i></p>	<p>FMI's Objectives</p> <p>Q.2.1.1: What are the FMI's objectives, and are they clearly identified? How does the FMI assess its performance in meeting its objectives?</p> <p>The NPSD supports the mission of the CBK by ensuring the overall effectiveness and integrity of the NPS. The mission of the BPSD within the Bank is to ensure the safety and efficiency of the NPS in the country. As such BPSD plays a significant role in supporting the role of the banks in maintaining financial stability of the country. The Bank's mission informs the operation of the KEPSS services and ensures that the Bank places a high priority on the safety and efficiency of the FMI services. The objective of the Bank's settlement system (KEPSS) is secure and efficient settlement of payments between banks with an account at the Bank. The settlement system must comply with relevant international standards and requirements for critical infrastructure.</p> <p>KEPSS was developed to enhance financial stability by removing credit and settlement risks and to also provide a net settlement service to several retail payment systems. This removes the risks associated with net obligations settled in commercial bank money. The Bank supports its financial stability objectives by providing a reliable, resilient, and responsive system for high value Kenya shillings payments and settlement. To ensure that the KEPSS services contribute towards monetary and financial stability, and, where appropriate, support other relevant public interest considerations, the Bank regularly engages with various stakeholders and users and consults on material changes to the KEPSS services.</p>
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	<p>Q.2.1.2 How do the FMI's objectives place a high priority on safety and efficiency? How do the FMI's objectives explicitly support financial stability and other relevant public interest considerations?</p> <p>The design of KEPSS ensures that there is no build-up of settlement exposures associated with high-value transactions, which in turn promotes the stability of Kenya's financial system. Reflecting the critical importance of KEPSS to the Kenyan financial system, the Bank aims to operate KEPSS at an extremely high standard of availability and resilience, and to ensure that its settlement services continue to evolve to meet the changing needs of the broader payments system. In support of financial stability, the Bank has formulated risk management policies to manage risks in a coordinated, comprehensive, and systematic manner, consistent with international standards and best practices.</p> <p>The FMI manages risks with the aim of achieving the safety and efficiency of the NPS by ensuring that the settlement of financial obligations in the economy takes place in central bank money which therefore underpins financial stability and supports the safety and efficiency of the NPS.</p>
<p>Key Consideration 2.2:</p> <p><i>An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to the owners, relevant authorities, participants and, at a more general level, the public.</i></p>	<p>Q.2.2.1 What are the governance arrangements under which the FMI's board of directors (or equivalent) and management operate? What are the lines of responsibility and accountability within the FMI? How and where are these arrangements documented?</p> <p>Governance Arrangements</p> <p>The management and operation of the KEPSS services sits within the Bank and is subject to the Bank's standard governance arrangements such as the Oversight by the Oversight and Compliance section of BPSD. The CBK Board provides strategic leadership for the KEPSS infrastructure and supports the delivery of the Bank's mission to promote the good of the people of the Republic of Kenya by maintaining monetary and financial stability. It also seeks to promote efficiency, innovation, and competition in the payment space wherever that can be safely done without impairing stability.</p> <p>Section 10 of the CBK Act vests executive and advisory authority at the Bank in the Board of Directors (the Board). This means that the Board oversees the Bank's operations and manages its resources, unless specifically stated otherwise in law. Section 12 A (5) of the CBK Act gives the Board powers to delegate authority to the Governor or specific committees, and the Board</p>

has done so in a number of areas in the form of both general and specific powers. To this end, the Board has delegated the monitoring of the KEPSS risk management framework, risk tolerance and risk profiles to the BAC, Sub-Committee of the Board chaired by an external member of the Board. The governance arrangements for the Board and the Sub-Committee are set out in the Board Charter. As operator of KEPSS, the Bank is accountable for the end-to-end risk management of the KEPSS services. The Board supports this through the oversight of all risks that could impact the resilience of the payment system.

The Governor may delegate any of his powers to other officers of the Bank (section 13 (5)). The decisions affecting day-to-day operations, and the development of KEPSS are delegated to the Director of BPSD. The Head of BPSD reports to the Governor. Ultimately, the Governor is accountable to the operations of the FMI and through the Governor to the Board.

A separate Governance, Oversight and Compliance (OC) section within BPSD is responsible for overseeing the governance system, operational risk management and compliance. OC helps ensure that the Operations of KEPSS does not incur public sanctions, financial loss or loss of reputation because of failure to comply with applicable laws, regulations and internal rules and procedures. OC is also to identify, assess, monitor, and report on the risk of non-compliance with the KEPSS rules and procedures that the Bank is required to observe, and to advise on following up this risk.

The Bank's Information Technology (IT) provide technology and infrastructure support services to the operation of KEPSS while the Internal Audit is charged with assessing the Bank's internal control, procedures and other matters that are important for the Bank's operations, based partly on the Regulation on Risk Management and Internal Control at CBK.

The Board, the Governor and other line managers are informed about KEPSS's settlement activities through regular management reporting, which also covers risk assessments, incidents, and compliance. Monthly reports are also prepared and distributed to the Governor and line management. A separate annual report is submitted to the Board for information.

Information about the organization and management of the CBK and the delegation of responsibilities at the Bank is available on the Bank's website and in the CBK Annual report. The information disclosed includes the composition of the Bank's Board of Directors and the organization of the Bank's departments.

Lines of Responsibility and Accountability

Q.2.2.2 For central bank-operated systems, how do governance arrangements address any possible or perceived conflicts of interest? To what extent do governance arrangements allow for a separation of the operator and oversight functions?

The management, operation and oversight of the FMI is currently located under the same department and therefore the managers of these functions report to the same Head of department. The functions are domicile at the BPSD. The head of the BPSD is assisted by a deputy director who is the head of the division that is responsible for the management, operations, and the oversight of the NPS. Although the operations and oversight functions of the FMI are domicile in the same department within the CBK, each function is headed by a senior manager each with a separate job description with assigned delegation and areas of responsibility. The Governance structure of BPSD is depicted under section 2.2 of this assessment report.

The Bank is currently in the process of reviewing the NPS act and Regulations and it is expected that the revised regulatory framework for the NPS will provide for an improved governance arrangement between the operator and the overseer of the FMI.

Q.2.2.3 How does the FMI provide accountability to owners, participants, and other relevant stakeholders?

The operations and management of the KEPSS system are governed through the SLAs, KEPSS service agreements entered into with each participating bank, settlement agreements and SLAs with relevant internal departments. Internally within CBK, the system operator reports to management on settlement activities in KEPSS through monthly, quarterly, and annual reports. Participants in KEPSS receive daily system reports on settlement activities including volumes and values. Other external stakeholders have access to monthly (volumes and Values) and annual reports published on the CBK website. A Treasury Managers' Group is also established to allow the FMI to engage participants on any matter that impacts on the FMI operations.

	<p>Disclosure of Governance Arrangements</p> <p>Q.2.2.4 How are the governance arrangements disclosed to owners, relevant authorities, participants and, at a more general level, the public?</p> <p>The CBK is the owner and operator of the FMI and therefore no other external owners exist. The governance arrangement is available on the Bank's website and is published in the CBK Annual Report, but no specific reference is made to FMI governance. The information about the organization and management of CBK includes the composition and tasks of the Bank's Board of Directors, and the organization of the Bank's departments. This self-assessment allows the FMI to disclose its governance arrangements.</p>
<p>Key Consideration 2.3:</p> <p><i>The roles and responsibilities of an FMI's board of directors should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.</i></p>	<p>Roles and responsibilities of the CBK Board</p> <p>Q.2.3.1 What are the roles and responsibilities of the FMI's board of directors (or equivalent), and are they clearly specified?</p> <p>The Board of Director's roles and responsibilities are set out in the CBK Act, which vests executive and advisory authority in the Board of Directors of the Bank. The CBK's Board is a single body that functions in terms of the CBK Act and a Board Charter. The terms of reference of all committees and the Board Charter are reviewed on a regular basis. The governance framework established for the Board outlines the following requirements and responsibilities: (i) composition and membership of the Board; (ii) Board and organizational matters; (iii) Board committees and their terms of reference; and (iv) policies and procedures relating to corporate governance. As specified in the CBK Act, the Board is responsible for the management of the CBK's affairs and for the formulation of policies, providing independent oversight for the overall management and strategy of the Bank and the use of its resources.</p> <p>As the CBK owns and operates the KEPSS, KEPSS management and operations fall under its governance structure and is therefore subject to the risk management, audit, and decision-making processes of the CBK and Board direction.</p> <p>In line with the CBK Act, the role of the Board is explicitly limited to that of corporate governance. The CBK Board is ultimately responsible for overseeing and monitoring the risk management processes established for the CBK, including FMI operations. The responsibility and accountability for FMI operations rest with the Governor, deputy governor and relevant committees established by the Board of Directors Board.</p>

	<p>Q.2.3.2: What are the board's procedures for its functioning, including procedures to identify, address and manage member conflicts of interest? How are these procedures documented, and to whom are they disclosed? How frequently are they reviewed?</p> <p>The Board has robust procedures in place to manage conflicts to ensure the integrity and impartiality of the Board's decision making. All Board members must declare (In line with Article 12 (5): guidelines issued by the Minister of Finance) their interests (personal, Business and financial). These includes Board members whose roles within the Bank's executive could give risk to specific potential conflicts. The Chair informs the Board of any interest which may give rise to an actual or potential conflicts and, the Board agrees the appropriate manner to manage that conflict.</p> <p>Q.2.3.3: Describe the board committees that have been established to facilitate the functioning of the board. What are the roles, responsibilities, and composition of such committees?</p> <p>The CBK Act provides that the Board may, by resolution either generally or in any particular case, delegate to any committee of the Board or to any member thereof, or to any officer, employee or agent of the Bank the exercise of any of the powers or the performance of any of the functions or duties of the Board under this Act or any other written law. The relevant Committees that have been established include (i) the Monetary Policy Committee (MPC) (ii) Audit Committee (iii) Human Resources Committee that performs advisory role to the bank's Board.</p>
	<p>Monetary Policy Committee (MPC)</p> <p>Monetary Policy Committee (MPC) established under Section 4D of the Central Bank of Kenya (Amendment) Act 2008 comprises the:</p> <p>(i) Governor who is the Chairman (ii) The Deputy Governor who is the Deputy Chairperson (iii) Two (2) members appointed by the Governor from the CBK. Of the two members a) one shall be a person with executive responsibility within the Bank for monetary analyses and b) one shall be a person with responsibility within the Bank for monetary policy operations and Four (iv) external members appointed by the Cabinet Secretary for The National Treasury (v) Principal Secretary for the National Treasury or his Representative. External members of the MPC are appointed for an initial period of three (3) years each and may be reappointed for another final term of three (3) years. The Committee is responsible for formulating monetary policy.</p>

Audit Committee

The role of the Committee is to assist the Board in fulfilling its oversight responsibilities for internal control systems, risk management, financial reporting process, the audit process and, as appropriate, the CBK's process for monitoring compliance with laws and regulations as they relate to financial reporting. The Committee comprise of four (4) members who are all non-executive directors.

The Committee's mandate on Internal Audit covers review of the activities and resources of the internal audit function, including the effectiveness, standing and independence of the internal audit function within the Bank. It also covers review of the internal audit plan and follow up of the implementation of internal audit findings and recommendations. The Audit Committee reports to the Board of Directors on the standing and independence of the internal audit function within the Bank. The Audit Committee also reports to the Board of Directors on internal audit scope, approach, and deliverables.

Human Resource Committee (HRC)

The HRC of the Board comprises of four (4) non-executive directors and its role is as an advisory role to the Bank's Board in the fulfilment of the following oversight responsibilities:

- a) Monitor the formulation and implementation of Human Resources Policies in the Bank.
- b) In relation to staff matters, they ensure the Bank's compliance with the Kenyan Constitution, Laws of Kenya, CBK regulations and its own code of conduct.
- c) Perform any other Human Resources related functions as assigned by the Board.
- d) Monitor the implementation of Board resolutions relating to the HRC of the Board

Review of Performance

Q.2.3.4: What are the procedures established to review the performance of the board as a whole and the performance of the individual board members?

Although there is no performance review on each individual member of the Board, in practice, the members, who are experts in the area of payment systems or related areas, have actively provided important information and made comments on various subjects in each meeting.

<p>Key Consideration 2.4:</p> <p><i>The board should contain suitable members with appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board members.</i></p>	<p>Q.2.4.1: To what extent does the FMI's board have the appropriate skills and incentives to fulfil its multiple roles? How does the FMI ensure that this is the case?</p> <p>All directors, except the Governor are non-executive directors. The appointment criteria for the members of the Board are specified under Article 11 (7) of the CBK Act provides that a person shall be appointed as Director if he/she is knowledgeable or experienced in monetary, financial, banking, and economic matters or other disciplines relevant to the functions of the Bank. As at the time of the assessment, the Board members comprised of seven (7) members. All the directors except the Governor are non-Executive and are therefore independent of management and free from any business or other relationship, which could interfere with the exercise of their independent oversight. The Bank publishes the names and biographies of all the Board members on the Bank's website and the CBK Annual reports.</p> <p>Under the terms of the CBK Act, the Directors, are appointed by the President of the Republic of Kenya with the approval of Parliament. Since KEPSS is owned by the Bank, and is not operated as a separate legal entity, the skills and qualifications of the Governor reflect the Bank's broader responsibilities. The Bank has human resources policies and practices in place to help in the development appropriate skills and have the appropriate incentives. These policies are described in Key Consideration 2.5.</p> <p>Q.2.4.2: What incentives does the FMI provide to board members so that it can attract and retain members of the board with appropriate skills? How do these incentives reflect the long-term achievement of the FMI's objectives?</p> <p>The directors' terms of office are prescribed in the CBK Act. All the Board members are appointed for a term of four (4) years each and are eligible for reappointment for a term of four (4) years provided that no Board member holds office for more than two (2) terms. Board members are appointed at different times so that the respective expiry dates of the members' terms of office shall fall at different times. The aim is to ensure continuity in the CBK's governance structure.</p> <p>Members of the Board of Directors need to deal with the full range of CBK's activities and are not normally appointed specifically on the basis of skills relating to the Bank's role as a settlement bank. There are therefore no special mechanisms or incentives to recruit members of the Board with expertise in</p>
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payment systems and settlement services. Members with a background in the bank sector may nevertheless be familiar with the payment system and KEPSS. The preparation of management reports and annual reports for KEPSS gives the Board relevant information about settlement activities and an opportunity to discuss related issues.

Q.2.4.2: What incentives does the FMI provide to board members so that it can attract and retain members of the board with appropriate skills? How do these incentives reflect the long-term achievement of the FMI's objectives?

See Q.2.4.1.

Q.2.4.3: Does the board include non-executive or independent board members? If so, how many?

All directors, except the Governor and the deputy governor are non-executive directors. This is a requirement prescribed by the CBK Act.

Q.2.4.4: If the board includes independent board members, how does the FMI define an independent board member? Does the FMI disclose which board member(s) it regards as independent?

An independent board member is deemed as any director that is not involved in the day-to-day management and operations of the CBK. Membership of the Board of Directors is public knowledge through the publication of appointments, CBK's annual report and information on the Bank's website.

<p>Key Consideration 2.5:</p> <p><i>The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.</i></p>	<p>Roles and Responsibilities of Management</p> <p>Q.2.5.1: What are the roles and responsibilities of management, and are they clearly specified?</p> <p>As the Chief Executive Officer, the Governor, is ultimately responsible for the management of the Bank, including the operation of KEPSS. The roles and responsibilities of the Governor are set out in the CBK Act. The management team of the FMI contributes to a sound and efficient payment system that meets the requirements of the NPS. The team is therefore responsible for monitoring developments in the settlement environment and making strategic decisions on the future developments of the settlement system. System ownership and operational responsibility for KEPSS are assigned to BPSD and are executed by the KEPSS Operations team.</p> <p>The Bank has a statutory Internal Audit Unit which reports to the Board of Directors and its Borad Audit Committee, which consists of four external members of the Board. Internal Audit is charged with assessing the Bank's</p>
	<p>internal control, procedures and other matters that are important for the Bank's operations, based partly on the Regulation on Risk Management and Internal Control at the Bank. Internal Audit performs regular audits of KEPSS.</p> <p>Other departments that play a role in the operation of the KEPSS system include the Internal Audit & Risk Management Department, Legal Department, and the Information Technology (IT) Department and Financial Markets Department (FMD).</p> <p>Q.2.5.2: How are the roles and objectives of management set and evaluated?</p> <p>The instrument of delegation of powers sets out line functions that are delegated to the respective departments. The management team of BPSD is therefore responsible for monitoring developments in the settlement environment and making strategic decisions on the future developments of the settlement system. The operations team is responsible for the day-to-day operations and monitoring of the FMI. Performance of staff charged with responsibilities in this area is evaluated based on a formal performance contract. The Bank has formal job descriptions and performance management arrangements to help clarify the expectations of staff who are also subject to the Code of Conduct for CBK Staff.</p>

Experience, Skills, and Integrity

Q.2.5.3: To what extent does the FMI's management have the appropriate experience, mix of skills and the integrity necessary for the operation and risk management of the FMI? How does the FMI ensure that this is the case?

The roles and responsibilities of the management of the day-to-day operation of KEPSS sits at the delegated chain of authority and has the appropriate integrity, skills and experience to operate the KEPSS services. Training is provided where individual knowledge gaps are identified. Managers in the functional area responsible for the management and operations of KEPSS services are typically employees with broad range of experience and skills. Leaving them well placed to understand the relevant risks.

The Bank has a formal process for assessing performance. The Bank's Human Resources (HR) Department owns the Bank's recruitment, training, competency, and retention strategies. Succession planning is in place to maintain staffing and experience levels. Job descriptions indicate educational requirements as well as skills and competencies required to manage the FMI. System. Performance is evaluated based on action plans, budget follow-up and ongoing governance.

Q.2.5.4: What is the process to remove management if necessary?

The CBK has a robust performance management system which allows for management to be assessed annually. A disciplinary process is in place to manage any misconduct by the management or any other employees of the Bank.

<p>Key Consideration 2.6:</p> <p><i>The board should establish a clear documented risk management framework that includes the FMI`s risk tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk management and internal control functions have sufficient authority, independence, resources, and access to the board.</i></p>	<p>Risk Management Framework</p> <p>Q.2.6.1: What is the risk management framework that has been established by the board? How is it documented?</p> <p>Generally, the Bank seeks to keep its exposure to risk low and aims to have a control environment and risk culture that supports this. There is a very low tolerance for operational risks, which impact business-critical functions such as the operation of the KEPSS services. Consistent with these arrangements, the Bank’s Board is responsible for setting the KEPSS risk tolerances, The Board is responsible for the supervision of the affairs of the CBK, lay down policies and exercise its powers to achieve the CBK statutory objectives. One of the main objectives is to eliminate risks and ensure monetary and financial system stability. Accordingly, risk management is an integral part of the general management of tasks and day-to-day operations of the Bank.</p> <p>The Bank’s enterprise-wide governance arrangements include a clear and documented risk management framework. BAC is responsible for monitoring the KEPSS risk management framework, risk tolerance and risk profile. BAC also seeks to ensure that, where relevant the KEPSS risk management framework will operate in a manner that is aligned with the Bank-wide risk management framework. BAC is responsible for escalating to the Board if it has concerns of whether the risk management framework is fit for purpose.</p> <p>Risk monitoring is performed through continuous monitoring of the RTGS services; periodic reporting to the Board and executive management; regular penetration testing and other testing; and regular updates on vulnerabilities. The internal auditor and the external auditor annually review the internal controls of the KEPSS system as a part of the BPSD audit. Additionally, they review IT applications, including access controls, segregation of duties, upgrades etc. as a part of the ITD audit. The internal audit findings are reported to the BPSD and ITD for their comments and then reported to the Audit Committee. The external auditor reports are submitted to the Governor and are reviewed by the Audit Committee.</p> <p>Q.2.6.2: How does this framework address the FMI’s risk tolerance policy, assign responsibilities and accountability for risk decisions (such as limits on risk exposures), and address decision-making in crises and emergencies?</p> <p>The CBK Group Risk Management Policy sets out the non-financial risk tolerance of the CBK Group. Risk tolerance is approached from an impact and a likelihood</p>
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perspective. From the impact perspective, the risk tolerance is set so that operations should be performed to minimize the potential risk impact inherent in the operations, while from the likelihood perspective, the risk tolerance requires a lower residual risk likelihood where the potential risk impact is higher. The Risk Management Policy is complemented by a Risk Appetite Statement, which provides an outline of the Bank's appetite for and approach to managing its most significant risks, including strategic, financial, people and operational risks.

The responsibilities for risk management of the FMI rest with BPSD. However, the Board is ultimately responsible for directing and monitoring the entire process of risk management as well as forming its own opinion on the adequacy and effectiveness of the process. The business continuity plan for the FMI sets out escalation and crisis management procedures to manage operational risks.

Q.2.6.3: What is the process for determining, endorsing, and reviewing the risk management framework?

According to the CBK Group Risk Management Policy, the RMCD is responsible for developing, maintaining, and promoting an appropriate risk management policy, framework, approach, and culture as well as methodologies, processes, and support systems. This Risk Management Policy is reviewed by RMCD annually by the RMCD and further developed in line with external requirements, internal needs and tabled for RMC and BAC's consideration and approval by the Bank's board.

The FMI has developed an Operational Risk Management (ORM) framework which allows for the proactive management of operational risks in all risk areas including the FMI environment. This ORM framework is reviewed and approved by BPSD, management that is responsible for managing the FMI. The CBK's BCP establishes the risk management framework for critical operations of the CBK, which include ensuring the operation of the KEPSS system in the event of wide scale operational disruptions. The BCP is tested at least twice a year covering various anticipated scenarios.

Authority and Independence of Risk Management and Audit Functions

Q.2.6.4: What are the roles, responsibilities, authority, reporting lines and resources of the risk management and audit functions?

Risks arising to the operation of its RTGS responsibilities fall within the Bank-wide risk management framework. The Risk Management and Compliance Division (RMCD) is responsible for maintaining an overview of material risks and ensuring that the Governor is kept adequately always informed about the Bank's risk situation. RMCD is also responsible for the Bank's risk management framework being implemented and further developed in accordance with external and internal requirements. The Division checks that principles and guidelines for risk management are complied with.

The CBK has delegated the coordinating responsibility of risk management to the RMCD whose responsibility is to collect the risk registers from all the business areas. BPSD is the first line of defence, and is the business function responsible for RTGS delivery and also owns the RTGS risks, developing and delivering the end-to-end risk management framework and implementing controls as appropriate. The function is in control of deploying internal risk policies, tools, and methods to effectively manage risks.

A Bank-wide second line function is responsible for defining the Bank's overall risk management framework, as well as providing tools and tasks to the first line of defence is the Risk Management and Compliance Division

(RMCD). The function reports to the Deputy Governor, through the RMC and the risk function has a direct reporting line to the BAC. The BAC provides recommendations to the Board on the adequacy and timelines of the proposed response to risk-based audit assessments. It also reviews whether the Bank's Internal Audit program of review adequately reflects the key risks to RTGS and provides sufficient assurance on the activities of the first and second lines of defence and make recommendations to the Board based on this.

The Bank's third line (Internal Audit) provides assurance that the RTGS risk management framework is robust and that internal controls are appropriate and effective. The Internal Audit Division (IAD) is to assess the Bank's internal control, procedures and other aspects that are important to the Bank's operations. Internal Audit's role is to support the Board of directors' in following up the Bank's operations by providing independent assessments and advice on the Bank's governance, risk management and internal control. Internal Audit bases

	<p>its assessments and advice on observations from audit projects and knowledge from monitoring the Bank’s operations. The IAD submits a report on risk management and internal control to the Board at least annually.</p> <p>Q.2.6.5: How does the board ensure that there is adequate governance surrounding the adoption and use of risk management models? How are these models and the related methodologies validated?</p> <p>As stated above, RMD is responsible for developing, maintaining, and promoting an appropriate risk management policy, framework, approach, and culture as well as methodologies, processes, and support systems. All these are approved by the Board.</p>
<p>Key Consideration 2.7:</p> <p><i>The board should ensure that the FMI’s design, rules, overall strategy and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.</i></p>	<p>Identification and Consideration of Stakeholder Interests</p> <p>Q.2.7.1: How does the FMI identify and take account of the interests of the FMI’s participants and other relevant stakeholders in its decision-making in relation to its design, rules, overall strategy, and major decisions?</p> <p>Important aspects of the rules for settlement activities, such as requirements for system solutions, account terms and contingency solutions, are formulated after obtaining opinions from the participants and other relevant players in the financial sector. This takes place through organized forums, formal consultations, or a combination of both. The Bank engages in routine cooperation with KEPSS members and consults on all material changes to operational arrangements, for example through regular KEPSS Treasury Managers forums which are held on quarterly basis.</p> <p>Policy decisions that affect KEPSS are also communicated to the public through media releases. Major decisions and the reasons for them are also explained in the CBK Annual Report. When there are major changes in KEPSS policies, the CBK will notify participants in advance to gather their opinions before finalizing its decision. In the recent past, during the migration to the New Generation Kenya Electronic Payment and Settlement System (NG-KEPSS) several workshops and training sessions were conducted by the CBK to disclose new major features of the systems to the participants and to get their input and comments for considerations.</p>

Q.2.7.2: How does the board consider the views of direct and indirect participants and other relevant stakeholders on these decisions; for example, are participants included on the risk management committee, on user committees such as a default management group or through a public consultation? How are conflicts of interest between stakeholders and the FMI identified, and how are they addressed?

Matters of strategic, operational, or financial importance to participants in the settlement system, such as the procurement of system and operating solutions, are submitted to the Board of Directors for consideration. In addition, The KUG meetings provide a platform for the FMI to discuss any issues that impact on the stakeholders. The FMI can also convene special meetings to discuss any issue that has an impact on the stakeholders. Various forms are available, including the quarterly Treasury Managers forums held with participants to discuss issues affecting the NPS and FMI operations. Where there are conflicts of interest between the system owner for KEPSS and external stakeholders, this will be made clear in the presentation of the matter. CBK relies on transparency and consultation to mitigate these conflicts of interest.

The participants and the Kenya Bankers Association (KBA) is also consulted before formulating policies and regulations on issues which have a major impact on them. In addition, the CBK calls for meetings and/or makes press releases to announce major decisions or new developments/ implementations of payment system projects to the public.

Disclosure

Q.2.7.3: To what extent does the FMI disclose major decisions made by the board to relevant stakeholders and, where appropriate, the public?

The CBK consult with interested parties and consider their comments or views before finalizing any regulations and resolutions that have general application (where applicable). The Bank's Board of Directors decisions on key issues will be made known to relevant stakeholders directly through meetings and consultation and otherwise through news items and documentation made available to the public on the CBK's website.

Some of the information disclosed on the CBK website includes the mandate, mission, objectives, and functions of the CBK, the Board structure, the role of the NPS as well as the role and responsibilities of the CBK, published under payments. The CBK maintains the confidentiality of its FMI members; hence, member information is published on a secure site.

<p>Key Conclusion</p>	<p>The CBK is governed by the laws of the Republic of Kenya, thus the settlement service is supported by a well-established legal foundation primarily based on rules, operating procedures, contractual agreements, laws, and regulations. The KEPSS system is subject to the governance arrangements as per the NPS Act, which is driven by the mission statement of the BPSD, as well as the clearly defined NPS industry's objectives. The CBK acts as overseer of the NPS and BPSD has the responsibility for implementing the framework and strategy agreed to by the CBK and the banking industry. The BPSD strives to reduce and manage the risks in the NPS by promoting compliance to accepted international best practice relevant for payment systems and is primarily focused on the domestic NPS. These elements place a high priority on the safety and efficiency of the FMI and support financial stability. Promoting a safe and efficient payment system is one of the main objectives of the CBK and thus governs its operation of the payment system. As a result, the public interest aspects of operating a large value payment system are integrated into the work of the Bank</p> <p>Additionally, the KEPSS system is operated and managed under robust policies and controls, which allows for strategic and operational risk management within the FMI. The governance arrangements clearly specify the roles and responsibilities of the CBK Board. According to the CBK Act, the Board shall be responsible for the corporate governance of the CBK by ensuring compliance with principles of good corporate governance as well as adopting rules and determining policies for the sound accounting, administration and functioning of the Bank. The Governor and the deputy governors are responsible for policy issues and the day-to-day management of the bsnk.</p>

Principle 3: Framework for the Comprehensive Management of Risk

Assessment Rating	Principle 3 is Considered to be Broadly Observed.
An FMI should have a sound risk management framework for comprehensively managing legal, credit, liquidity, operational and other risks.	
<p>In reviewing this principle, an assessor should consider how the various risks, both borne by and posed by the FMI, relate to and interact with each other. As such, this principle should be reviewed holistically with the other principles.</p>	
<p>Key Consideration 1.</p> <p><i>An FMI should have risk management policies, procedures and systems that enable it to identify measure, monitor and manage the range of risks that arise in or are borne by the FMI. Risk management frameworks should be subject to periodic review.</i></p>	<p>Risks that arise in or are borne by the FM</p> <p>Q.3.1.1: What types of risk arise in, or are borne by, the FMI?</p> <p>The CBK has operational, regulatory, oversight, and supervisory roles with respect to the KEPSS-RTGS system. The CBK Law provides the required legal provision to perform these statutory roles. The regulations, directives, and operating rules of the KEPSS system provide for managing potential risks born by the FMI. The types of risk arising in, or borne by, the FMI include systemic risk, operational risk, settlement risk, legal risk, liquidity risk, credit risk and reputational risk.</p> <p>Risk Management Policies, Procedures, and Systems</p> <p>Q.3.1.2: What are the FMI's policies, procedures, and controls to help identify, measure, monitor and manage the risks that arise in or are borne by the FMI?</p> <p>The Bank's risk management framework is set out under Key Consideration 2.6. The framework provides a methodology for identifying, assessing, responding to and following up risks. Risk identification and assessment are to be performed quarterly and in the event of: - Serious incidents, including failures of established controls - Start-up of major projects - Major changes in Central Banking Operations' duties, IT systems or other infrastructure, or organisation structure - Major changes to regulatory conditions - Significant external events that may affect Central Banking Operations.</p> <p>The Bank's Internal Audit Division reports to the bank's Board and has the main purpose of helping the Bank achieve its objectives by checking that there is adequate and effective management of material risks in the organisation, and that appropriate and satisfactory internal controls are conducted. The RMCD coordinates and facilitates continual risk management activities, which include the reporting of risk incidents, monitoring the implementation of action plans to mitigate identified residual risks, and implementing and monitoring key risk indicators</p>
<p>48 CENTRAL BANK OF KENYA KEPSS ASSESSMENT AGAINST THE PFMI PRINCIPLES - DECEMBER 2024</p>	

The RMCD coordinates and facilitates continual risk management activities, which include the reporting of risk incidents, monitoring the implementation of action plans to mitigate identified residual risks, and implementing and monitoring key risk indicators. The risk assessment will be performed by departmental line management responsible for processes. A risk owner will be defined for each risk. Risks for KEPSS and changes in the risk profile are compiled in a consolidated report prepared by RMCD to management following the end of each quarter.

Risk Management Systems

Q.3.1.3 What risk management systems are used by the FMI to help identify, measure, monitor and manage its range of risks?

The management of potential risks for the FMI is done as a part of the risk management framework of the Bank. Strategic and operational risk assessments are conducted on an annual basis to identify potential risks. Emerging risks are also recorded as and when identified by the FMI. Strategic and operational risk registers assist in recording, monitoring, and reporting strategic and operational risks. These registers are updated at least on a quarterly basis to ensure that action plans identified for implementation are reviewed for reporting. Comprehensive change management processes are implemented to assist with the management of risks. A crisis management procedure is in place to assist with managing any emergencies or operational disruptions. SLAs are completed with relevant stakeholders to manage risks emanating in their environment and in the FMI operations.

BPSD also uses the call logging system to record operational incidents reported that might affect the smooth functioning of FMI operations and the system also provides error log and control log reports that identify problems and controls in the system.

Review of Risk Management Policies, Procedures and Systems

Q.3.1.5: What is the process for developing, approving, and maintaining risk management policies, procedures, and systems?

The FMI aligns its processes and systems with the CBK Group Risk Management Policy and, where required, works together with the RMCD to develop, and maintain risk management systems and processes. Procedures are developed by the BPSD's operations and approved by the departmental management team. These procedures are regularly updated and audited by both the CBK's external and internal auditors

The Bank's Risk Management Policy requires that BPSD reviews and updates its risks and controls continuously, including after any major change to the Department's risk environment, to reflect any changes in risks and controls that have occurred. As part of this process, any residual risks identified in the Risk Register that are outside of risk appetite or agreed tolerance levels must be appropriately escalated by the risk owner including the identification of actions to return residual risks to within risk appetite.

The Risk Management Policy is reviewed annually or more frequently if there is a major change to the Bank's risk management framework. Changes to the Policy are approved by the Bank's Board.

Q.3.1.6: How does the FMI assess the effectiveness of risk management policies, procedures, and systems

The effectiveness of the risk management is assessed through audit reports and monthly operations reports.

The current risk management framework has been designed in consultation with the various Units of the Bank, including the KEPSS system owner. The effectiveness of the risk management is assessed through audit reports and monthly operations reports.

The FMI aligns its processes and systems with the CBK Enterprise Risk Management Policy and, where required, works together with the RMCD

The current risk management framework has been designed in consultation with the various Units of the Bank, including the KEPSS system owner. The effectiveness of the risk management is assessed through audit reports and monthly operations reports.

The FMI aligns its processes and systems with the CBK Enterprise Risk Management Policy and, where required, works together with the RMCD
The FMI aligns its processes and systems with the CBK Enterprise Risk Management Policy and, where required, works together with the RMCD to develop, and maintain risk management systems and processes. These processes and procedures are regularly updated and audited by both the CBK's external and internal auditors.

	<p>Q.3.1.7: How frequently are the risk management policies, procedures and systems reviewed and updated by the FMI? How do these reviews take into account fluctuation in risk intensity, changing environments and market practices?</p> <p>In line with the CBK Group Risk Management Policy, strategic and operational risk self-assessments are conducted on an annual basis to identify new risks, and review and assess existing controls. The general principles for risk management at the Bank require risk management to be a continuous process designed to detect, assess, manage, and follow up risk in such a way that it remains within the Board’s tolerance limit. Risk management processes are to be updated regularly and developed further so that they meet the requirements of the Internal Control Guidelines and internationally recognized standards.</p> <p>The Bank, in operating KEPSS, reviews the material risks that it bears from, and poses to, other entities. This is done in the context of its ongoing review of risks, and its processes for identifying risks associated with major changes to its risk environment, such as new activities or system changes. This is also part of the Bank’s change management framework (see <i>Key Consideration 17.1</i>). The tools used to manage risks from other entities include service level agreements, customer support packages and documented operational and contingency procedures (see <i>Key Consideration 17.7</i>)</p>
<p>Key Consideration 2</p> <p><i>An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.</i></p>	<p>Q.3.2.1: What information does the FMI provide to its participants and, where relevant, their customers to enable them to manage and contain the risks they pose to the FMI?</p> <p>A number of terms and conditions must be met for participants in KEPSS to have their payment orders settled, including requirements for the format of the payment order and to have sufficient funds in their accounts. These requirements are set out in the Terms and Conditions for Account Management, Collateralisation and Participation in KEPSS, which all participants must accept. The KEPSS Terms and Conditions also specify the participants’ responsibilities. The daily operating schedule for KEPSS shows the times that scheduled settlements take place. This information is available on the CBK website pages for payments.</p> <p>Each participant in KEPSS has access to its account through an Internet-based solution (KEPSS- Online) and can monitor movements in its own account in KEPSS during the day. The information for each account is continuously updated, including information on available liquidity. This enables participants to manage their liquidity risk. Participants may also submit payment orders for settlement at a later time.</p>

The KEPSS Terms and Conditions contain user management requirements for the use of KEPSS Online by each participant. Each participant is to have a security officer who is authorised to manage the participant's users of KEPSS Online, and there is a requirement that the number of users must be restricted to those who actively use the solution or will need to use it in a contingency situation..

Q.3.2.2: What incentives does the FMI provide for participants and, where relevant, their customers to monitor and manage the risks they pose to the FMI?

All account holders in KEPSS are subject to prudential supervision. Each participant agrees to observe the rules and procedures that apply to accounts held at the Bank and participation in KEPSS by signing both a declaration of collateral and a request to open an account, deposit collateral and participate in KEPSS. The reputation of the Bank or other participants may be damaged if a participant breaches its obligations in a way that inflicts risk for KEPSS, such as poor liquidity management resulting in insufficient funds for the settlement of a clearing.

The Bank may impose fees to make it clear to participants that some types of incident are particularly undesirable, including incorrect submission of payment orders to the Bank. If a participant defaults significantly on its obligations under the KEPSS Terms and Conditions, the Bank may suspend or terminate its account

Q.3.2.3: How does the FMI design its policies and systems so that they are effective in allowing their participants and, where relevant, their customers to manage and contain their risks?

The KEPSS system is designed to provide real-time settlement with high levels of efficiency and security. This ensures predictability for participants and their customers. The division of responsibilities between the Bank and participants in KEPSS is clarified in the KEPSS Rules and Procedures. Participants have direct access to information from their accounts in KEPSS through statements of account via SWIFT and through KEPSS Online. This also enables them to monitor the status of the securities they have pledged as collateral for loans from the Bank and the collateral value these have in KEPSS.

<p>Key Consideration 3:</p> <p><i>An FMI should regularly review the material risks it bears from and poses to their entities as a result of interdependencies and develop appropriate risk management tools to address the risks.</i></p>	<p>Q.3.3.1: How does the FMI identify the material risks that it bears from and poses to other entities as a result of interdependencies? What material risks has the FMI identified?</p> <p>Material Risks</p> <p>Material risks identified include liquidity and system availability, external suppliers of ICT operating services, system solutions. Reliance on SWIFT as the only message network carrier might pose a material risk to the FMI operations.</p> <p>Q.3.3.2: How are these risks measured and monitored? How frequently does the FMI review these risks?</p> <p>The BPSD participates in the review of strategic and operational risks, facilitated by the RMCD, on an annual basis.</p> <p>Risk Management Tools</p> <p>Q.3.3.3: What risk management tools are used by the FMI to address the risks arising from interdependencies with other entities?</p> <p>The NPS call logging system is used to log and manage any identified risks. Controls, action plans and changes to the processes and procedures are updated when new risks relating to FMI operations are identified. The system is also monitored and supported throughout the business day. The FMI's BCP document is reviewed annually to ensure risks are mitigated by processes and procedures. A contingency application is in place to determine participants' settlement balances when an incident occurs. In addition, before new or upgraded ICT solutions are taken into use, thorough testing is conducted together with external parties where relevant. KEPSS has developed an extensive framework for testing such changes with set test scenarios.</p> <p>When it comes to international players such as SWIFT, the authorities where these organizations are headquartered take the lead in supervising their operations. The Belgian central bank is the oversight authority for SWIFT. SWIFT is the main channel for payment orders and other communication between banks and KEPSS, and the Bank conducts detailed testing of new versions of software and other infrastructure for SWIFT before they are taken into use.</p>
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	<p>Q.3.3.4: How does the FMI assess the effectiveness of these risk management tools? How does the FMI review the risk management tools it uses to address these risks? How frequently is this review conducted?</p> <p>The RMCD is responsible for the review of this risk management tool. The IAD conducts audits on tools used by the BPSD for effectiveness and adequacy. Contingency procedures are continuously revised and improved in the light of experience from incidents, disruptions, and exercises. There is also regular internal and external auditing of KEPSS, which often also covers risk management.</p>
<p>Key Consideration 4:</p> <p><i>An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.</i></p>	<p>Scenarios that may prevent an FMI from providing critical operations and services.</p> <p>Q.3.4.1: How does the FMI identify scenarios that may potentially prevent the FMI from providing its critical operations and services? What scenarios have been identified as a result of these processes?</p> <p>The risk analysis for KEPSS has identified a number of scenarios that could result in the disruption of settlement functions. The FMI BCP details various scenarios that may prevent the FMI from providing its critical operations and services. The scenarios are identified as part of the business impact assessment conducted with the specialized operational risk function in the RMCD. Among other things, the scenarios identified include the loss of the primary information and communications technology (ICT) infrastructure, loss of facilities, and the unavailability of monitoring and support personnel.</p> <p>Q.3.4.2: How do these scenarios take into account both independent and related risks to which the FMI is exposed?</p> <p>The risks are managed in line with service agreements established between the FMI and related structures.</p> <p>Recovery or Orderly Wind-down Plans</p> <p>Q.3.4.3: What plans does the FMI have for its recovery or orderly wind-down?</p> <p>This is not applicable to the KEPSS System.</p> <p>Q.3.4.4: How do the FMI's key recovery or orderly wind-down strategies enable the FMI to continue to provide critical operations and services?</p> <p>This is not applicable to the KEPSS System</p> <p>Q.3.4.5: How are the plans for the FMI's recovery and orderly wind-down reviewed and updated? How frequently are the plans reviewed and updated?</p> <p>This is not applicable to the KEPSS System.</p>

<p>Key Conclusion</p>	<p>The Bank as a whole has a clear high level risk management model operating with a standard “three lines of defence” model. The risk management framework includes the operational risk arising from the Bank’s delivery of KEPS services. A Board-approved risk tolerance statement defines the nature and extent of risks (including operational risk) that the Bank is willing to accept for KEPSS. The Board determines the strategy for managing risk and risk tolerance that apply to the KEPSS services. This is codified through a local end-to-end risk management framework that includes setting a tighter level than that of the wider Bank due to the critical operational nature of the KEPSS services.</p> <p>The Board takes the lead in setting a strong risk management culture and relies on sound governance structure to ensure its risk management strategy is implemented through frameworks, policies and risk reporting. The Board approves the risk tolerances on an annual basis, or whenever there is a significant change to KEPSS.</p> <p>The risk management framework established for the Bank is used for KEPSS. This framework and its application are based on nationally and internationally recognized risk management principles. The framework provides guidance in identifying, assessing, handling, and reporting risks. The risk analysis for KEPSS is designed, reviewed, and updated in line with this framework.</p>
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Principle 4: Credit Risk

<p>Assessment Rating:</p>	<p><i>Principle 4 is Considered to be Observed.</i></p>
<p><i>An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payments, clearing and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.</i></p>	
<p>Because of the extensive interactions between the financial risk management and financial resources principles, this principle should be reviewed in the context of Principle 5 on collateral, Principle 6 on margin and Principle 7 on liquidity risk, as appropriate. This principle should also be reviewed in the context of Principle 13 on participant default rules and procedures, Principle 23 on disclosure of rules, key procedures and market data, and other principles, as appropriate</p>	

<p>Key Consideration 4.1</p> <p>An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risk arising from its payments, clearing and settlement processes. Credit exposure may arise from current exposures, potential future exposures or both.</p>	<p>Q.4.1.1: What is the FMI's framework for managing credit exposures, including current and potential future exposures, to its participants and arising from its payment, clearing and settlement processes?</p> <p>The Bank does not become a counterparty to individual funds settlements between participants. However, since the Bank, with the aim to ensure smooth settlement of funds under the System, extends credit in the form of ILF/OLF to the participants it has authorized to use such a facility when requested, it is exposed to the credit risk of the borrower until the facility is repaid. In order to borrow from the Bank, a participant must comply with the Terms and Conditions for Account Management, Collateralization and Participation in the Bank's Settlement System (KEPSS) and have pledged approved collateral in favour of the Bank. Therefore, in providing the ILF, the Bank requires the participant to pledge, in advance, eligible collateral in an amount sufficient to cover the lending and manages the amount of credit extended to keep the credit extension within the value of the pledged collateral.</p> <p>Based on its existing credit risk management framework, the CBK manages such risk by accepting only high-quality government securities (Treasury bills and bonds) and Bank Deposits kept with the Bank. The Reserves are the principal source of liquidity held at the Bank and in the unlikely event that a credit risk materialized, the Bank could use these reserves to cover any shortfall. As described under <i>Principle 5</i>, the eligible collateral the Bank accepted for the use of the intraday facility is managed under a robust framework. Through these measures, the Bank manages the risk of losses from current and potential future exposures so that they are sufficiently low.</p> <p>All banks participating in KEPSS that are eligible for intraday liquidity are subject to appropriate prudential supervision by BSD.</p> <p>Q.4.1.2: How frequently is the framework reviewed to reflect the changing environment, market practices and new products?</p> <p>The framework is reviewed on an ad hoc basis, as and when required.</p>
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<p>Key Consideration 4.2:</p> <p><i>An FMI should identify sources of credit risk, routinely measure, and monitor credit exposures and use appropriate risk-management tools to control these risks.</i></p>	<p>Q.4.2.1: How does the FMI identify sources of credit risk? What are the sources of credit risk that the FMI has identified?</p> <p>The key credit exposure from the Bank’s operation of KEPSS is through intraday liquidity provision. The nature of RTGS settlement fully eliminates credit risk between account holders. As settlement occurs in real-time, there are no intraday exposures built up between RTGS account holders through use of KEPSS. KEPSS requires sufficient liquidity to be in place before settlement can take place. No direct credit risks are posed to the Bank from settlement across accounts in KEPSS.</p> <p>The Bank, as operator of KEPSS, neither guarantees transfers to meet payment obligations, nor allows overdrafts that would permit payments to settle if the account holder lacks liquidity. This is understood by KEPSS account holders and reflected in the relevant legal documentation. In addition, there are system checks built into the KEPSS system that prevent account holders from becoming overdrawn.</p> <p>Q.4.2.2: How does the FMI measure and monitor credit exposures? How frequently does and how frequently can the FMI recalculate these exposures? How timely is the information?</p> <p>The FMI was designed with a capability to grant loans subject to the available collateral value. The collateral value is revalued per the current market value on daily a basis. This function is automated to ensure optimum credit allowance protection.</p> <p>Q.4.2.3: What tools does the FMI use to control identified sources of credit risk (for example, offering an RTGS or DvP settlement mechanism, limiting net debits or intraday credit, establishing concentration limits, or marking positions to market on a daily or intraday basis)? How does the FMI measure the effectiveness of these tools?</p> <p>Settlement through the RTGS is provided on a gross basis and it limits the intraday credit risk. In KEPSS, payments between participants are settled in real time. There is therefore no time difference between acceptance/ verification and settlement of a payment order. This applies both to individual payments and to clearings from NACH. Each participant’s available credit in KEPSS is updated on a daily basis.</p>
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<p>Key Consideration 4.3:</p> <p><i>A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources. In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposure arising from its payment, clearing and settlement processes, such an FMI should maintain at a minimum, such sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.</i></p>	<p>Coverage of Exposures to each Participant</p> <p>Q.4.3.1: How does the payment system or SSS cover its current and, where they exist, potential future exposures to each participant? What is the composition of the FMI's financial resources used to cover these exposures? How accessible are these financial resources?</p> <p>As indicated in key considerations 1 to 3 above, credit risk is limited to the KEPSS system due to the prefunding requirement and collateralized loans. Only banks registered in terms of the Banks Act or the Micro Finance Act, may clear and settle in the KEPSS system. Settlement of the cash leg of securities settlement in KEPSS is based on all participants in the settlement having sufficient funds for their payment obligations in the form of deposits or available credit at CBK. To provide security for the settlement each participant sets aside an amount in its account in CBK to cover its payment obligations. This procedure helps reduce the risk in each securities settlement.</p> <p>In KEPSS payment orders are settled immediately after they are received. This applies both to individual payments and to payment obligations in clearings submitted by the clearinghouse (NACH). KEPSS does not aggregate payments during the day for subsequent settlement. Potential credit exposures in net settlements are nevertheless discussed under Q.4.3.3 and Q.4.3.4 below:</p> <p>ACH agreements govern the clearing of payment instructions between participants. The CBK will manage any liquidity and credit issues that may arise from NACH settlements in terms of the circumstances and conditions that prevail at the time.</p> <p>Q.4.3.2: To what extent do these financial resources cover the payment system's or SSS's current and potential future exposures fully with a high degree of confidence? How frequently does the payment system or SSS evaluate the sufficiency of these financial resources?</p> <p>The only credit exposure relates to the provision of loans against collateral that is described in key consideration 1 above.</p> <p>The credit risk assumed by the Bank in providing liquidity to KEPSS members is mitigated by purchasing high-quality securities under repo and having appropriate collateral policies in place. In KEPSS, payment orders are settled immediately after they are received. This applies both to individual payments and to payment obligations in clearings submitted by the clearing houses</p>
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	<p>KEPSS does not aggregate payments during the day for subsequent settlement. Potential credit exposures in net settlements are nevertheless discussed under Q.4.3.3 and Q.4.3.4 below.</p> <p>Q.4.3.3: If the payment system or SSS is a DNS system in which there is no settlement guarantee, do its participants face credit exposures arising from the payment, clearing and settlement processes? If there are credit exposures in the system, how does the system monitor and measure these exposures?</p> <p>The FMI is an RTGS system and DNS requirements do not apply. The only credit exposure relates to the provision of loans against collateral, which is described in key consideration 1 above. Net settlements in KEPSS are carried out if, and only if, all participants have sufficient funds to cover their payment obligations in the form of deposits or loans from the Bank. Any loans from the Bank must be secured against collateral that is approved in advance. The Bank monitors participants' credit positions, especially if loans are not repaid on the same day and so become interest-bearing overnight loans.</p> <p>Q.4.3.4: If the payment system or SSS is a DNS system in which there is no settlement guarantee and has credit exposures among its participants, to what extent does the payment system's or SSS's financial resources cover, at a minimum, the default of the two participants and their affiliates that would create the largest aggregate credit exposure in the system?</p> <p>The FMI is an RTGS system and DNS requirements do not apply. The only credit exposure relates to the provision of loans against collateral, which is described in key consideration 1 above. Participants in the settlement of payments in KEPSS are not exposed to any credit risk vis-à-vis the Bank as settlement bank. Net settlements are performed only if all participants have sufficient funds to cover their payment obligations. In the event of the insolvency of one or more participants, the account(s) will be blocked from making or receiving any new payments.</p>
<p>Key Consideration 4.4, 4.5 and 4.6</p>	<p>Key considerations 4-6 not applicable as they concern CCPs in trades in financial instruments and have not been assessed for KEPSS.</p>

Key Consideration 4.7:

An FMI should establish explicit rules and procedures that address fully any credit losses it may face because of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds the FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during the stress event, so that the FMI can continue to operate in a safe and sound manner.

Allocation of Credit Losses

Q.4.7.1: How do the FMI's rules and procedures explicitly address any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI? How do the FMI's rules and procedures address the allocation of uncovered credit losses and in what order, including the repayment of any funds an FMI may borrow from liquidity providers?

The Bank's most important insurance against losses on loans to participants in KEPSS is the right to realize the collateral that each participant has pledged for loans. This right is set out in the KEPSS Terms and Conditions. The authority to release the collateral is assigned to the system owner for KEPSS. This will protect or minimize the amount of credit losses by CBK. Otherwise, the Bank as central bank has an unlimited supply of liquidity and does not need to borrow from others.

Replenishment of Financial Resources

Q.4.7.2: What are the FMI's rules and procedures on the replenishment of the financial resources that are exhausted during a stress event?

As described under Key Consideration 1, the Bank manages credit exposures arising from both current and potential future exposures so that they are sufficiently low. As such, it does not adopt rules for the allocation of uncovered credit losses stemming from a participant's default among the participants under the System.

Key Conclusion

KEPSS is designed to provide Real Time Gross Settlement (RTGS) mechanism in order to mitigate credit risk between participants. As a general principle, the FMI is an RTGS system that operates strictly on a prefunded principle; that is, settlement will only take place if there are sufficient funds in the settlement accounts at the Bank. The CBK, as provider of ILF, may be exposed to credit risk arising from failure of participant to repay their ILF at the end of day.

Credit risk arising in KEPSS is well managed through the rules on collateral for loans and procedures for monitoring that there is always adequate collateral for outstanding loans. Each participant's available credit is updated on a daily basis. The Bank, as operator of KEPSS is not exposed to any material current or future credit exposures other than through the provision of liquidity against collateral, which is secured against the very highest quality collateral.

The CBK credit risk management framework and associated processes ensure that the modest residual credit risk exposures arising from participation in the KEPSS system are mitigated and kept at a minimal level by the CBK. The KEPSS Rules and Procedures also state that the Bank has a right to realize the collateral immediately if a participant defaults on a loan. Procedures for how the collateral is to be realized have been put in place.

Principle 5: Collateral

Assessment Rating:	<i>Principle 5 is Considered to be Badly Observed.</i>
<i>An FMI that requires collateral to manage its or its participants` credit exposure should accept collateral with low credit, liquidity and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.</i>	
<p>Because of the extensive interactions between the financial risk management and financial resources principles, this principle should be reviewed in the context of Principle 4 on credit risk, Principle 6 on margin, and Principle 7 on liquidity risk, as appropriate. This principle should also be reviewed in the context of Principle 14 on segregation and portability, Principle 16 on custody and investment risk, and other principles, as appropriate.</p>	
<p>Key Consideration 5.1:</p> <p><i>An FMI should generally limit the assets it accepts as collateral to those with low credit, liquidity, and market risks.</i></p>	<p><i>Q.5.1.1: How does the FMI determine whether a specific asset can be accepted as collateral, including collateral that will be accepted on an exceptional basis? How does the FMI determine what qualifies as an exceptional basis? How frequently does the FMI adjust these determinations? How frequently does the FMI accept collateral on an exceptional basis, and does it place limits on its acceptance of such collateral</i></p> <p>The Bank provides intraday credit for liquidity purposes in order to settle obligations in KEPSS. Acceptable collateral monitored to secure ILF/OLF is drawn from very high-quality collateral in the form of government securities (treasury bills and bonds) with very low credit, liquidity, and market risks. This collateral is automatically utilized for securing KEPSS loans, on the conditions determined by the Bank from time to time, in order to facilitate settlement through the KEPSS system if there is a shortage of funds in a bank's settlement account. As the Bank only accepts the very heist quality collateral, the default of an account holder should not impact the value of collateral and wrong-way risk is largely mitigated.</p> <p><i>Q.5.1.2: How does the FMI monitor the collateral that is posted so that the collateral meets the applicable acceptance criteria?</i></p> <p>All securities that the Bank has approved as collateral is stated in the CBK Act that is available on the Bank's website. KEPSS monitors posted collaterals to ensure that they meet the acceptance criteria. When participants transfer their securities to the Bank for use of liquidity facilities of KEPSS, these collaterals will be verified against the eligible collateral list as specified by the KEPSS Rules and Procedures for ILF. Eligibility of posted securities will be rechecked again every time before conducting a repo transaction and granting ILF to participants. The CBK's collateral acceptance criteria focus on the issuers of debt instruments; at present, only the highest quality collaterals issued by the Government are accepted.</p>

	<p>Q.5.1.3: How does the FMI identify and mitigate possible specific wrong-way risk – for example, by limiting the collateral it accepts (including collateral concentration limits)?</p> <p>The CBK mitigates possible specific wrong-way-risk by limiting acceptable collaterals to be mainly government securities in the form of Treasury bills and bonds. These bonds' values do not have explicit correlation with financial institutions' credit quality; thus, default of a financial institution should not affect the value of these collaterals. In other words, there is low likelihood of wrong-way risk. The rules contain various limits in order to reduce concentration risk. For example, the Bank does not accept collateral in the form of securities issued by banks and other financial institutions, or bonds, and short-term paper issued by companies in which banks and other financial institutions collectively have a direct or indirect holding of more than a third.</p>
<p>Key Consideration 5.2:</p> <p><i>An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.</i></p>	<p>Valuation Practices</p> <p>Q.5.2.1: How frequently does the FMI mark its collateral to market, and does it do so at least daily?</p> <p>The market value of financial instruments is revalued on a daily basis. These values are received from FMD.</p> <p>Q.5.2.2: To what extent is the FMI authorized to exercise discretion in valuing assets when market prices do not represent their true value?</p> <p>There is no value limit on intraday liquidity generation. Such credit is, however, limited by the value of collateral that each participant holds, subject to appropriate haircuts. Haircuts are designed to be sufficient to cover intraday price movements. It is FMD's responsibility to ensure that the collateral values are sufficient to cover the CBK against any credit losses, and this clause is set out in the SLA between FMD and the BPSD.</p> <p>Haircutting Practices</p> <p>Q.5.2.3: How does the FMI determine haircuts?</p> <p>The Bank takes only the very highest quality collateral. The CBK currently does not apply haircuts to collateral taken from the provision of short-term liquidity through ILF or overnight repo, a practice which is in line with its operating guideline for the RTGS system. The amount of collateral taken is based on the face value of the asset, with no daily mark-to-market or any concentration limits. While the provision of intraday liquidity can have monetary and financial stability benefits, the Bank must also protect its balance sheet. Reserves are the principal source of liquidity held at the Bank. In the unlikely event that a credit risk materialized, the Bank could use these reserves to cover any shortfall.</p>

	<p>Q.5.2.4: How does the FMI test the sufficiency of haircuts and validate its haircut procedures, including with respect to the potential decline in the assets' value in stressed market conditions involving the liquidation of collateral? How frequently does the FMI complete this test?</p> <p>These haircuts are determined by FMD. For a further detailed discussion on haircuts, see Principle 7 below. The SLA between FMD and the FMI addresses communication on when the sufficiency tests are to be conducted and have been conducted. The sufficiency of haircuts is considered when the rules in general are reviewed. Haircuts may also be adjusted in response to particular events, stress or uncertainty in financial markets.</p>
<p>Key Consideration 5.3:</p> <p><i>In order to reduce the need for pro-cyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.</i></p>	<p>Q.5.3.1: How does the FMI identify and evaluate the potential procyclicality of its haircut calibrations? How does the FMI consider reducing the need for procyclical adjustments – for example, by incorporating periods of stressed market conditions during the calibration of haircuts?</p> <p>FMD is responsible for the identification and evaluation of the potential procyclicality of haircut calibrations. The Bank generally applies haircuts that are calibrated to include periods of stressed market conditions. Haircuts are calibrated to capture stressed market conditions. This ensures that haircuts are set at stable and conservative levels and reduces the need for procyclical haircut adjustments during periods of stress. Currently, there is a standing agreement between the FMI operator and FMD; therefore, any discussions to identify and evaluate the haircut calibrations must be communicated to the FMI operator.</p>
<p>Key Consideration 5.4:</p> <p><i>An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.</i></p>	<p>Q.5.4.1: What are the FMI's policies for identifying and avoiding concentrated holdings of certain assets in order to limit potential adverse price effects at liquidation? What factors (for example, adverse price effects or market conditions) are considered when determining these policies?</p> <p>Consistent with the CPMI-IOSCO guidance on the Application of the Principles to Central Bank FMIs, the Bank is not constrained with regards to the assets it accepts as eligible collateral in its lending operations. FMD determines policies for identifying and avoiding concentrated holdings for the CBK in the execution of its monetary policy.</p>

	<p>Q.5.4.2: How does the FMI review and evaluate concentration policies and practices to determine their adequacy? How frequently does the FMI review and evaluate these policies and practices?</p> <p>FMD determines policies for identifying and avoiding concentrated holdings for the CBK in the execution of its monetary policy. The FMI operator is not responsible for the review or evaluation of such policies; however, the FMI must comply with the policies to enforce participants' compliance. There is no need for concentration limit since the accepted collaterals have low credit, liquidity, and market risk. KEPSS can, therefore, liquidate the collaterals quickly without any significant adverse price effects.</p>
<p>Key Consideration 5.5</p> <p><i>An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensures that the collateral can be used in a timely manner.</i></p>	<p>Q.5.5.1: What are the legal, operational, market and other risks that the FMI faces by accepting cross-border collateral? How does the FMI mitigate these risks?</p> <p>This is not applicable to the KEPSS system, as the FMI does not accept cross-border collateral.</p> <p>Q.5.5.2: How does the FMI ensure that cross-border collateral can be used in a timely manner?</p> <p>This is not applicable to the KEPSS system, as the FMI does not accept cross-border collateral.</p>
<p>Key Consideration 5.6</p> <p><i>An FMI should use a collateral management system that is well designed and operationally flexible.</i></p>	<p>Collateral Management System Design</p> <p>Q.5.6.1: What are the primary features of the FMI's collateral management system?</p> <p>Main aim of the Bank's system for managing banks' collateral for loans is to minimize the risk of the Bank suffering losses on loans to banks, while still ensuring that banks are able to borrow sufficiently from the Bank to enable the conduct of monetary policy and the settlement of payments. The seamless integration between the RTGS and CSD system provides the channel through which collateralized lending can be conducted by the CBK to provide short-term liquidity to direct RTGS members if needed. KEPSS, through its linkage with the CSD provides the functionality to pledge and release collateral for loans extended by the CBK to fund settlement accounts. The process is managed by FMD.</p> <p>The system is set up for real-time collateralization with immediate updating of the available credit in each bank's account in KEPSS. The banks themselves pledge the bulk of the securities they use as collateral in favor of the Bank in their own account in the central securities depositories.</p>

Participants do not have the right themselves to reduce holdings pledged in favor of the Bank directly in the central securities depositories. The process is automated to release the collateralized securities after reversal of the ILF amounts to the Bank. This is done after the execution of KEPSS Initial Cut Off.

Q.5.6.2: How and to what extent does the FMI track the reuse of collateral and its rights to the collateral provided?

When securities have been pledged to the Bank in a separate account in each depository, the Bank has full rights of disposal over the collateral but is not the owner of the securities. The reuse of securities as collateral vis-à-vis other parties is not therefore possible, as the Bank's rights to the securities must be indisputable. This is regulated by the KEPSS Terms and Conditions and in the agreements with the central securities depositories.

Operational flexibility

Q.5.6.3: How and to what extent does the FMI's collateral management system accommodate changes in the ongoing monitoring and management of collateral?

The KEPSS system has functionality that allows participants to obtain information on their collateral available on the FMI. The system is parameter-driven, and all changes need to be authorized. . If the estimated value of a certain FI changes during monitoring, the collateral management system is modified to include new parameters taking such changes into account, and the parameters can be activated immediately if necessary.

Q.5.6.4: To what extent is the collateral management system staffed to ensure smooth operations even during times of market stress?

The aforementioned features of the collateral management system is performed automatically, using parameters set by the CBK and relevant standing instructions from RTGS members to the CBK. This minimizes the requirement for manpower and manual intervention. Other situations may require access to internal ICT expertise from the supplier of operating services and within the Bank, as well as system expertise from the external software suppliers.

<p>Key Conclusion</p>	<p>The general principle for the Bank is that all participants must have collateral in the KEPSS system. To secure any loans in the KEPSS system, collateral in the form of government securities, Treasury bills and bonds are utilised. These assets are claims on the government and therefore they carry minimal or no liquidity or credit risk. By requiring the very highest quality collateral, the Bank ensures the collateral it accepts has deep and liquid markets. Each settlement participant enters into a KEPSS settlement agreement with the KEPSS. In terms of this agreement, the participant relinquishes the collateral to the Bank, as security for the proper and timeous performance by the participant of all its obligations which it may incur to the Bank arising from the participant's utilisation of the kepss system.</p> <p>FMD is responsible for the safekeeping of collateral reserved for use in KEPSS. This is managed through an SLA with FMD. The Bank has a comprehensive regulatory framework and the collateral for loans to KEPSS participants is monitored continuously. The CBK has established the operational procedures and BCP to ensure that the collateral management system has smooth operations during stressed conditions. The Bank has a comprehensive regulatory framework and the collateral for loans to KEPSS participants is monitored continuously.</p>
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Principle 6: Margin

<p><i>A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk based and regularly reviewed.</i></p>

This principle does not apply since it only applies to CCPs.

Principle 7: Liquidity Risk

<p>Assessment Rating:</p>	<p><i>Principle 7 is Considered to be Observed.</i></p>
<p><i>An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day, and where appropriate, intraday and multiday settlement of payment obligations with high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions</i></p>	
<p>Because of the extensive interactions between the financial risk management and financial resources principles, this principle should be reviewed in the context of Principle 4 on credit risk, Principle 5 on collateral and Principle 6 on margin, as appropriate. This principle should also be reviewed in the context of Principle 8 on settlement finality, Principle 13 on participant default rules and procedures, Principle 23 on disclosure of rules, key procedures and market data, and other principles, as appropriate</p>	

<p>Key Consideration 7.1:</p> <p><i>An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers and other entities.</i></p>	<p>Q.7.1.1: What is the FMI's framework for managing its liquidity risks, in all relevant currencies, from its participants, settlement banks, nostro agents, custodian banks, liquidity providers and other entities?</p> <p>The KEPSS system is a single currency system that settles only in Kenyan currency (shillings). The FMI has not identified any liquidity risk as a settlement system because KEPSS settles instructions on a gross basis. As central bank, the Bank has the exclusive right to issue Kenyan currency (shillings) and as such it has an unlimited supply of Kenyan currency and does not have any liquidity risk vis-à-vis the participants in KEPSS. Nor can the Bank therefore incur liquidity risk from other parties.</p> <p>However, there is a potential for liquidity risk to arise in a RTGS environment as it settles each transaction individually. To manage such liquidity risk, the CBK provides fully collateralized ILF/OLF for direct members. In addition, the RTGS system has a gridlock detection and resolution mechanism (bilateral and multilateral) which is triggered by the system every 5 seconds for settling queued payment transactions. Gridlock can also be triggered manually when the need arises.</p> <p>Participants are also encouraged to process their payments early in the day using the throughput guidelines provided. The system's pricing is designed around two windows with the first window Initial Cut-Off (ICO) being the cheapest (at Kshs.50 per transaction) to encourage early funding and settlement of payments. The second window attracts a fee of Ksh.140 per transaction for interbank payments made after the ICO. This serves as an incentive to encourage the early submission of interbank payment instructions as provided in Schedule E of the KEPSS Rules and Procedures.</p> <p>In the event of operational disruption, there may be situations where the Bank is unable to make liquidity available for the settlement of payments in KEPSS. In this case, there will be an operational risk with consequences for participants' access to liquidity. It is the responsibility of the participant to ensure sufficient liquidity is available for all its settlement obligations.</p> <p>Q.7.1.2: What are the nature and size of the FMI's liquidity needs, and the associated sources of liquidity risks, that arise in the FMI in all relevant currencies?</p> <p>Given its role as central bank and exclusive right to issue Kwnyan currency, (shillings), the Bank itself can cover its liquidity needs in relation to KEPSS. Payments in foreign currency are not settled in KEPSS.</p>
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	<p>Q.7.1.3: How does the FMI take into account the potential aggregate liquidity risk presented by an individual entity and its affiliates that may play multiples roles with respect to the FMI?</p> <p>The Bank does not have any liquidity risk vis-à-vis participants in its settlement system, and participants do not have any liquidity risk vis-à-vis the Bank. Participants in KEPSS do, however, have liquidity risk vis-à-vis other participants in KEPSS. This applies both directly between two participants and indirectly between banks that act as settlement banks for others. This does not, however, mean that the Bank as settlement bank incurs liquidity risk in KEPSS. As a central bank-operated system, KEPSS does not have liquidity needs or hold liquidity in its name. It is the responsibility of the participant to ensure sufficient liquidity is available for all its settlement obligations.</p> <p>A successful settlement depends on sufficient funds or collateral available in the system. Therefore, the responsibility lies with the participant to ensure that there is enough liquidity to ensure settlement regardless of any other additional roles the participant has in the system.</p>
<p>Key Consideration 7.2:</p> <p><i>An FMI should have effective operational and analytical tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.</i></p>	<p>Q.7.2.2: How does the FMI use those tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity?</p> <p>Settlement and funding streams in KEPSS are monitored, analyzed, and reported as set out under Q.7.2.1. As central bank, the Bank has a particular responsibility to informing external stakeholders and the general public about its operations. Information from KEPSS is used in a variety of analyses and publications from the Bank. From a participant’s perspective, the intraday collateralization measures provide ample opportunities for banks to effect settlement in real time.</p> <p>The KEPSS system facilitates transfers of interbank funds and allows banks to monitor their settlement exposures through the position monitor with a single view of participants’ liquidity position. This improves the overall risk management in the interbank settlement system and enables the CBK to improve the settlement risk management and, therefore, reduce the potential for crises. Banks are allowed to utilize their available cash reserve balance fully during the day for intraday liquidity, but the banks still must meet the requirements for their cash reserve holdings over the monthly maintenance period. Any movements against the cash reserve ratio (CRR) are recorded in the KEPSS system.</p>

Key Consideration 3

A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement and, where appropriate, intraday or multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions

Q.7.3.1: How does the payment system or SSS determine the amount of liquid resources in all relevant currencies to effect same day settlement and, where appropriate, intraday or multiday settlement of payment obligations? What potential stress scenarios (including, but not limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions) does the payment system or SSS use to make this determination?

The KEPSS system has various system tools and measures to ensure sufficient liquidity is generally available for same-day settlement of transactions. However, at present there is no stress test program with viable stress scenarios in place, which makes it difficult to be certain with a high degree of confidence that there is still adequate liquidity for same-day settlement under extreme but plausible market conditions. KEPSS is a single currency system that trades in Kenyan (shillings) currency.

Q.7.3.2: What is the estimated size of the liquidity shortfall in each currency that the payment system or SSS would need to cover?

KEPSS is a single currency system that trades in Kenyan (shillings) currency. The KEPSS system will not have to cover any estimated liquidity shortfall. In the event of a liquidity shortfall, the decision to provide additional liquidity will be made by the Governor of the CBK after taking into consideration the advice of BSD and close liaison with National Treasury and the Minister of Finance, if applicable. In such extreme cases, the CBK, following the lender-of-last-resort principle, will bear the credit risk and not KEPSS.

<p>Key Consideration 7.4:</p> <p><i>A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios.</i></p>	<p>Key consideration does not apply to the KEPSS.</p>
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<p>Key Consideration 7.5:</p> <p><i>For purposes of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and at investments that are readily available and convertible into cash with pre-arranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is</i></p>	<p>Key Consideration 5-7 are not applicable.</p> <p>The KEPSS system is owned and operated by the CBK. Any liquidity needs from the system to pay for the obligations arising from day-to-day business will be met by the Bank. As for participant's liquidity needs to settle payments, the CBK also provides short-term liquidity to direct KEPSS members through collateralized lending in the form of ILF/overnight repo.</p> <p>Size and composition of qualifying liquid resources</p> <p>Q.7.5.1: What is the size and composition of the FMI's qualifying liquid resources in each currency that is held by the FMI? In what manner and within what time frame can these liquid resources be made available to the FMI?</p> <p>The KEPSS system as an FMI does not have liquidity needs or hold liquidity in its own name. Liquidity is held for each participant's own account in the system. Thus, it is the responsibility of the participant to ensure sufficient liquidity is available for all its settlement obligations.</p> <p>Availability and coverage of qualifying liquid resources</p> <p>Q.7.5.2: What prearranged funding arrangements has the FMI established to convert its readily available collateral and investments into cash? How has the FMI established that these arrangements would be highly reliable in extreme but plausible market conditions? Has the FMI identified any potential barriers to accessing its liquid resources?</p> <p>The KEPSS system as an FMI does not have liquidity needs; therefore, no potential barriers to access liquid resources have been identified.</p> <p>Q.7.5.3: If the FMI has access to routine credit at the central bank of issue, what is the FMI's relevant borrowing capacity for meeting its minimum liquid resource requirement in that currency?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.5.4: To what extent does the size and the availability of the FMI's qualifying liquid resources cover its identified minimum liquidity resource requirement in each currency to effect settlement of payment obligations on time?</p> <p>This is not applicable to the KEPSS system as an FMI</p>
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<p>Key Consideration 7.6:</p> <p><i>An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as part of its liquidity plan.</i></p>	<p>Size and composition of supplemental liquid resources</p> <p>Q.7.6.1: What is the size and composition of any supplemental liquid resources available to the FMI?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Availability of supplemental liquid resources</p> <p>Q.7.6.2: How and on what basis has the FMI determined that these assets are likely to be saleable or acceptable as collateral to obtain the relevant currency, even if this cannot be reliably prearranged or guaranteed in extreme market conditions?</p> <p>This is not applicable to the KEPSS system as an FMI</p> <p>Q.7.6.3: What proportion of these supplemental assets qualifies as potential collateral at the relevant central bank?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.6.4: In what circumstances would the FMI use its supplemental liquid resources in advance of, or in addition to, using its qualifying liquid resources?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.6.5: To what extent does the size and availability of the FMI's supplemental liquid resources, in conjunction with its qualifying liquid resources, cover the relevant liquidity needs identified through the FMI's stress test program for determining the adequacy of its liquidity resources (see key consideration 9)?</p> <p>This is not applicable to the KEPSS system as an FMI.</p>
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Key Consideration 7.7:

An FMI should obtain high degree of confidence through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider`s performance reliability with respect to a particular currency, a liquidity provider`s potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.

Use of liquidity Providers

Q.7.7.1: Does the FMI use a liquidity provider to meet its minimum required qualifying liquidity resources? Who are the FMI's liquidity providers? How and on what basis has the FMI determined that each of these liquidity providers has sufficient information to understand and to manage their associated liquidity risk in each relevant currency on an ongoing basis, including in stressed conditions?

This is not applicable to the KEPSS system as an FMI.

Reliability of Liquidity Providers

Q.7.7.2: How has the FMI determined that each of its liquidity providers has the capacity to perform on its commitment in each relevant currency on an ongoing basis?

This is not applicable to the KEPSS system as an FMI.

Q.7.7.3: How does the FMI take into account a liquidity provider's potential access to credit at the central bank of issue?

This is not applicable to the KEPSS system as an FMI.

Q.7.7.4: How does the FMI regularly test the timeliness and reliability of its procedures for accessing its liquid resources at a liquidity provider?

This is not applicable to the KEPSS system as an FMI.

<p>Key Consideration 7.8:</p> <p><i>An FMI with access to central bank accounts, payment services or securities services should use these services, where practical, to enhance its management of liquidity risk.</i></p>	<p>Q.7.8.1: To what extent does the FMI currently have, or is the FMI eligible to obtain, access to accounts, payment services and securities services at each relevant central bank that could be used to conduct its payments and settlements, and to manage liquidity risks in each relevant currency?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.8.2: To what extent does the FMI use each of these services at each relevant central bank to conduct its payments and settlements and to manage liquidity risks in each relevant currency?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.8.3: If the FMI employs services other than those provided by the relevant central banks, to what extent has the FMI analyzed the potential to enhance the management of liquidity risk by expanding its use of central bank services?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.8.4: What, if any, practical or other considerations to expanding its use of relevant central bank services have been identified by the FMI?</p> <p>This is not applicable to the KEPSS system as an FMI.</p>
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<p>Key Consideration 7.9:</p> <p>An FMI should determine the amount and regularly test the adequacy of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of the stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI, and where appropriate, cover multiday periods. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.</p>	<p>Stress Test Program</p> <p>Q.7.9.1: How does the FMI use stress testing to determine the amount and test the sufficiency of its liquid resources in each currency? How frequently does the FMI stress test its liquid resources?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Q.7.9.2: What is the process for reporting on an ongoing basis the results of the FMI's liquidity stress tests to appropriate decision-makers at the FMI, for the purpose of supporting their timely evaluation and adjustment of the size and composition of the FMI's liquidity resources and liquidity risk management framework?</p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p>Stress Test Scenarios</p> <p>Q.7.9.3: What scenarios are used in the stress tests, and to what extent do they take into account a combination of peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions?</p> <p>This is not applicable to the KEPSS system as an FMI as a liquidity stress test has not been carried out.</p> <p>Q.7.9.4: To what extent do the scenarios and stress tests take into account the FMI's particular payment and settlement structure (for example, real-time gross or deferred net; with or without a settlement guarantee; DVP model 1, 2 or 3 for SSSs), and the liquidity risk that is borne directly by the FMI, by its participants, or both?</p> <p>This is not applicable to the KEPSS system as an FMI as a liquidity stress test has not been carried out.</p> <p>Q.7.9.5: To what extent do the scenarios and stress tests take into account the nature and size of the liquidity needs, and the associated sources of liquidity risks that arise in the FMI to settle its payment obligations on time, including the potential that individual entities and their affiliates may play multiples roles with respect to the FMI?</p> <p>This is not applicable to the KEPSS system as an FMI as a liquidity stress test has not been carried out.</p>
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	<p>Review and Validation</p> <p><i>Q.7.9.6: How frequently does the FMI assess the effectiveness and appropriateness of stress test assumptions and parameters? How does the FMI's stress test programme take into account various conditions, such as a sudden and significant increase in position and price volatility, position concentration, change in market liquidity and model risk, including a shift of parameters?</i></p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p><i>Q.7.9.7: How does the FMI validate its risk management model? How frequently does it perform this validation?</i></p> <p>This is not applicable to the KEPSS system as an FMI.</p> <p><i>Q.7.9.8: Where and to what extent does the FMI document its supporting rationale for, and its governance arrangements relating to, the amount and form of its total liquid resources?</i></p> <p>This is not applicable to the KEPSS system as an FMI.</p>
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<p>Key Consideration 7.10:</p> <p><i>An FMI should establish explicit rules and procedures that enable the FMI to effect same day, and where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking or delaying the same day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquid resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.</i></p>	<p>Same-day Settlement</p> <p>Q.7.10.1: How do the FMI's rules and procedures enable it to settle payment obligations on time following any individual or combined default among its participants?</p> <p>The KEPSS system is owned and operated by the CBK and settles transactions on a gross basis and in real-time during system operating hours. Various system tools and measures are in place to facilitate RTGS members to monitor and manage their payment flows in order to facilitate same day settlement of payment transactions.</p> <p>Q.7.10.2: How do the FMI's rules and procedures address unforeseen and potentially uncovered liquidity shortfalls and avoid unwinding, revoking or delaying the same-day settlement of payment obligations?</p> <p>The main rule for the settlement of payments in KEPSS is that sufficient funds are required in the form of deposits or available credit for a payment obligation to be settled. In the event of insufficient funds for gross settlements, payment orders will be queued and cancelled if still unsettled at end-of-day.</p> <p>A clearing from NACH will be queued in the event of insufficient funds at one or more settlement banks. There are set deadlines for covering each clearing. If these deadlines are not met, the clearing will be rejected by KEPSS. NACH will then calculate a new clearing without the participant that has insufficient funds and send this to KEPSS for settlement. The new clearing will be settled in KEPSS slightly later than normal. Payments taken out of a clearing will be included in the next clearing, even if the next clearing is not conducted before the following bank day.</p> <p>Replenishment of Liquidity Resources</p> <p>Q.7.10.3: How do the FMI's rules and procedures allow for the replenishment of any liquidity resources employed during a stress event?</p> <p>The CBK imposed transaction fees on RTGS participants and membership fees in part to recover operational and maintenance charges of the CBK for the system. The KEPSS rules and procedures set out actions that may be taken in KEPSS in the event of a member default (see Principle 13). Since the Bank does not assume liquidity risk as operator of KEPSS, the requirement to establish rules and procedures to address unforeseen and potentially uncovered liquidity shortfalls and replenish any liquid resources does not apply.</p>
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<p>Key Conclusion</p>	<p>As a central bank, the Bank does not itself bear any liquidity risk in relation to its settlement activities, and participants in KEPSS do not have any liquidity risk vis-à-vis the Bank as settlement bank. Participants in KEPSS may nevertheless incur liquidity risk as a result of errors or problems at other participants in settlement or in the event of operational disruption in KEPSS. Since KEPSS is a critical FMI, such problems will impact on the Bank over and above the risk that the Bank itself is exposed to. This risk is adequately addressed by the KEPSS Terms and Conditions and the requirements made of participants. In addition, the Bank has operational and analytical tools to identify, measure and monitor its settlement and funding streams on an ongoing and timely basis, including the use of intraday liquidity.</p> <p>The Settlement in the KEPSS system is based on the pre-funding principle in terms of which any interbank fund transfer will be affected only if sufficient funds are available in the paying bank's settlement account. In providing a settlement service, liquidity and market risks are linked. The CBK, in its wider mandate, endeavors to promote financial stability by managing the liquidity needs of the banking system as a whole. It also contributes to the development and efficiency of the domestic financial markets, particularly the interbank market.</p>
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Principle 8: Settlement

<p>Assessment Rating:</p>	<p><i>Principle 8 is Considered to be Observed.</i></p>
<p><i>An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.</i></p>	
<p>In reviewing this principle, it should be noted that this principle is not intended to eliminate failures to deliver in securities trades. The occurrence of non-systemic amounts of such failures, although potentially undesirable, should not by itself be interpreted as a failure to satisfy this principle. This principle should be reviewed in the context of Principle 9 on money settlements, Principle 20 on FMI links, and other principles, as appropriate.</p>	

<p>Key Consideration 8.1:</p> <p><i>An FMI`s rules and procedures should clearly define the point at which settlement is final.</i></p>	<p>Point of Settlement Finality</p> <p>Q.8.1.1: At what point is the settlement of a payment, transfer instruction or other obligation final, meaning irrevocable and unconditional? Is the point of settlement finality defined and documented? How and to whom is this information disclosed?</p> <p>The point of time when the funds settlements under the System are final is stipulated in the KEPSS rules and procedures. The settlement of payment instructions between KEPSS participants and the CBK via KEPSS accounts is final and irrevocable once the relevant accounts have been appropriately debited and credited. This means that once payments are settled between banks they cannot be revoked, even by a liquidator. Therefore, the point of finality is the point at which both relevant accounts have been appropriately debited and credited upon successful settlement.</p> <p>This information is disclosed to all participants and the public under the KEPSS Rules and Procedures Section 6 and the NPS Act section 9 (2) and (3) and states that (2) <i>A settlement that has been effected by payment of money or by means of an entry to the credit of the account maintained by a settlement system participant in the Central Bank settlement system or a designated payment system shall be final and irrevocable.</i> (3) <i>An entry to or payment out of the account of a designated payment system participant to settle a payment or settlement obligation in a designated payment system shall be final and irrevocable.</i></p> <p>Q.8.1.2: How does the FMI’s legal framework and rules, including the applicable insolvency law(s), acknowledge the discharge of a payment, transfer instruction or other obligation between the FMI and its participants, or between participants?</p> <p>Payment instructions in KEPSS are deemed final and irrevocable once the sending participants account is debited and the receiving participant is credited with the amount specified in the payment instruction. Payments are settled in real time, according to their priority and any queued payments due to insufficient funds are cancelled by the KEPSS System at the relevant activity cutoff. Members have the option to cancel/re-sequence a queued payment (Clause 7.2 of the KEPSS Rules & Procedures).</p>
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	<p>Q.8.1.3: How does the FMI demonstrate that there is a high degree of legal certainty that finality will be achieved in all relevant jurisdictions (for example, by obtaining a well-reasoned legal opinion)?</p> <p>Payments are settled in KEPSS exclusively in Kenyan currency (shillings) on the basis of Kenyan law. Settlement finality is described and protected in the NPS Act. This is supported with explicit reference in the KEPSS service agreement and the settlement agreement.</p> <p>Finality in the case of Links</p> <p>Q.8.1.4: How does the FMI ensure settlement finality in the case of linkages with other FMIs?</p> <p>This is not applicable to the KEPSS system. CBK has not established links with other FMIs beyond standard SWIFT-based communication to receive payment orders, send confirmation of settlement and exchange other types of messages. This principle is not considered to be relevant to KEPSS.</p>
<p>Key Consideration 8.2:</p> <p><i>An FMI should complete final settlement no later than end of value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple -batch processing during the settlement date.</i></p>	<p>Final Settlement on the value date</p> <p>Q.8.2.1: Is the FMI designed to complete final settlement on the value date (or same day settlement)? How does the FMI ensure that final settlement occurs no later than the end of the intended value date?</p> <p>KEPSS is a real-time settlement system with immediate settlement of all payment orders provided that there are sufficient funds for each payment and the payment order meets the applicable formal and technical requirements. All valid payments are settled on the value date.</p> <p>Q.8.2.2: Has the FMI ever experienced deferral of final settlement to the next business day that was not contemplated by its rules, procedures or contracts? If so, under what circumstances? If deferral was a result of the FMI's actions, what steps have been taken to prevent a similar situation in the future?</p> <p>Since the current system solution for KEPSS was set into operation in 2009, there have been no situations where payment orders have been deferred to the next business day due to errors at the Bank.</p>

Intraday or Real-Time Final Settlement

Q.8.2.3: Does the FMI provide intraday or real-time final settlement? If so, how? How are participants informed of the final settlement?

Payments in KEPSS are settled in real time. After the settlement of each individual payment, a message is sent automatically to the paying bank confirming that the payment order has been executed. After the settlement of clearings, confirmation is sent to the clearinghouse. Each participant can also monitor all activities in their account during the day.

Q.8.2.4: If settlement occurs through multiple-batch processing, what is the frequency of the batches and within what time frame do they operate? What happens if a participant does not have enough funds or securities at the settlement time? Are transactions entered in the next batch? If so, what is the status of those transactions and when would they become final?

At present, clearings from ACH, dhowCSD, PESALINK, card switches, (Interswitch and Kenswitch) CDSC for securities are settled in KEPSS each day. The net settlements are distributed throughout the day on the basis of a fixed operating schedule. The RTGS provides settlement of payment instruction in real-time. Payment instructions may be submitted to RTGS for settlement between 8:25am and 4:30pm Monday to Friday. All other pending transactions of the value-date are cancelled at system closure. However, KEPSS allows participants to queue future-dated transactions.

The operating schedule for KEPSS is published in KEPSS Rules and Procedures. If one or more participants have insufficient funds for their payment obligations in a net settlement, the clearing will not be settled in KEPSS. A clearing from NACH will be queued in KEPSS until all participants have sufficient funds to cover their payment obligations.

Q.8.2.5: If settlement does not occur intraday or in real time, how has the LVPS or SSS considered the introduction of either of these modalities?

Settlement of all payments in KEPSS takes place in real time throughout the day.

<p>Key Consideration 8.3:</p> <p><i>An FMI should clearly define the point after which unsettled payments, transfer instructions or other obligations may not be revoked by a participant.</i></p>	<p>Q.8.3.1: How does the FMI define the point at which unsettled payments, transfer instructions or other obligations may not be revoked by a participant? How does the FMI prohibit the unilateral revocation of accepted and unsettled payments, transfer instructions or obligations after this time?</p> <p>Payment instructions in KEPSS are deemed final and irrevocable once the sending participants account is debited and the receiving participant is credited with the amount specified in the payment instruction. As provided in the NPS Act, any credit payment that settles in KEPSS is irrevocable and may not be withdrawn by the paying bank. As provided in the NPS Act, any credit payment that settles in KEPSS is irrevocable and may not be withdrawn by the paying bank. It is not possible to reverse an order once it has been settled in KEPSS. This is due to the fact that KEPSS participants have no ability to amend or withdraw settlement instructions submitted to the KEPSS system.</p> <p>Q.8.3.2: Under what circumstances can an instruction or obligation accepted by the system for settlement still be revoked (for example, queued obligations)? How can an unsettled payment or transfer instruction be revoked? Who can revoke unsettled payment or transfer instructions?</p> <p>KEPSS Rules and Procedures are distributed directly to all participants and are publicly available on CBK's web pages. To have an account at the Bank, a participant must accept the KEPSS Terms and Conditions.</p> <p>If there are insufficient funds for a payment order, it will be queued in the settlement system until there are sufficient funds in the account. Queued payment orders may be deleted by the remitter or the Bank at the remitter's request. If there are messages queued in a sub-account when it is closed, the order is automatically rejected at the end of the settlement day. Banks can delete or reprioritize payment orders directly via KEPSS Online. A participant may request return of a payment from a receiving party by using any available means of communication open to it.</p> <p>Q.8.3.3: Under what conditions does the FMI allow exceptions and extensions to the revocation deadline?</p> <p>The Bank has no rules or procedures permitting participants in KEPSS to revoke payment orders that have been settled.</p> <p>Q.8.3.4: Where does the FMI define this information? How and to whom is this information disclosed?</p> <p>The rules on settlement, queuing due to insufficient funds and the handling of unsettled payment orders are set out in the KEPSS Rules and Procedures. The</p>
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<p>Key Conclusion</p>	<p>KEPSS is a real-time settlement system where settlement finality is clearly defined. Settlement of funds transfers in the KEPSS is achieved in real-time and is final and irrevocable once the sending participants account is debited and the receiving participant is credited with the amount specified in the payment instruction. Payments are settled in real time, according to their priority and any queued payments due to insufficient funds are cancelled by the RTGS System at the relevant activity cutoff. As discussed under Principle 1, the settlement of payment instructions by banks in the KEPSS system is final and irrevocable, even in the event that a settlement participant becomes subject to insolvency proceedings.</p> <p>The transaction settled in the KEPSS is protected under Section 9 (1) (2) and (3) of the NPS Act, 2011 and cannot be cancelled or revoked.</p>
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Principle 9: Money Settlements

<p>Assessment Rating:</p>	<p><i>Principle 9 is Considered to be Observed.</i></p>
<p><i>An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimize and strictly control the credit and liquidity risks arising from the use of commercial bank money</i></p>	
<p>This principle should be reviewed in the context of Principle 8 on settlement finality, Principle 16 on custody and investment risks, and other principles, as appropriate.</p>	
<p>Key Consideration 9.1:</p> <p><i>An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.</i></p>	<p>Q.9.1.1: How does the FMI conduct money settlements? If the FMI conducts settlement in multiple currencies, how does the FMI conduct money settlement in each currency?</p> <p>Settlement in KEPSS occurs in central bank money. It is a single currency settlement system in the domestic Kenyan currency (shillings).</p> <p>Q.9.1.2: If the FMI does not settle in central bank money, why is it not used?</p> <p>Settlement in KEPSS occurs in central bank money.</p>

<p>Key Consideration 9.2:</p> <p><i>If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.</i></p>	<p>Q.9.2.1: <i>If central bank money is not used, how does the FMI assess the credit and liquidity risks of the settlement asset used for money settlement?</i></p> <p>This is not applicable as it relates to where commercial bank money rather than central bank money is used for settlement. Settlement in KEPSS occurs in central bank money.</p> <p>Q.9.2.2: <i>If the FMI settles in commercial bank money, how does the FMI select its settlement banks? What are the specific selection criteria the FMI uses?</i></p> <p>This is not applicable as it relates to where commercial bank money rather than central bank money is used for settlement. Settlement in KEPSS occurs in central bank money/</p>
<p>Key Consideration 9.3:</p> <p><i>If an FMI settles in commercial bank money, it should monitor, manage and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation, supervision, creditworthiness, capitalization, access to liquidity and operational reliability.</i></p>	<p>Q.9.3.1: <i>How does the FMI monitor the settlement banks' adherence to criteria it uses for selection? For example, how does the FMI evaluate the banks' regulation, supervision, creditworthiness, capitalization, access to liquidity and operational reliability?</i></p> <p>This is not applicable as it relates to where commercial bank money rather than central bank money is used for settlement. Settlement in KEPSS occurs in central bank money.</p> <p>Q.9.3.2: <i>How does the FMI monitor, manage and limit its credit and liquidity risks arising from the commercial settlement banks? How does the FMI monitor and manage the concentration of credit and liquidity exposures to these banks?</i></p> <p>This is not applicable as it relates to where commercial bank money rather than central bank money is used for settlement. Settlement in KEPSS occurs in central bank money.</p> <p>Q.9.3.3: <i>How does the FMI assess its potential losses and liquidity pressures as well as those of its participants if there is a failure of its largest settlement bank? Settlement in SAMOS occurs in central bank money.</i></p> <p>Settlement in KEPSS occurs in Central Bank money</p>

<p>Key Consideration 9.4:</p> <p><i>If an FMI conducts money settlements on its own books, it should minimize and strictly control its credit and liquidity risks.</i></p>	<p>Q.9.4.1: If an FMI conducts money settlements on its own books, how does it minimize and strictly control its credit and liquidity risks?</p> <p>Settlement instructions are settled across the KEPSS accounts. This means that participants are exposed to some credit and liquidity risk with respect to the funds due to them from other participants.</p> <p>However, these risks are limited due to the design of the KEPSS system, which uses carefully tested KEPSS system-administered algorithms to ensure the efficient use of funds during settlements. Therefore, it is the responsibility of the participants to monitor their respective positions as determined by their exposure. The KEPSS system is a prefunded system and therefore liquidity is managed by participants.</p>
<p>Key Consideration 9.5:</p> <p><i>An FMI`s legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferrable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.</i></p>	<p>Q.9.5.1: Do the FMI's legal agreements with its settlement banks state when transfers occur, that transfers are final when affected, and that funds received are transferable?</p> <p>This is not applicable as it relates to an FMI conducting money settlement on its own books, where money settlement is conducted in commercial bank money.</p> <p>Q.9.5.2: Are funds received transferable by the end of the day at the latest? If not, why?</p> <p>All funds are transferred immediately, in real time and always before the end of the day.</p> <p>The settlement agreement through KEPSS provides that once the sending participant's account is debited and the receiving participant's is credited with the amount specified in the payment instruction, settlement is deemed final and irrevocable.</p>
<p>Key Conclusion</p>	<p>The FMI is owned and operated by the central bank. All settlements in KEPSS are conducted in central bank money by debiting and crediting banks and other participants' accounts in the Bank. Payment instructions are settled across the books of the CBK and payment is made to and from the CBK via the central bank accounts the CBK has allocated to each participating settlement participant.</p>

Principle 10: Physical Deliveries

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should clearly identify, monitor and manage risks associated with such physical deliveries.

This is not applicable to the KEPSS system. The key considerations concern how central securities depositories and CCPs conduct the transfer of rights to financial instruments, commodities etc. from seller to buyer. Principle 10 is not therefore considered to apply to the Bank's activities as a settlement bank for payment obligations.

Principle 11: Central Securities Depositories

A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues, minimize, and manage risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in a dematerialized or dematerialized form for their transfer by book entry.

This is not applicable to the KEPSS system.

Principle is not applicable. This principle has six key considerations which all concern the management of securities in central securities depositories. This principle is not considered relevant to KEPSS as a settlement system for the cash leg of securities settlement.

Principle 12: Exchange-of-Value Settlement Systems

If an FMI settles transactions that involve the settlement of two linked obligations, it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Principle is not applicable. CBK is the settlement bank for the cash leg of securities settlement at CSDC and at the CBK-operated CSD. These settlements are based on ownership of financial instruments transferred from seller to buyer when, and only when, the associated payment obligations have been settled. This principle therefore applies to these systems, not to the KEPSS.

Principle 13: Participant-Default Rules and Procedures

Assessment Rating: *Principle 13 is Considered to be Broadly Observed.*

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Because of the extensive interactions between the default management principles as they apply to CCPs, this principle needs to be reviewed in the context of Principle 14 on segregation and portability. This principle should also be reviewed in the context of Principle 4 on credit risk, Principle 7 on liquidity risk, Principle 23 on disclosure of rules, key procedures and market data, and other principles, as appropriate

<p>Key Consideration 13.1:</p> <p><i>An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of participant default and that address the replenishment of resources following a default.</i></p>	<p>Participant default rules and procedures</p> <p>Q.13.1.1: Do the FMI's rules and procedures clearly define an event of default (both a financial and an operational default of a participant) and the method for identifying a default? How are these events defined?</p> <p>The Bank does not become a counterparty to individual funds transfers between the participants. Moreover, as described under Principle 4, the Bank manages credit risks arising from credit extension to participants in the form of ILF/OLF by requiring them to pledge eligible collateral, so that losses from a participant default are sufficiently low.</p> <p>Identifying a default event</p> <p>The KEPSS system settles transactions in real time, on a gross basis, subject to availability of funds. The CBK provides a fully collateralized ILF and a gridlock detection and resolution mechanism to help settlement of transactions rather than them being queued for a long time or cancelled at the respective activity cutoff. In the case of a default of an ILF in the RTGS system, a member can take an overnight repo to settle the ILF.</p> <p>The BPSD, in consultation with the respective supervision department (BSD) of the CBK, will handle any issues related to a defaulted member (CBK licensee). Since the RTGS system settles transactions in real time, on a gross basis, and subject to funds availability, there is no likelihood for members to face a problem of defaulting of transactions in the RTGS System. However, if a member defaults due to an insolvency event or a failure to meet its obligation in the RTGS system, the Bank, as the operator of the KEPSS system, has the authority to suspend a member that is unable to meet its settlement obligations. By permitting swift and decisive action in this way, it allows the Bank to minimize the potential for a member default to disrupt settlement in the system more widely.</p>
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Q.13.1.2: How do the FMI's rules and procedures address the following key aspects of a participant default:

a) the actions that the FMI can take when a default is declared.

The KEPSS system has been designed with the functionality to immediately suspend a participant temporarily or permanently. The CBK may suspend a participant from taking part in the payment settlement services if it determines, in good faith, based on the information available to it, that the Participant's financial and / or operating conditions introduces significant disruption risks affecting the stability of the system or interests of CBK or other Participants in KEPSS. The Bank is also the prudential supervisor of all KEPSS account holders. Internal guidance and processes facilitate the sharing of supervisory judgments and information with other areas of the Bank such as BSD as and when necessary.

b) the extent to which the actions are automatic or discretionary.

The procedures followed and actions taken by the Bank are established and published in the KEPSS Terms and Conditions. Beyond this, there may be a need to use discretion in relation to concrete issues in each case.

The KEPSS system's settlement and payment processes, algorithms, risk controls and procedures ensure efficient settlement. The system will always dispatch failed payment results to the defaulting participant as the originator of the settlement instruction to notify whether the settlement was successful or had failed. If a particular settlement instruction is not funded, it will be discarded by the system due to insufficient funds and a penalty charge will automatically be imposed.

c) changes to normal settlement practices.

In the case where a batch of settlements cannot be settled due to the participant having insufficient funds in its settlement account, the CBK shall ascertain the reason for the failure to fund the settlement account and contact the participant. The participant shall be informed by the CBK of the seriousness of the failure to fund and be instructed to explore all avenues to obtain the necessary funds to settle the batch within the time frames as agreed at that point between the CBK and the participant.

Any payment instructions received in the KEPSS system submitted by the participant (regardless of whether the underlying transaction is scheduled or batched) will not be eligible for settlement. These pending instructions will be rejected by the system when released. All KEPSS participants that have unsettled payment instructions with the suspended participant are made aware of the suspended payment instructions. In case of a settlement failure due to the temporary mismanagement of a participant's position, normal settlement practices still apply. It is the responsibility of the participant to resend such settlement instruction within the correct settlement time frames.

d) the management of transactions at different stages of processing.

The participant's account in KEPSS will generally be blocked to low priority outgoing payments if a high priority payment is pending due to insufficient funds. The settlement of transactions can be rearranged only within the same priority range to ensure low value payments are settled ahead of high values.

e) the expected treatment of proprietary and customer transactions and accounts.

The Bank does not involve itself directly in the participant's customer relationships. Participating banks are responsible for meeting their contractual and regulatory obligations to other participants and the CBK. Each participant is obliged to ensure that it can meet its payment and settlement obligations timeously, and that its systems and procedures are adequate to ensure that failure thereof will not jeopardize the payments system. The obligations have been incorporated in various rules and agreements such as the KEPSS settlement agreement and service agreement, bankruptcy proceedings and on the procedures that the Bank has established

f) the probable sequencing of actions.

The sequence of actions depends on the decision on public administration or in the KEPSS Terms and Conditions. Procedures are in place that address the sequence of events, which are documented in the KEPSS Operations Manual.

g) the roles, obligations and responsibilities of the various parties, including non-defaulting participants; and

The roles, obligations and responsibilities of the parties directly and indirectly involved are set out in legislation and in the KEPSS Rules Procedures. It is generally the CBK's policy to suspend if the participant has failed to meet its obligations (default) as soon as it has learned of, and is reasonably able to confirm, the event. The prompt suspension of such a participant upon such confirmation protects the CBK from legal risk, provides certainty to participants in the payment and settlement service, enables counterparties to plan their own respective contingency measures, and protects the CBK from potentially costly and disruptive litigation.

h) The existence of other mechanisms that may be activated to contain the impact of a default.

This is not applicable to the KEPSS system.

Use of financial resources

be secured against collateral, and the Bank has the right to cover its claims through realization of collateral. Beyond these rules, no special rules or procedures have been drawn up for the order in which financial resources may be used. If the KEPSS system fails to draw funds from the participant's liquid assets, a total bank default will then occur.

Q.13.1.5: How do the FMI's rules and procedures address the replenishment of resources following a default?

For the same reasons as mentioned under Q.13.1.3 and Q.13.1.4, no special rules or procedures have been drawn up for replenishing resources used in a situation where a participant in KEPSS is placed under public administration or subject to bankruptcy proceedings.

<p>Key Consideration 13.2:</p> <p><i>An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.</i></p>	<p>Q.13.2.1: Does the FMI’s management have internal plans that clearly delineate the roles and responsibilities for addressing a default? What are these plans?</p> <p>The KEPSS Operational Manual and the curatorship guidelines have clearly defined procedures should a participant default. The CBK has in place plans to manage a participant default and allows for the suspension of the relevant participant from the KEPSS system. The KEPSS system’s functionality allows for the immediate suspension of a participant at any point in the operational timeline. The KEPSS Operational Manual have clearly defined procedures should a participant default. However, currently the FMI has not implemented a “failure to settle mechanism(FTS)” to address risks that may cause delay or disruptions by a participant bank settling for a third party who may not be able to fulfill its obligation to one or more participants as outlined in its contract with the third party. The argument has always been that KEPSS has an inbuilt FTS mechanism to mitigate this risk.</p> <p>Q.13.2.2: What type of communication procedures does the FMI have in order to reach in a timely manner all relevant stakeholders, including regulators, supervisors and overseers?</p> <p>The Bank has detailed procedures in place that set out the operational steps to be taken in response to an insolvency event affecting a KEPSS member. If a participant in KEPSS is placed under public administration or into bankruptcy, the Bank will inform other participants and players submitting payment orders for settlement in KEPSS about how the settlement of payments in KEPSS will be managed. The following modalities of communication may be employed:</p> <ul style="list-style-type: none"> i. Call the participants when there are pending transactions queued on the KEPSS system. ii. Immediate communication happens via telephone calls. iii. Email broadcasts to the KEPSS treasury managers user group. iv. Circular letters to all CEOs of participants and other relevant stakeholders such as other regulators. v. Public media pronouncements such as press briefings.
	<p>However, the Bank does not have a formally documented framework setting out the Bank’s decision-making and crisis-management arrangements in the event of a KEPSS member default, including consultation arrangements with other authorities and with industry, and the roles of relevant executives in this process.</p> <p>Q.13.2.3: How frequently are the internal plans to address a default reviewed? What is the governance arrangement around these plans?</p> <p>The internal contingency procedures are reviewed when there are changes to the regulatory framework or the system solutions for KEPSS and based on experience from exercises testing these procedures. Responsibility for the procedures rests with the system owner for KEPSS, BPSD.</p>

<p>Key Consideration 13.3:</p> <p><i>An FMI should publicly disclose key aspects of its default rules and procedures.</i></p>	<p>Q.13.1.1: Do the FMI's rules and procedures clearly define an event of default (both a financial and an operational default of a participant) and the method for identifying a default? How are these events defined?</p> <p>The legal framework for placing banks or other financial institutions under public administration or into bankruptcy is established in national legislation. Upon joining the KEPSS system as a settlement participant, the participant agrees to abide by the settlement rules and procedures as outlined in the service and settlement agreements. As discussed in detail under Principle 7, the CBK maintains committed liquidity facilities for each participating bank in the KEPSS system and will draw on its liquidity facilities in the event of a 'default' by granting the bank a collateralised loan in order to satisfy its payment obligations to its beneficiary bank in the system. If the KEPSS system fails to draw funds from the participant's liquid assets, a bank default will then occur (as detailed under Principle 7)</p>
	<p>Q.13.3.2: How are the key aspects of the FMI's participant default rules and procedures made publicly available? How do they address:</p> <p>These default rules are stipulated in the settlement agreement signed by participants.</p> <p>a) the circumstances in which action may be taken.</p> <p>This is not applicable to the KEPSS system.</p> <p>b) who may take those actions?</p> <p>This is not applicable to the KEPSS system.</p> <p>c) the scope of the actions which may be taken, including the treatment of both proprietary and customer positions, funds, and assets.</p> <p>This is not applicable to the KEPSS system.</p> <p>d) the mechanisms to address an FMI's obligations to non-defaulting participants; and</p> <p>This is not applicable to the KEPSS system.</p> <p>e) where direct relationships exist with participants' customers and the mechanisms to help address the defaulting participant's obligations to its customers?</p> <p>This is not applicable to the KEPSS system.</p>

Key Consideration 13.4:

An FMI should involve its participants and other stakeholders in testing and review of the FMI`s default procedures, including any close out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.

Q.13.4.1: How does the FMI engage with its participants and other relevant stakeholders in the testing and review of its participant default procedures? How frequently does it conduct such tests and reviews? How are these test results used? To what extent are the results shared with the board, risk committee and relevant authorities?

Currently no testing is being done for default procedures.

Q.13.4.2: What range of potential participant default scenarios and procedures do these tests cover? To what extent does the FMI test the implementation of the resolution regime for its participants?

Since the KEPSS system settles transactions in real time, on a gross basis, and subject to funds availability, there is no likelihood for members to face a problem of defaulting of transactions in the RTGS System.

<p>Key Conclusion</p>	<p>The KEPSS system settle funds and securities transactions in real time, on a gross basis subject to funds availability. The actions the Bank can take if an RTGS account holder, default is set out in the KEPSS Terms & Conditions and the KEPSS Operations Manual. In the event that a default event does occur, there should be no material adverse effect on the Bank's ability to meet its obligations as operator of the RTGS services. Settlement does not complete in KEPSS unless there are sufficient funds. The likelihood and magnitude of any credit losses to the Bank are minimized (see <i>Principle 4 – Credit risk</i>).</p> <p>The settlement risk design ensures that a bank has sufficient funds to satisfy its payment obligations relating to settled settlement instructions. The settlement rules and relevant procedures clearly define the roles, obligations and requirements with respect to participation in the KEPSS system, outline participant default management when these requirements are not met, define actions the CBK may take to mitigate the impact of a default, and detail the probable sequencing of actions and the tools for managing resulting liquidity pressures and, if necessary, containing and allocating any losses. To ensure relevant participants are aware of, and operationally capable of, taking the steps required for managing a default in the KEPSS system, the CBK has implemented applicable settlement measures to facilitate the understanding and management of potential participant default impacts.</p> <p>Contingency procedures are reviewed regularly as they are updated and in line with changes in the formal regulatory framework and experience from incidents, contingency situations and exercises. However, the Bank has not developed and implemented a <i>failure to settle mechanism</i> to address the risk posed by failure to settle the NSI files.</p>
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Principle 14: Segregation and Portability

A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.

Principle 14 concerns CCPs in trades in financial instruments and is not therefore considered not relevant to KEPSS.

Principle 15: General Business Risk

Assessment Rating:	Principle 15 is Considered to be Broadly Observed.
<p>An FMI should identify, monitor and manage its general business risk and hold sufficient liquid assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.</p>	
<p>This principle should be reviewed in the context of Principle 3 on the framework for the comprehensive management of risks, Principle 21 on efficiency and effectiveness, and other principles, as appropriate.</p>	
<p>Key Consideration 15.1:</p> <p><i>An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.</i></p>	<p>Q.15.1.1: How does the FMI identify its general business risks? What general business risks has the FMI identified?</p> <p>The Bank has an enterprise-wide risk framework for monitoring and managing risks. General business risk associated with the management and operation of the KEPSS services is managed within this framework. As set out under Key Consideration 2.6, the Bank takes a coordinated approach to identifying, assessing, and managing risk at both an enterprise and business level.</p> <p>A key component of the Bank’s framework for managing general business risk is its budgeting and accounting processes, which allow it to monitor, manage and control its operating expenses, including those arising from the operation of KEPSS. The Bank’s financial accounts are also subject to audit by the Australian National Audit Office. Audit reports are reviewed by the Audit Committee.</p> <p>Q.15.1.2: How does the FMI monitor and manage its general business risks on an ongoing basis? Does the FMI’s business risk assessment consider the potential effects on its cash flow and (in the case of a privately operated FMI) capital?</p> <p>There is a formal SLA between the CBK’s BPSD and FMD.</p> <p>The KEPSS services are provided by the central bank. General business risk from settlement operations in KEPSS is considered part of other risks within the CBK’s risk management framework. This includes risk (and economic cost) from the introduction of new system and operating solutions, the risk of damages (reputational risk) in the event of errors that result in losses for participants, and the risk of additional costs if external suppliers cease to supply the CBK or maintain the KEPSS infrastructure. These SLAs clearly state the responsibilities between the BPSD and the FMD in order to manage and monitor general business risks that may arise.</p>

<p>Key Consideration 15.2:</p> <p><i>An FMI should hold net liquid assets funded by equity so that it can continue operations and services as a going concern if it incurs general business losses. The amount of net liquid assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate of its critical operations and services if such action is taken.</i></p>	<p>It should be noted that since the services are provided by the central bank, key considerations 2 to 5 are not applicable. The requirement to hold ring-fenced liquid net assets funded by equity to cover business risk and support a recovery or wind-down plan does not apply to the central bank, given the central bank’s inherent financial soundness. The CBK has a robust framework to identify, monitor and manage its general business risks under the overall risk management framework, as discussed under <i>Principles 3 and 17</i>.</p> <p>Q.15.2.1: Does the FMI hold liquid net assets funded by equity so that it can continue operations and services as a going concern if it incurs general business losses?</p> <p>This is not applicable to the KEPSS system.</p> <p>Q.15.2.2: How does the FMI calculate the amount of liquid net assets funded by equity to cover its general business risks? How does the FMI determine the length of time and associated operating costs of achieving a recovery or orderly wind-down of critical operations and services?</p> <p>This is not applicable to the KEPSS system or FMI.</p>
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Key Consideration 15.3:

An FMI should maintain a viable recovery or wind-down plan and should hold sufficient net liquid assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.

Recovery or orderly wind-down plan

Q.15.3.1: Has the FMI developed a plan to achieve a recovery or orderly wind-down, as appropriate? If so, what does this plan take into consideration (for example, the operational, technological and legal requirements for participants to establish and move to an alternative arrangement)?

This is not applicable to the KEPSS system.

Resources

Q.15.3.2: What amount of liquid net assets funded by equity is the FMI holding for purposes of implementing this plan? How does the FMI determine whether this amount is sufficient for such implementation? Is this amount at a minimum equal to six months of the FMI's current operating expenses?

This is not applicable to the KEPSS system.

Q.15.3.3: How are the resources designated to cover business risks and losses separated from resources designated to cover participant defaults or other risks covered under the financial resources principles?

This is not applicable to the KEPSS system.

Q.15.3.4: Does the FMI include equity held under international risk-based capital standards to cover general business risks?

This is not applicable for the KEPSS system or FMI.

Q.15.4.1: What is the composition of the FMI's liquid net assets funded by equity? How will the FMI convert these assets as needed into cash at little or no loss of value in adverse market conditions?

This is not applicable for the KEPSS system or FMI.

Q.15.4.2: How does the FMI regularly assess the quality and liquidity of its liquid net assets funded by equity to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions?

This is not applicable for the KEPSS system or FMI.

<p>Key Consideration 15.4:</p> <p><i>Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet current and projected operating expenses under a range of scenarios, including in adverse market conditions.</i></p>	<p>Q.15.4.1: What is the composition of the FMI's liquid net assets funded by equity? How will the FMI convert these assets as needed into cash at little or no loss of value in adverse market conditions?</p> <p>This is not applicable for the KEPSS system or FMI.</p> <p>Q.15.4.2: How does the FMI regularly assess the quality and liquidity of its liquid net assets funded by equity to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions?</p> <p>This is not applicable for the KEPSS system or FMI.</p>
<p>Key Consideration 15.5:</p> <p><i>An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.</i></p>	<p>Q.15.5.1: Has the FMI developed a plan to raise additional equity? What are the main features of the FMI's plan to raise additional equity should its equity fall close to or fall below the amount needed?</p> <p>This is not applicable for the KEPSS system or FMI.</p> <p>Q.15.5.2: How frequently is the plan to raise additional equity reviewed and updated?</p> <p>This is not applicable for the KEPSS system or FMI.</p> <p>Q.15.5.3: What is the role of the FMI's board (or equivalent) in reviewing and approving the FMI's plan to raise additional equity if needed?</p> <p>This is not applicable for the KEPSS system or FMI.</p>
<p>Key Conclusion</p>	<p>It is important to note that since the KEPSS services are provided by the central bank, key considerations 2 to 5 are not applicable. The requirement to hold ring-fenced liquid net assets funded by equity to cover business risk and support a recovery or wind-down plan does not apply to the central bank, given the central bank's inherent financial soundness. The CBK has a robust framework to identify, monitor and manage its general business risks under the overall risk management framework, as discussed under principles 3 and 17</p>

Principle 16: Custody and Investment Risks

<p>Assessment Rating</p>	<p>Principle 16 is Considered to be Broadly Observed.</p>
<p><i>An FMI should safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market and liquidity risks.</i></p>	

This principle should be reviewed in the context of Principle 4 on credit risk, Principle 5 on collateral, Principle 7 on liquidity risk, and other principles, as appropriate.

Key Consideration 16.1:

An FMI should hold its own assets and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures and internal controls that fully protect these assets.

Participant default rules and procedures

Q.16.1.1: If the FMI uses custodians, how does the FMI select its custodians? What are the specific selection criteria the FMI uses, including supervision and regulation of these entities? How does the FMI monitor the custodians' adherence to these criteria?

The KEPSS itself has no assets, though the CBK has the rights to financial instruments pledged as collateral for its lending under the ILF/OLF. These securities are held in the CSD operated by the CBK. Pledged securities are segregated in the CSD records and cannot be sold or otherwise utilized by a participant until the CBK releases the pledge following repayment of any loan.

Q.16.1.2: How does the FMI verify that these entities have robust accounting practices, safekeeping procedures, and internal controls that fully protect its and its participants' assets?

The Bank monitors collateralization continuously. If errors are detected in the pledging of collateral or release of pledged securities, this is followed up and, where appropriate, the participant in KEPSS that pledged the security. The BPSD and FMD have an SLA in place which governs the relationship between the two functions

<p>Key Consideration 16.2:</p> <p><i>An FMI should have prompt access to its assets and the assets provided by participants, when required.</i></p>	<p>Q.16.2.1: How has the FMI established that it has a sound legal basis to support enforcement of its interest or ownership rights in assets held in custody?</p> <p>The Bank takes full legal ownership of collateral that is placed with it under the terms and conditions for KEPSS participation. Each participant that joins the KEPSS system is strictly required to sign the KEPSS service agreement. This agreement, among other things, outlines the cession requirement governing the ownership of the financial instruments pledged as collateral by the participant in the KEPSS system against a loan provided to facilitate settlement.</p> <p>During the KEPSS business hours, the Bank provides immediate access to funds held in RTGS and the ability to settle in real-time. The securities the Bank holds against the provision of ILF can be on demand if the Bank considers that the collateral is not required to cover any exposure. The cession can only be lifted once all the obligations, liabilities and monies owed to or payable by the participant have been irrevocably paid and discharged in full. Each participant that joins the KEPSS system is strictly required to sign the KEPSS service agreement.</p> <p>Q.16.2.2: How does the FMI ensure that it has prompt access to its assets, including securities that are held with a custodian in another time zone or legal jurisdiction, in the event of participant default?</p> <p>Securities that participants in KEPSS pledge as collateral in favor of the Bank are registered in separate collateral accounts for this purpose. The collateral accounts are managed by the Bank, and the collateral is released only if it is not in use. The collateral must be always available to the Bank under the agreements with each central securities depository and each participant as pledgor.</p>
<p>Key Consideration 16.3:</p> <p><i>An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationship with each.</i></p>	<p>Q.16.3.1: How does the FMI evaluate and understand its exposures to its custodian banks? In managing those exposures, how does it take into account the full scope of its relationship with each custodian bank? For instance, does the FMI use multiple custodians for the safekeeping of its assets to diversify exposure to any single custodian? How does the FMI monitor concentration of risk exposures to its custodian banks?</p> <p>This is not applicable to the KEPSS system, as it does not have custodian banks.</p>

<p>Key Consideration 16.4:</p> <p><i>An FMI`s investment strategy should be consistent with its overall risk management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.</i></p>	<p>Investment Strategy</p> <p>Q.16.4.1: How does the FMI ensure that its investment strategy is consistent with its overall risk management strategy? How and to whom does the FMI disclose its investment strategy?</p> <p>This is not applicable to the KEPSS system.</p> <p>Q.16.4.2: How does the FMI ensure on an ongoing basis that its investments are secured by, or there are claims on, high-quality obligors?</p> <p>This is not applicable to the KEPSS system.</p> <p>Risk Characteristics of Investments</p> <p>Q.16.4.3: How does the FMI consider its overall exposure to an obligor in choosing investments? What investments are subject to limits to avoid the concentration of credit risk exposures?</p> <p>This is not applicable to the KEPSS system.</p> <p>Q.16.4.4: Does the FMI invest participant assets in the participants' own securities or those of its affiliates?</p> <p>This is not applicable to the KEPSS system.</p> <p>Q.16.4.5: How does the FMI ensure that its investments allow for quick liquidation with little, if any, adverse price effect?</p> <p>This is not applicable to the KEPSS system.</p> <p>KEPSS is a settlement system where participants pledge assets – primarily securities – as collateral for loans from the Bank. The pledged securities are registered in separate collateral accounts and may not be withdrawn etc. without the Bank’s consent. The participant remains the owner of the pledged securities. The Bank does not reinvest assets pledged as collateral for loans. Key consideration 4 is therefore not considered relevant to KEPSS.</p>
<p>Key Conclusion</p>	<p>The KEPSS system has its own collateral management system that fully controls the use of collateral in the system. The CBK is a direct participant with direct control over the financial instruments lodged with the CSD.</p>

Principle 17: Operational Risk

<p>Assessment Rating</p>	<p>Principle 17 is Considered to be Broadly Observed.</p>
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An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI`s obligations, including in the event of a wide-scale or major disruption.

This principle should be reviewed in the context of Principle 20 on FMI links, Principle 21 on efficiency and effectiveness, Principle 22 on communication standards and procedures, and other principles, as appropriate.

Key Consideration 17.1:

An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures and controls to identify monitor and manage operational risks.

Operational Risk Management Framework for KEPSS

Q.17.1.1: What are the FMI's policies and processes for identifying the plausible sources of operational risks? How do the FMI's processes identify plausible sources of operational risks, whether these risks arise from internal sources (for example, the arrangements of the system itself, including human resources), from the FMI's participants or from external sources?

Operational risk management for the Bank's settlement system has been designed on the basis of the risk management framework for the Bank's Operations. The aim of the framework is for the Bank to assess continuously which material risks it faces in respect of its operations, and whether there are appropriate systems for managing these risks. Under the risk management framework, risks are identified in order to map and assess those that could prevent the achievement of objectives at different levels. Within the context of the Bank's risk management framework, the end-to-end KEPSS risk management framework has been created which highlights appropriate systems, policies, and controls in place to identify, monitor and manage risks that may impact the operation of the KEPSS services.

The framework provides the FMI with a framework to identify core processes and implement controls to mitigate potential residual risks. The CBK has put in place policies, processes, and controls to manage or mitigate any potential operational risks. These arrangements include a service level agreement with ITD to manage systems, processes, and risks by ensuring that the FMI's operational reliability objectives, namely availability, recovery time and recovery point objectives are met. Redundancy and disaster recovery (DR) systems and processes, including business continuity arrangements, were established to ensure that the FMI is robust and resilient.

The operational risk management function allows the FMI to proactively manage operational risk by monitoring day-to-day operations and introducing new controls or mitigation strategies. Operational risk management is therefore a continuous process entrenched in the daily operations of the FMI.

Q.17.1.2: What sources of operational risks has the FMI identified? What single points of failure in its operations has the FMI identified?

<p>Key Consideration 17.2:</p> <p><i>An FMI board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI`s operational risk management framework. Systems, Operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.</i></p>	<p>Roles, Responsibilities, and Framework</p> <p>Q.17.2.1: How has the board of directors defined the key roles and responsibilities for operational risk management?</p> <p>The Bank manages the operational risks arising from KEPSS through its risk management framework, the governance of which is set out under Key Consideration 2.6. Under this framework, operational risk policies are developed and approved by the CBK Board, with oversight from the Risk Management Committee. The roles and responsibilities for operational risk management are clearly defined in the CBK Group Risk Management Policy. When it comes to roles and responsibilities, risk management is to organised in such a way as to ensure the necessary delegation of duties and independence between risk management in line management (first line of defence) and defined compliance and risk management functions (second line of defence). The Internal Audit supports the Board in following up the Bank's activities by providing independent assessments and advice on the Bank's governance, risk management and internal control (third line of defence).</p> <p>Q.17.2.2: Does the FMI's board explicitly review and endorse the FMI's operational risk management framework? How frequently does the board review and endorse the FMI's operational risk management framework?</p> <p>Risk management for KEPSS is based on the framework for enterprise risk management for the Bank. The CBK is a central bank and, as such, the FMI operation is not the only or main business of the Bank. The operational risk management, as outlined in the CBK Group Risk Management Policy provides for a high-level framework that is approved by the Board. According to this policy, the Board is ultimately responsible for directing and monitoring the total process of risk management as well as forming its own opinion on the adequacy and effectiveness of the process.</p> <p>The RMCD coordinates the entire risk management process in the CBK Group for reporting to the Board.and relevant risk oversight structures. The FMI operational risk management function provides a proactive risk management process established specifically for FMI operations. The CBK Group Risk Management framework is to be assessed annually and developed further in line with external requirements, internal needs and developments in the field Policy is reviewed annually by the RMCD and is presented to the RMC and BAC for consideration and submission to the Board for approval.</p>
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<p>Key Consideration 17.3:</p> <p><i>An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.</i></p>	<p>Q.17.3.1: What are the FMI's operational reliability objectives, both qualitative and quantitative? Where and how are they documented?</p> <p>The main operational reliability objective is to settle payment orders continuously during KEPSS's opening hours using the ordinary operating and backup solutions. The agreements with suppliers of system, operating and communication solutions for KEPSS contain stringent requirements for IT availability and stable provision of individual services.</p> <p>The FMI's qualitative and quantitative operational reliability objectives include the availability of the system, the recovery time objective (RTO) and the recovery point objective. In the event of severe disruption the main objective is to settle payment orders continuously during KEPSS opening hours using the ordinary operating and backup solutions. When necessary, manual procedures.</p> <p>Q.17.3.2: How do these objectives ensure a high degree of operational reliability?</p> <p>Given the importance of the KEPSS to financial stability, the Bank targets availability of KEPSS settlement to 99.99 percent during operating hours. Sound, efficient and secure settlement of payments is important for the Bank's role in the society and has management's attention. The necessary resources are made available to achieve this objective.</p> <p>Q.17.3.3: What are the policies in place that are designed to achieve the FMI's operational reliability objectives to ensure that the FMI takes appropriate action as needed?</p> <p>The Bank has staffing and operational procedures for continuous monitoring of settlement in KEPSS during the day. This allows for issues to be followed up immediately in line with internal procedures and taken up with external participants and suppliers on the basis of agreed procedures. All incidents are logged on the FMI's call logging application, analyzed for root causes, and reported to the relevant internal and external stakeholders.</p> <p>Severe incidents are escalated to periodic management meetings with suppliers. The procedures for managing non-conformances are updated on the basis of experience from incidents and non-conformances from ongoing operations, exercises and where otherwise deemed necessary.</p>
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<p>Key Consideration 17.4:</p> <p><i>An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.</i></p>	<p>Q.17.4.1: How does the FMI review, audit and test the scalability and adequacy of its capacity to handle, at a minimum, projected stress volumes? How frequently does the FMI conduct these reviews, audits and tests?</p> <p>The framework for enterprise risk management at the Bank, including operational risk management, is subject to auditing by the Bank’s external auditor where this is relevant for the audit of the financial statements. When introducing changes and upgrades, the systems are tested with a much higher number of transactions than normal. Stress testing of the system is done prior to any implementation of a new system or process in the production environment, based on historical maximum volumes as well as projected volumes, considering the data available at the time. The KEPSS hardware infrastructure was upgraded and tested in June 2020.</p> <p>Q.17.4.2: How are situations where operational capacity is neared or exceeded addressed?</p> <p>The KEPSS system capacity has been improved to settle around 125,000 transactions per hour compared to 7,500 transactions per hour prior to go-live of the upgraded KEPSS system (New-Generation) in 2020. The current capacity has not been fully utilized indicating that the current operational capacity is sufficient for now. BPSD as the operator of the system has a real-time monitoring tool to keep track of the number of transactions against the maximum capacity.</p>
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Key Consideration 17.5:

An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

Q.17.5.1: What are the FMI's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of physical vulnerabilities and threats on an ongoing basis?

Physical Security

The RTGS systems is operated from the CBK head office, which has high physical access controls. The CBK is an organ of the state and as such the CBK's security is subject to external oversight and review by official entities. IT Policies and procedures protect RTGS Information. The KEPSS system use SWIFT where transactions are authenticated and encrypted. Audit logs are monitored on a regular basis. KEPSS is certified against the ISO27001 information security standard. The CBK has a set of comprehensive building and information security policies to address potential risks.

The CBK Group Security Policy and related framework provide a framework within which physical and information security risks are managed in the FMI. These allow for the management of physical security, namely facilities, which include assets and processes; information security in any form (i.e. written, spoken and electronic) as well as security for staff, contractors, and visitors.

Cyber resilience in relation to both KEPSS and the Bank's operations more broadly is overseen by the Risk Management Committee as part of the Bank's enterprise-wide risk management framework. Cyber security practices are informed by domestic and international best practice, to mitigate Cyber Security Incidents. To support the Bank's information security, there is a dedicated Information Technology Security Team within the ITD that is headed by a senior Manager, Payment Systems.

Q.17.5.2: Do the FMI's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for physical security?

Activities relating to policies, processes, controls and testing of physical security for KEPSS take place in close collaboration with specialist units in this area. Relevant national and international requirements and standards serve as a basis for physical security requirements and are adjusted in line with assessed threats and risks. The CBK Group's security function complies with relevant legislation in terms of physical, personnel and information security. Security

Key Consideration 17.6:

An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that cause a widespread or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by end of day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.

Objectives of Business Continuity Plan

Q.17.6.1: How and to what extent does the FMI's business continuity plan reflect objectives, policies and procedures that allow for the rapid recovery and timely resumption of critical operations following a wide-scale or major disruption?

The continuity plan for KEPSS is designed to ensure continuous settlement of payment orders even when there is disruption in the ordinary operating solutions. CBK has in place a Business Continuity Policy which aims to provide a framework for the effective management of a BCM programme. This policy allows each department, including the FMI, to establish a BCP which is specific and appropriate to its own operations. The FMI's BCP is specific on all the FMI's business critical business processes, ICT applications used, the critical time period during which these processes are required, interdependencies and the amount of time required to recover these processes.

The operational disruptions catered for in the FMI's BCP cover any situation or incident that has a major or worst-case impact on the continuity of the identified critical business processes and reputation of the FMI. The BCP in place defines the roles and responsibilities of the recovery team, including governance arrangements, to clarify the level of authority required to invoke the plan. Operational procedures are documented to support the recovery of the FMI's critical business processes. The RTO for the FMI's critical business processes for all major business processes is set for two hours during primary and secondary time.

For the communication solution SWIFT, there are also procedures for reporting critical issues such as problems with the system solution, hardware or communication lines. The Bank has an extended user support agreement with SWIFT to ensure priority treatment and access to resources at SWIFT to deal with issues

Design of Business Continuity Plan

Q.17.6.2: How and to what extent is the FMI's business continuity plan designed to enable critical IT systems to resume operations within two hours following disruptive events, and to enable the FMI to facilitate or complete settlement by the end of the day even in extreme circumstances?

The continuity plan for KEPSS is designed to ensure continuous settlement of

<p>Key Consideration 17.7:</p> <p><i>An FMI should identify, monitor and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor and manage the risks its operations might pose to other FMIs.</i></p>	<p>Risks to the FMI's own Operations</p> <p>Q.17.7.1: What risks has the FMI identified to its operations arising from its key participants, other FMIs, and service and utility providers? How and to what extent does the FMI monitor and manage these risks?</p> <p>The greatest risks for KEPSS relate to threats to IT systems in the financial sector and critical infrastructure, and the use of external suppliers of critical services. The sources of operational risks in the KEPSS operations that have been identified include the Telecommunications (international and domestic), loss of SWIFT (international and domestic), loss of infrastructure, power failures, payment processing system failures and loss of key human resources have been identified as sources of operational risks in the FMI operations.</p> <p>Participants are required to log any new changes relating to their payment and settlement systems with the FMIs. Testing is required for these changes and progress is monitored by the FMI. Participants are also required to provide implementation and back-out plans for changes that are introduced in their systems. The risk in KEPSS is monitored constantly through surveillance of day-to-day operations with registration and follow-up of incidents and contingencies. These risk assessments are reviewed and updated quarterly and in the event of significant changes to KEPSS or the regulatory framework..</p> <p>Q.17.7.2: If the FMI has outsourced services critical to its operations, how and to what extent does the FMI ensure that the operations of a critical service provider meet the same reliability and contingency requirements they would need to meet if they were provided internally?</p> <p>The agreement with each provider of services that are critical to KEPSS emphasizes requirements for stable and reliable performance. This includes each system's technical availability, contingency procedures and the registration, follow-up and reporting of problems. The requirements are based on national rules for critical infrastructure and international recommendations for settlement systems at central banks. Service level agreements with penalty clauses are in place with service providers to protect critical services. To address the risks to KEPSS from critical dependencies on utility providers, the Bank has put in place a number of controls:</p> <ul style="list-style-type: none"> • each site has an uninterruptable power supply and a backup power generator system. • regular testing of backup arrangements
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<p>Key Conclusion</p>	<p>The CBK has in place an operational risk function that provides for a systematic, structured and transparent approach to managing operational risks in the FMI. Operational risk in the FMI is mitigated through the system and processes' design and architecture, which provides for system integrity and security, and the availability of FMI operations. The KEPSS system has a high degree of operational reliability due to the resilience of the technical architecture and infrastructure, which enables the FMI to render settlement services to the participating institutions.</p> <p>The continuity plan for KEPSS covers events where there is a risk of disruption to the operation of the settlement system. Access to an enhanced contingency solution in the SWIFT network means that data from payment messages can provide the basis for the settlement of payments in a situation where the ordinary operating and backup solutions are out of action. This contingency solution has a risk profile that is distinct from that of the primary and secondary solutions. Failures and disruption at external players such as banks and clearing systems may result in delays and disruption in KEPSS and in the payment system as a whole. The risk to KEPSS in such cases relates to efficient and appropriate contingency management for the settlement of payments. As such there is need for the bank to implement a failure to settle mechanism to mitigate the risks that may be pose by these external players.</p> <p>The Bank has however, not conducted an evaluation of the accounts of all critical service providers such as KENEX to ensure preparedness for possible financial problems and to take action in good time to ensure stable operation of KEPSS.</p>
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Principle 18: Access and Participation Requirements

<p>Assessment Rating</p>	<p>Principle 18 is Considered to be Observed.</p>
<p><i>An FMI should have objective, risk based and publicly disclosed criteria for participation, which permit fair and open access.</i></p>	
<p>In reviewing this principle, it should be noted that FMIs are subject to the constraints of local laws and policies of the jurisdiction in which the FMI operates, and those laws may prohibit or require the inclusion of certain categories of financial institutions. This principle should be reviewed in the context of Principle 19 on tiered participation arrangements, Principle 21 on efficiency and effectiveness, and other principles, as appropriate</p>	

<p>Key Consideration 18.1:</p> <p><i>An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk related participation requirements.</i></p>	<p>Participation Criteria and Requirements</p> <p>Q.18.1.1: What are the FMI's criteria and requirements for participation (such as operational, financial and legal requirements)?</p> <p>The management of the NPS by the CBK includes the provision of participation access to the industry and ensures that requirements are set and adhered to. Categories for service providers in the NPS include non-clearing banks, clearing banks, settlement banks and third-party payment service providers. This environment is well organised and well regulated. Only clearing and settlement banks are allowed to participate in this area. The KEPSS system does not allow for indirect participants. Participating banks can be settlement banks for Third Party payment service providers such as the payment switches. For this kind of arrangements, the settlement bank assumes full responsibility for the settlement in KEPSS. The participant's exposure is not directly visible in the KEPSS system.</p> <p>Participants are subject to all applicable laws and the regulatory framework of the NPS. The initial and continuing eligibility requirements for direct participation in the KEPSS system are objective and expressly set out and approved by the regulatory structure as discussed in <i>Principle 1</i>. The access criteria for KEPSS are applied transparently across all participants who must meet the laid down access criteria. At present, KEPSS membership is generally provided to all licensed commercial and microfinance banks provided they fulfill the primary eligibility requirements specified in the KEPSS Rules and Procedures and in the starter pack for participation, which is disseminated as a participant handbook to participants of the NPS. The criteria is designed to permit fair and open access based on the goal of protecting the integrity of the settlement and payment processes, and mitigating any relevant risks associated with participation in the KEPSS system.</p> <p>The CBK is empowered to designate a settlement system as a designated settlement system in terms of section 3 of the NPS Act, 2011. Such designation may be made if the (a) the payment system poses systemic risk; (b) the designation is necessary to protect the interest of the public; or (c) such designation is in the interest of the integrity of the payment system.</p> <p>Q.18.1.2: How do these criteria and requirements allow for fair and open access to the FMI's services, including by direct and, where relevant,</p>
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<p>Key Consideration 18.2:</p> <p><i>An FMI`s participation requirements should be justified in terms of the safety and efficiency the FMI and the markets it serves, be tailored to and commensurate with the FMI`s specific risks and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavor to set requirements that have the least restrictive impact on access that circumstances permit.</i></p>	<p>Justification and Rationale of Participation Criteria</p> <p>Q.18.2.1: How are the participation requirements for the FMI justified in terms of the safety and efficiency of the FMI and its role in the markets it serves, and tailored to and commensurate with the FMI's specific risks?</p> <p>The Bank proactively seeks to provide fair and open access to a broad range of institutions. Participation is open to all licensed commercial banks that have met its eligibility criteria. The Bank has expanded the perimeter of the type of institutions eligible for access to include institutions such as non-bank microfinance that have qualified to be direct participants having met the set criteria.</p> <p>The Bank looks to ensure that access is available as widely as possible, while ensuring the integrity of the system and its role regarding maintaining monetary and financial stability. The Bank publishes the access criteria for settlement account under the KEPSS Rules and Procedures published on the CBK website. To become a KEPSS Direct Participant, an applicant must meet the definition of a “participant” as defined in the NPS ACT, 2011.</p> <p>Q.18.2.2: Are there participation requirements that are not risk-based but required by law or regulation? If so, what are these requirements?</p> <p>To hold an account at the Bank and participate in the settlement of payments in KEPSS, participants must meet objective, formal requirements that include holding a license to carry on business as a bank or micro-finance bank. All the participation requirements defined by the NPS Act, the starter pack and the KEPSS Operations Manual are intended to mitigate risk.</p> <p>Q.18.2.3: Are all classes of participants subject to the same access criteria? If not, what is the rationale for the different criteria (for example, size or type of activity, additional requirements for participants that act on behalf of third parties, and additional requirements for participants that are non-regulated entities)?</p> <p>All participants in the KEPSS system must be a bank or microfinance bank or designated settlement participant, as stipulated in the NPS Act. No unregulated entities participate in KEPSS.</p> <p>Least Restrictive Access</p>
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<p>Key Consideration 18.3:</p> <p><i>An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.</i></p>	<p>Monitoring Compliance</p> <p>Q.18.3.1: How does the FMI monitor its participants' ongoing compliance with the access criteria? How are the FMI's policies designed to ensure that the information it uses to monitor compliance with participation criteria is timely and accurate?</p> <p>The Bank continuously monitors the settlement of payments in KEPSS and participants' use of the settlement system and their accounts. Non-conformances are registered and followed up both with each participant and as a source of experience for assessing the suitability of the participation criteria. This continuous monitoring and registration of non-conformances helps ensure that the Bank has up-to-date and accurate information about participants' compliance with the criteria.</p> <p>It is the responsibility of the participant to ensure that its systems are adequate to operate the transactions contemplated in the services and its back-up systems are an adequate alternative to its systems upon the occurrence of a disaster event. Each participant is obliged to ensure that it is able to meet its settlement obligations timeously, and that its systems and procedures are adequate to ensure that failure thereof will not jeopardize the payments system.</p> <p>Q.18.3.2: What are the FMI's policies for conducting enhanced surveillance of, or imposing additional controls on, a participant whose risk profile deteriorates?</p> <p>Payment orders from a participant in KEPSS are executed only if the participant has sufficient funds to cover the payment in the form of deposits or available credit. Payment orders without sufficient funds will not be executed. Where this is part of a clearing, the clearing will be rejected after a set time and the clearinghouse will need to calculate a new clearing result that can be settled. The Bank plays a variety of roles in the financial system, including supervision and analysis of banks' financial position and liquidity in the money market. Should this supervision pick up anything that may be significant for the Bank as settlement bank, this will be reported internally through established notification and information procedures. If this information may be significant for KEPSS, the Bank may contact the participant to obtain further details.</p> <p>The BPSD oversight framework includes the monitoring of participants</p>
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<p>Key Conclusion</p>	<p>The terms and criteria for holding an account at the Bank, participating in KEPSS, and taking out loans are set out clearly in publicly disclosed rules and procedures. The same applies to the procedures for terminating an account. The rules, which are publicly available, define the requirements for initial and continuing participation in the KEPSS system. Upon joining, participants are continually monitored for compliance with the regulatory framework. Failure to abide by these regulations could result in suspension from the system.</p> <p>Participation in KEPSS is open to a financial institution or any entity/ institution approved by the CBK, provided it meets all the eligibility criteria and conditions. KEPSS has fair and open access criteria with an aim to promote risk management capability, system stability and efficiency as well as financial stability. The CBK examines and monitors KEPSS participants' ongoing compliance by performing an annual review of KEPSS compliance requirements of all approved participants.</p>
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Principle 19: Tiered Participation Arrangements

<p>Assessment Rating</p>	<p>Principle 19 is Considered to be Observed.</p>
<p><i>An FMI should identify, monitor and manage the material risks to the FMI arising from the tiered participation arrangements.</i></p>	
<p>This principle should be reviewed in the context of Principle 14 on segregation and portability, Principle 18 on access and participation requirements, and other principles, as appropriate.</p>	

<p>Key Consideration 19.1:</p> <p><i>An FMI should ensure that its rules, procedures and agreements allow it to gather basic information about indirect participation in order to identify, monitor and manage any material risks to the FMI arising from such tiered participation arrangements.</i></p>	<p>Tiered participation arrangements</p> <p>Q.19.1.1: Does the FMI have any tiered participation arrangements? If so, describe these arrangements.</p> <p>The KEPSS system provides only for direct settlement banks but allows for settlement of clearings from clearinghouse (NACH), payment switches (debit and credit cards) and individual banks' such as microfinance banks that are not participating members that use other member banks to settle payments in KEPSS through the submission of the NSI files..</p> <p>Q.19.1.2: How does the FMI gather basic information about indirect participation? Which information is collected and how frequently is it updated?</p> <p>The CBK's bank models is not designed to cater for indirect participation. KEPSS has contractual agreements with the direct participants and has no relationship with the third-party participants; thus, KEPSS has neither obligations towards nor interaction with any third-party arrangements. Therefore, an indirect participant's exposure is not visible in KEPSS as the direct participant assumes full responsibility for the settlement in KEPSS. (Refer to Principle 18, key consideration 1). For this reason, the FMI does not collect any third-party information through settlement (i.e. when KEPSS processes a settlement instruction where a participant is settling on behalf of the customer, the customer information is removed and KEPSS receives only the direct participant's information).</p> <p>Risks to the FMI</p> <p>Q.19.1.3: How does the FMI evaluate its risks arising from these arrangements?</p> <p>The risk to the Bank from tiered participation in KEPSS is mainly related to the risk to settlement banks participating directly in the settlement of payments in KEPSS. It will be the settlement bank that identifies and manages risks that arise from the settlement of payments for clearing system (NACH) and payment switches. If the settlement bank is unable to discharge its obligations this can cause disruption in the payment system that could also affect the settlement of payments in KEPSS. There are no contingency measures address such disruptions. The Bank should consider implementing a "failure to settle mechanisms".</p>
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<p>Key Consideration 19.2:</p> <p><i>An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.</i></p>	<p>Q.19.2.1: How does the FMI identify material dependencies between direct and indirect participants that might affect the FMI?</p> <p>The risk to KEPSS from dependencies between direct and indirect participants in KEPSS is assessed as part of the regular review of the risk picture for KEPSS. In principle, tiered participation does not pose any risks of significance for the settlement of payments in KEPSS. It is difficult to identify any material dependencies between direct participants and third-party participants that will affect the KEPSS system or other participants through their settlement in KEPSS as these third parties do not have any contractual agreements with KEPSS, and all payment instructions take place only between the FMI and the KEPSS participant. Therefore, it is the responsibility of the settlement bank to manage credit risk exposure to the third-party entity's obligations.</p>
<p>Key consideration 19.3:</p> <p><i>An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.</i></p>	<p>Q.19.3.1: Has the FMI identified</p> <ul style="list-style-type: none"> a) the proportion of activity that each direct participant conducts on behalf of indirect participants in relation to the direct participants' capacity, b) direct participants that act on behalf of a material number of indirect participants, c) indirect participants responsible for a significant proportion of turnover in the system, and d) indirect participants whose transaction volumes or values are large relative to the capacity of the direct participant through which they access the FMI to manage risks arising from these transactions? <p>KEPSS does not currently monitor any of the mentioned criteria relating to indirect participants because it does not keep records of such participants.</p> <p>As part of its role as the licensing body for interbank systems, and of its responsibility for promoting an efficient payment system and financial stability, the Bank assesses structural developments in direct and tiered participation in the settlement of payments. Some direct participants offer tiered participation in several types of settlement. This applies particularly to banks which is the settlement bank for third party service providers such as payment switches and NACH..</p> <p>Q.19.3.2: What risks to the FMI arise, and how does the FMI manage these risks arising from key indirect participants?</p> <p>The settlement bank accepts the settlement risk and, is required to ensure that the obligations arising from the clearing of third party are settled; therefore, only the settlement bank is managed by the FMI. Monitoring should be performed between the settlement bank and third-party entities in respect of indirect exposures.</p>

<p>Key consideration 19.4:</p> <p><i>An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.</i></p>	<p>Q.19.4.1: What are the FMI's policies for reviewing its rules and procedures in order to mitigate risks to the FMI arising from tiered participation?</p> <p>How frequently is this review conducted?</p> <p>KEPSS does not currently monitor any indirect participants because it does not keep records of such participants.</p> <p>Q.19.4.2: What criteria does the FMI use to determine when mitigating actions are required? How does the FMI monitor and mitigate its risks?</p> <p>KEPSS does not currently monitor any indirect participants because it does not keep records of such participants.</p>
<p>Key Conclusion</p>	<p>There is no tiered participation in the KEPSS system. All participants are direct members, and they are licensed commercial and microfinance banks that have fulfilled the membership requirements. There is no category for indirect members. The retail payment payment systems i.e te clearing system and payment switches (debits and redit cards) are given access to submit net settlement files (NSI) to the RTGS system for settlement purpose only through participating member banks contractual agreements with the third parties. Failures and disruption at such external players may result in delays and disruption in KEPSS and in the payment system as a whole. The risk to KEPSS in such cases relates to efficient and appropriate contingency management for the settlement of payments.</p>

Principle 20: FMI links

An FMI that establishes a link with one or more FMIs should identify, monitor and manage link related risks.

Principle is not applicable.

The Bank has not established links with other FMIs beyond standard SWIFT-based communication to receive payment orders, send confirmation of settlement and exchange other types of messages. This principle is not considered to be relevant to KEPSS.

Principle 21: Efficiency and Effectiveness

Assessment Rating	Principle 21 is Considered to be Observed.
<i>An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.</i>	
This principle should be reviewed in the context of Principle 17 on operational risk, Principle 18 on access and participation requirements, Principle 22 on communication procedures and standards, and other principles, as appropriate.	

<p>Key Consideration: 21.1:</p> <p><i>An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled or recorded; and use of technology and procedures.</i></p>	<p>Q.21.1.1: How does the FMI determine whether its design (including its clearing and settlement arrangement, its operating structure, its delivery systems and technologies, and its individual services and products) is taking into account the needs of its participants and the markets it serves?</p> <p>The Bank's strategy is to concentrate its activities as a settlement bank on ensuring efficient and secure settlement of payments between banks. The Bank has implemented a modern real-time settlement system. The payment settlement service is specifically designed to effectively and efficiently improve and address settlement risk in the Kenyan national payment systems. In its efforts to ensure improve efficiency and effectiveness of the system, the Bank upgraded the system to a modern real-time settlement system the New-Generation KEPSS settlement system in June 2020.</p> <p>The responsibility of operating the KEPSS system has been delegated to BPSD. While providing and maintaining an efficient payment settlement service through the KEPSS system, the CBK also facilitates the improvement of operational standards and straight through processing, and helps to reduce the need for reconciliation among its participants. The aim of the KEPSS system is also to significantly reduce the amount of post-settlement workflow as the validations required and algorithms used reduces duplicates, failed payments and unaccountable claims.</p> <p>The SWIFT network is the main channel for communication with banks and clearinghouses on payment instructions and settlement confirmations. Banks can monitor movements in their accounts in real time and can submit payment orders via the proprietary solution KEPSS Online solution.</p> <p>Q.21.1.2: How does the FMI determine whether it is meeting the requirements and needs of its participants and other users and continues to meet those requirements as they change (for example, through the use of feedback mechanisms)?</p> <p>The interbank clearing systems are organised and operated by the banking industry and participants in the securities market, i.e. NACH, CSD. The Bank, the banking industry and other stakeholders in the payment system collaborate on the operation and development of settlement and clearing systems. When there is a new initiative or system development due to a change in payment environment or new edge of technology, the CBK will discuss with relevant stakeholders to exchange views and insights. Moreover,</p>
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Key Consideration 21.2:

An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in areas of minimum service levels, risk management expectations and business priorities.

Q.21.2.1: What are the FMI's goals and objectives as far as the effectiveness of its operations is concerned?

The objective of KEPSS is secure and efficient settlement of payments between banks that have an account at the CBK. The settlement system must comply with relevant international standards and requirements for critical infrastructure. Payment orders are to be settled continuously during KEPSS's opening hours using the standard operating and backup solutions. In the event of severe disruption, the objective is for all payment orders to be settled on the same day with the help of an enhanced contingency solution

The strategy of the Bank includes a mission statement for the bank's operation of KEPSS services consistent with the Bank's overall mission. This sets out that the purpose of the services is to deliver; the Bank's monetary and financial stability mission by providing a resilient, well-run and responsive RTGS infrastructure that enables access to central bank money accounts and payment services, and the Bank's financial stability mission by providing a reliable, resilient and responsive system for high value Kenya shillings payments.

Q.21.2.2: How does the FMI ensure that it has clearly defined goals and objectives that are measurable and achievable?

The qualitative objectives for the operation of KEPSS can be measured through monitoring of operations, recording, and reporting of incidents and disruptions, measurement of the technical availability of system solutions (uptime) and achievement of the recovery time objective following a disruption.

Q.21.2.3: To what extent have the goals and objectives been achieved? What mechanisms does the FMI have to measure and assess this?

Since the current core system for KEPSS was implemented on July 29, 2005, there has been only rare and short-lived disruption in the settlement of payments. There has also been stable operation of other key KEPSS systems such as the communication solution SWIFT and the system for collateral for loans. In the case of KEPSS Online, which gives participants access to information on their accounts in KEPSS and allows them to submit payment orders, some users have at times experienced dropped connections, forcing them to log in again. Operational stability is monitored and reported continuously. Incidents and non-conformances are followed up internally, with

<p>Key Consideration 21.3:</p> <p><i>An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.</i></p>	<p>Q.21.3.1: What processes and metrics does the FMI use to evaluate its efficiency and effectiveness</p> <p>Participants' understanding of the risks associated with participating in KEPSS depends largely on their own internal risk assessments which they are required to perform under the rules that apply to them as financial institutions. The documentation of rules and operational procedures for KEPSS also forms part of the basis for this understanding. Participants may contact the Bank directly with questions in this context. All new participants must also complete a course in KEPSS Online, which provides Internet-based access to information from their own accounts. A user guide to KEPSS Online has been prepared which also contains some information on contingency procedures. Courses and training are provided at participants' request and as required.</p> <p>There is also healthy contact with all the participants on matters concerning the settlement of payments and management of non-conformances. KEPSS also receives external audit on Information System covering IT governance, business continuity management, network and server management and software quality assurance.</p> <p>Q.23.3.2: Is there evidence that the means described above enable participants' understanding of the FMI's rules, procedures and the risks they face from participating in the FMI?</p> <p>The most important evidence that the documentation and training for participants result in a good understanding of participation in KEPSS is that the settlement of payments has been stable and lived up to expectations for many years. Occasionally, there are issues that may be due to participants failing to follow applicable routines and procedures in KEPSS, but there are rarely any significant problems. Experience shows that participants generally comply with the applicable rules and procedures. Understanding of the rules is supported by joint exercises to test contingency procedures and joint fora for exchanging information and opinions.</p> <p>Q.23.3.3: In the event that the FMI identifies a participant whose behaviour demonstrates a lack of understanding of the FMI's rules, procedures and the risks of participation, what remedial actions are taken by the FMI?</p> <p>If the Bank detects a lack of understanding of the rules and procedures for KEPSS, it will get in touch with one of the participant's designated contacts to</p>
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