



National Bank of Rwanda
Banki Nkuru y'u Rwanda

P.o.Box 531 Kigali - Rwanda
Tel: (+250) 252 59142200 /
252 59142231 (30 Lines) /
0788172200 / 0788172231 (30 Lines)
Fax: (+250) 252 572551 / 252 577391
E-mail: info@bnr.rw
Website: www.bnr.rw

OVERSIGHT POLICY FRAMEWORK FOR FINANCIAL MARKET INFRASTRUCTURES IN RWANDA

Kigali, June 2014

EXECUTIVE SUMMARY

Financial market infrastructures are critical to the effective functioning of financial systems worldwide. In order to avoid that payment systems transmit disruptions within the domestic and international financial market, such systems must be overseen closely to protect them against credit, legal, operational and other risks.

In this regard, the document on oversight policy framework has been elaborated to set out the policy framework that will govern oversight of the payments and securities settlement systems by the BNR. It provides a comprehensive overview of the methods, policy, scope and activities that the BNR carries out in its oversight duty. The responsibility is part of the BNR's wider responsibilities for monetary and financial stability. BNR will oversee all payment and securities settlement systems, those it operates and of other entities, including payment and settlement systems, payment system operators, payment services providers, payment instruments and remittances. The aim is to ensure that payment and settlement systems function securely and efficiently, via processes of monitoring, analysing and inducing changes in the systems. The guiding policy statements include payment systems safety, efficiency, reliability and equitable Services.

During the oversight function, BNR will use both risk-based and standards methodologies in order to provide an effective approach to assess risks in payment and settlement systems, to ensure that BNR focuses its risk mitigation actions on those systems where risks are significant and to enable the identification, across systems, of the types of risk on which BNR should focus oversight resources basing on best practices. For a better oversight, BNR will also ensure cooperation between its various units and with other regulators in Rwanda and other countries. In case an operator of payment and securities settlement system and a payment service provider breaches the laws, regulations and directives governing the payment and securities settlement systems and the payment services, BNR has the right to apply sanctions both disciplinary and pecuniary sanctions basing on laws and regulations in place.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
TABLE OF CONTENTS.....	3
I. INTRODUCTION	5
2. BNR OVERSIGHT OBJECTIVES.....	5
3. OVERSIGHT OPERATIONAL GUIDELINES	6
4. OVERSIGHT MANDATE.....	6
5. OVERSIGHT POLICY STATEMENT.....	6
5.1. Safety	7
5.2. Efficiency	7
5.3. Reliability.....	7
5.4. Equitable Services	7
6. THE SCOPE OF BNR OVERSIGHT	7
6. 1.Payment and settlement systems	8
6. 2. Payment systems operators	8
6.3. Payment Services Providers.....	8
6.4. Payment instruments.....	9
6.5. Remittance Services.....	9
7. BENCHMARK FOR PAYMENT SYSTEMS OVERSIGHT	9
8. RISKS IN FINANCIAL MARKET INFRASTRUCTURE (FMI)	10
9. CRITERIA FOR SYSTEMICALLY IMPORTANT PAYMENT SYSTEMS IN RWANDA	10
10. OVERSIGHT ACTIVITIES	10
10.1. Licensing.....	10
10.2. Monitoring	11
10.3 Assessment	11
10.4 Inducing change	12
11. COOPERATIVE OVERSIGHT.....	12
11.1. Cooperation within the BNR.....	12
11.2. Cooperation with regional central banks	12
11.3. Cooperation with other regulatory authorities	13
12. TARGETS OF OVERSIGHT.....	13
12.1 Access.....	13
12 .2 Risk control.....	13
12.3 Information transparency.....	13
12.4 Pricing.....	13
12.5 System Reliability	14

13. BNR POWERS TO IMPOSE SANCTIONS FOR NON COMPLIANCE	14
14. BNR REPORTING OF OVERSIGHT ACTIVITIES	14
15. CONCLUSION.....	14
APPENDIXES	15
Appendix I: GLOSSARY OF TERMS.....	15
Appendix II: PRINCIPLES AND RESPONSIBILITIES OF CENTRAL BANKS, MARKET REGULATORS, AND OTHER RELEVANT AUTHORITIES FOR FINANCIAL MARKET INFRASTRUCTURES (BIS- IOSCO:2012).....	17
Appendix III : GENERAL PRINCIPLES FOR INTERNATIONAL REMITTANCE SERVICES (BIS : 2007). 21	
Appendix IV: RISKS IN PAYMENT AND SETTLEMENT SYSTEMS AND MITIGATION MEASURES	22
Appendix V: PAYMENT AND SETTLEMENT SYSTEMS RISK ASSESSMENT MATRIX	23
Appendix VI: PAYMENT SYSTEMS CATEGORIES.....	25
Appendix VII: DESIGNATION CRITERIA FOR PAYMENT SYSTEMS IN RWANDA	26
REFERENCES	26

I. INTRODUCTION

Financial Market Infrastructures (FMIs) also referred to as payment, securities settlement and trade repositories system comprises of a set of instruments and banking procedures that facilitate the circulation of money in economy. They facilitate transfer, storage and settlement of monetary instruments and transmission of monetary policy. This function makes payment systems critical to the effective functioning of financial systems worldwide. Its failure can result in inefficient use of financial resources, inequitable risk-sharing among participants, actual losses, and loss of confidence in the financial system.

The National Bank of Rwanda (BNR) like other central banks worldwide exercises supervision and oversight of payment and settlement systems. In order to avoid payment system transmitting disruptions within the domestic and international financial market, such systems must be sufficiently protected against credit, legal, operational and other risks. The responsibility is part of the BNR's wider responsibilities for monetary and financial stability. The aim is to ensure that payment and settlement systems function securely and efficiently, via processes of monitoring, analysing and inducing changes in the systems.

This responsibility is assigned to BNR vide the Law N° 55/2007 of 30/11/2007 governing BNR which grants BNR powers of supervising and regulating payment systems.

BNR payment and securities settlement systems oversight uses both risk-based and standards methodologies. The use of both methodologies helps to providing an effective approach to assess risks in payment and settlement systems. They help to ensure that BNR focuses its risk mitigation actions on those systems where risks are significant; but also enable the identification, across systems, of the types of risk on which BNR should focus oversight resources basing on best practices.

The purpose of this document is to define and disclose the objectives of the Payment and settlement Systems oversight policy performed by BNR. It also provides an overview of the broader framework in place for assessment and monitoring of payment and securities settlement systems.

2. BNR OVERSIGHT OBJECTIVES

The objectives pursued by the BNR in its oversight functions are as follows:

1. Maintaining stability in payment and securities settlement systems by reducing exposure to systemic risk and other risks;
2. Promote safety and efficiency of FMIs through systems designs, which comply with international best practices and standards.

3. Ensure safety and efficiency of payment instruments used by the public, and associated clearing facilities;
4. Safeguarding an essential medium for the transmission of monetary policy through the oversight function; and
5. Ensure that market participants have fair access to payment system, clearing, and securities settlement systems.

Thus, the main objectives of BNR oversight function involve facilitating management of risks, promoting efficiency and thereby encourage competition, protecting consumers/users, and ensuring efficient infrastructure to facilitate implementation of monetary policy and maintain financial stability.

3. OVERSIGHT OPERATIONAL GUIDELINES

Oversight of payment and settlement systems is a central bank function whereby the objectives of safety and efficiency are promoted by monitoring existing and planned systems, assessing them against these objectives and, where necessary, inducing change¹.

BNR shall use international, regional and national risk management standards in conducting the oversight function. These standards shall include, those issued by the Bank for International Settlement (BIS) and the International Organisation for Securities Commission (IOSCO), International Standards Organisation (ISO), Industry best practices such as Payment Card Industry Standards, laws, directive and rules issued by BNR and other regionally (EAC) agreed standards.

The Principles for Financial Market Infrastructures and the Disclosure and Assessment Methodology (BIS/IOSCO: 2012) shall be the de facto standards in assessing financial market infrastructure in Rwanda. Summarised highlight of the PFMIs is attached as Appendix I.

4. OVERSIGHT MANDATE

The legal foundation for the oversight of payment systems in Rwanda is enshrined in the Law No 55/2007 of 30/11/2007 governing the Central Bank and Law N°03/2010 of 26/02/2010 concerning Payment System.

5. OVERSIGHT POLICY STATEMENT

The following statements are guiding policy statements on payment and settlement systems oversight in Rwanda:

¹ BIS, GLOSSARY OF TERMS

5.1. Safety

BNR shall monitor and assess risk management frameworks and practices for financial market infrastructure in order to ensure compliance to best practices in ensuring that such infrastructure are protected.

5.2. Efficiency

BNR shall monitor, assess, encourage innovation and adoption of appropriate technology that reduce cost of providing services; it promotes also the development and operation of payment and securities settlement systems that are interoperable to enhance cooperation and competition in the market.

5.3. Reliability

BNR shall monitor and assess performance of financial market infrastructure in order to ensure their availability and integrity.

5.4. Equitable Services

BNR shall monitor and assess financial market infrastructure to ensure they are conducted on an equitable basis without undue restrictions on access or over pricing; and that payment and securities settlement system services adhere to consumer rights to privacy and information disclosures.

6. THE SCOPE OF BNR OVERSIGHT

BNR oversees all payment and securities settlement systems: those it operates and of other entities. For banking institutions, the oversight activity does not cover inspection of the whole institution but focuses only on the risks associated in the activities of operating the payment infrastructure. For non-bank institutions, the oversight activity shall cover both institutional issues and the payment infrastructure guided by the relevant BNR regulations such as regulation governing payment services providers, regulation relating to the licensing criteria of operating payment and securities settlement systems and regulation relating to the oversight of payment systems and the activities of payment service providers; and other risk management requirements for governance and institutional risks.

These are related but not limited to:

- Payment and settlement systems;
- Payment system operators;
- Payment services providers;
- Payment instruments;
- Remittances.

BNR's approach to payment and settlement systems oversight is to prioritize and address what it assesses to have more systemic risk in the systems. The following categorization highlights the Rwandan Financial Market Infrastructure (FMI) (Appendix V provides the FMI categories).

6. 1.Payment and settlement systems:

a. Rwanda Integrated Payments and Processing System (RIPPS)

To ensure that time critical payments are settled in real time, in 2011 the BNR put in place a real time settlement system called the Rwanda Integrated Payments Processing System (RIPPS), encompassing the Automated Clearing House (ACH), the Real Time Gross Settlement (RTGS) and the Central Securities Depository (CSD), all three running on the same platform.

RIPPS which is a systemically important system process all interbank transactions of high and low value. It is essential to the proper functioning of the financial system. A failure could trigger disruptions or transmit shocks, both at national and at cross-border level as it will be linked to the East African payment System (EAPS) and Regional Payments and Settlement System (REPS).

b. Retail Payment Systems

Rwanda's retail payment systems include payment card transactions switches, mobile payment schemes. Retail payment systems handle a large number of payment orders of low value. Retail payment systems are important for the provision of payment services to the economy, most of them are of wide importance: their failure often may cause a wide inconvenience to the population.

6. 2. Payment systems operators:

These are entities that operate/own payment systems. They may be BNR, commercial banks, Micro finance institutions, Switches, telecoms, etc. BNR sets licensing requirements to operate payment and settlement systems referring to laws and regulations. Assessment of these systems on risk management is based on international standards, current in force, which are the Principles for Financial Market Infrastructures and any other issued from time to time.

6.3. Payment Services Providers:

Payment services providers (PSP) are any entity providing services enabling cash deposits and withdrawals, execution of payment transactions, issuing and/or acquisition of Payment Instruments, money remittances and any other services functional to the transfer of money. BNR's oversight role is to ensure that the PSPs comply with the regulation governing payment services providers and other international standards regarding risk management. BNR shall

cooperate with other regulators in overseeing PSPs that are also regulated by these Regulatory Authorities.

6.4. Payment instruments:

Rwanda's payment instruments comprise of paper and electronic instruments that facilitate transfer of funds in the market. Examples of these instruments include: cheques, EFT, debit and credit cards, mobile money among others. BNR's oversight roles is necessary to ensure that these instruments are issued in compliance with safety and efficiency requirements

6.5. Remittance Services:

A remittance is a person to person transfer of funds of relatively low value which are either domestic or international. Remittances have a significant value to the households of Rwandans and the economy at large. BNR oversight role is important to ensure that remittance services are operated efficiently and safely by the Remittance Service Providers.

7. BENCHMARK FOR PAYMENT SYSTEMS OVERSIGHT

BNR shall use international, regional and national risk management standards in conducting the oversight function. These standards shall include, those issued by the Bank for International Settlements (BIS) and the International Organisation for Securities Commission (IOSCO), International Standards Organisation (ISO), Industry best practices such as Payment Card Standards, laws, directive and rules issued by BNR and other regionally (EAC) agreed standards.

The Principles for Financial markets Infrastructure and the Disclosure and Assessment Methodology (BIS/IOSCO: 2012) shall be the current de facto standards, in assessing financial market infrastructure in Rwanda including the General Principles for International Remittance Services. Summarised highlight of the PFMI and Remittance Principles are attached as Appendix I and Appendix II respectively.

These standards shall be applied in monitoring and assessing the design and operation of payment and settlement systems, and aim to emphasize the basic principles of security, reliability and efficiency that should be upheld by systemically important payment systems. They provide a benchmark for BNR in its oversight function, aiding the identification of relative areas of strength and weakness in the design or operation of particular payment and settlement systems.

8. RISKS IN FINANCIAL MARKET INFRASTRUCTURE (FMI)

Oversight of payment systems includes the identification, management, containment and mitigation of payment and settlement risks in FMI. Thus the BNR oversight activity focuses on enforcement of FMIs compliance with effective management of risks to mitigate systemic failure. Appendix III provides minimum risk management guidelines that FMIs are required to adopt.

9. CRITERIA FOR SYSTEMICALLY IMPORTANT PAYMENT SYSTEMS IN RWANDA

During the oversight function, priority will be accorded to systems that process, clear or settle payments which, individually or cumulatively, are of large value and consequently present substantial risk in the event of settlement or operational failure. Of significance is the fact that all systems will be accorded the appropriate level of oversight attention by the BNR. With regard to retail payment systems there will be two classifications², according to assessment standards for these systems in the payments system. Therefore, systems will be assessed according to the designation criteria (See Annex VII) and classified in order of potential risk and systemic importance as follows:

- i. Systemically Important Payments systems (SIPS);
- ii. Systemically Important Retail Payment Systems (SIRPS);
- iii. Prominently Important Retail Payment Systems; and
- iv. Other Systems.

BNR shall monitor and assess systemically important systems closely because of their potential to causing systemic disruption if they are not effectively overseen against risks.

10. OVERSIGHT ACTIVITIES

BNR shall conduct oversight activities which include licensing, monitoring, assessment and inducing change to mitigate risks in payment and securities settlement systems. In carrying out these activities, the BNR shall conduct both off-site and on-site oversight.

10.1. Licensing

For any system proposed or identified, an initial oversight assessment will be carried out as part of the oversight process leading to approval of the system/service. The objective of the payment service/system licensing is to legalize the operation of the systems and disclose information on these system participants, thus forming the conditions for assessment and

² ECB, Assessment of Euro Retail Payment Systems Against the Applicable Core Principles, August 2005-July 2012

monitoring of licensed payment services/systems operators. The BNR shall take a decision on the licensing of a system or revocation. It reserves the right to refuse system licensing and communicate the circumstances underpinning the decision.

10.2. Monitoring

BNR shall assess the FMIs compliance to the risk management standards by continuous monitoring through among others, obtaining information of the FMIs. Information shall include among others:-

- a. Publicly available information on system design and performance;
- b. Official system documentation eg system rules, member documentation, business continuity plans and other “static” information setting out how the system operates;
- c. Regular or ad hoc reporting on system activity including volume and value of transactions, and operating performance or on its financial position including balance sheet and profit and loss information;
- d. Internal reports of board or committee meetings;
- e. Bilateral contacts with the system and system participants;
- f. Multilateral meetings including industry group meetings or participation in committees;
- g. On-site inspections
- h. surveys;
- i. Expert opinion from legal advisers;
- j. Information from other regulators; and
- k. Customer feedback.

10.3 Assessment

The information obtained by the BNR through its monitoring is used to understand the whole set of payment and settlement arrangements in the economy, formulate appropriate oversight policies, including standards. In addition, based on an assessment of the risks and efficiency issues that arise, BNR shall determine which systems come within the scope of such policies and the information obtained through monitoring is used to assess whether they meet the relevant policy requirements and standards.

In addition, the Central Bank may, at its discretion, request the external auditors of operators of designated systems, banks or payment institutions to make specific financial and other (including security) audits with respect to those institutions for the purpose of the oversight. The cost of such audits is carried by the audited institution.

10.4 Inducing change

BNR shall make recommendations, issue directives and enforce compliance to induce change of FMI's risk management process in order to comply with best practices or a rule or regulation in force.

11. COOPERATIVE OVERSIGHT

BNR shall endeavour to cooperate with other regulators domestically and internationally in order to ensure the FMIs are effectively complying to risk management standards. To ensure the good smoothing of financial market infrastructures, the cooperation is very important even within the BNR between different departments.

11.1. Cooperation within the BNR

Payment and securities settlement systems oversight involves activities requiring that different departments within the BNR work together. The internal cooperation is necessary within Financial Stability Directorate through exchanging the information both statistical and non-statistical about the system operated or the products/systems to be provided by payment services industry on market which require the BNR approval or license.

On the other side the Operations Directorate is operating the financial market infrastructures (eg. RIPPS, Clearing house for paper based payment instruments) owned by BNR and need to be closely overseen to mitigate against systemic risk. In addition, the payment and securities settlement systems strengthening goes along with supporting laws and regulations; this requires cooperation with Legal Counsel and Company Secretary who is in charge of drafting legal texts. The projects which are implemented by BNR in order to develop payment system require close collaboration with Information and Communication Technology Directorate (ICTD) as these rely on smooth functioning of BNR IT system.

11.2. Cooperation with regional central banks

Cooperation with overseers and other authorities at the international level complements the BNR's policy and it is an instrument to address the rising importance of interdependencies as international companies are offering payment services in Rwanda.

Thus, it is important to recognize that offshore systems and interdependencies with systems and third-party providers create the need for efficient and effective cooperation between the central banks responsible for the oversight of such systems.

This includes the mutual adoption of the same internationally recognized oversight standards and recommendations and sharing the information with those other central banks about payment systems and payment services providers.

11.3. Cooperation with other regulatory authorities

Cooperation with other authorities is also an important tool to ensure effective and efficient oversight as the oversight responsibilities of BNR are closely related to the responsibilities of other prudential and securities regulators. In particular, it is recognized that each regulator needs to fulfil its own regulatory responsibilities and that cooperation takes place without prejudice to these responsibilities. That is why the BNR needs to adopt Memoranda of Understanding with prudential supervisors and other regulators that regulate entities, which are involved in providing payment, clearing, securities and settlement services.

12. TARGETS OF OVERSIGHT

The oversight function of the BNR aims to achieve among others the following targets:

12.1 Access

Oversight ensures that access is controlled in order to protect the systems and their participants from participation by institutions that might expose them to excessive legal and operational risks. Defining minimum eligibility criteria will be necessary to ensure that participants possess the reputation, financial, governance, technical and operational requisites as well as the business commitment to operate within the set standards.

Oversight function will also ensure that existing payment service providers do not cause undue access impediments.

12.2 Risk control

Oversight will seek to ensure that participants adopt consistent methods to manage their risks and that systems have enough incentives and safeguards against excessive risk-taking by individual participants. Collective action by participants in this area which ties the risk position of each participant to the behaviour of others will be encouraged.

12.3 Information transparency

Oversight will therefore encourage participants to inform users of all relevant aspects concerning the operations of their system. Appropriate information channels will be established to collect service information evaluations and complaints from users and conveyed to the participants for corrective action. Information sharing with independent external expert payment system evaluation bodies is another dimension that oversight will take to enhance transparency.

12.4 Pricing

Oversight will be directed at monitoring the evolution of pricing policies across FMIs to ensure that pricing practices are fair to users and beneficiaries.

12.5 System Reliability

Oversight will ensure that payment and settlement systems have enough warning devices guarding against abnormalities across the payment circuits and have tested emergency procedures that would allow them to operate smoothly at all points of the process and be resilient.

13. BNR POWERS TO IMPOSE SANCTIONS FOR NON COMPLIANCE

In case an operator of payment and securities settlement system and a payment service provider breaches the laws, regulations and directives governing the payment and securities settlement systems and the payment services ; BNR is empowered to apply sanctions both disciplinary and pecuniary sanctions. This should be done according to the Law n° 55/2007 of 30/11/2007 governing Central Bank of Rwanda, especially in its articles 6, 9, 56 and 57; the law n°03/2010 of 26/02/2010 concerning payment systems especially in its Articles 6, 7, 8 and 10; and law n° 26/2010 of 28/05/2010 governing the holding and circulation of securities especially in its Article 29.

14. BNR REPORTING OF OVERSIGHT ACTIVITIES

The Bank will provide a summary of its payment systems oversight activities developments in its Annual Report. Technical oversight reports will be prepared regularly on quarterly and annual basis and presented to the BNR Management Committee. Information that may enhance the effective functioning of the other departments of the Bank and other institutions shall be handled with promptness. The Bank will from time to time also disseminate information of a general nature to promote public awareness on the developments in Rwanda's FMIs using BNR's website and other appropriate media.

15. CONCLUSION

Oversight of payment and securities settlement systems is the responsibility of the Central Bank. In the BNR statute and in the Payment Systems law it is clearly stated as the BNR role to ensure safe, sound and efficient payment systems. Thus, the BNR is responsible for monitoring and regulating payment systems. This enables BNR to manage the integrity of the system dynamically and in real-time.

FMIs are dynamic; they involve various stakeholders and cross cutting issues, such as consumer protection, public awareness of adoption of new products, cooperation among payment service providers and if necessary apply sanctions in case of non-compliance with governing laws, regulations and directives. In this regard BNR's role is important to ensure that effective coordination of the cross cutting issues and risk management in the FMIs are upheld.

APPENDIXES

Appendix I: GLOSSARY OF TERMS

- a. “Central Bank” means the National Bank of Rwanda;
- b. “Central Bank Law” means the Law N° 55/2007 of 30/11/2007 governing the Central Bank of Rwanda;
- c. “Clearing System” means a system responsible for transmitting, reconciling and, in some cases, confirming Financial Instruments transfer instructions prior to settlement;
- d. Financial Market Infrastructure is defined as a multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions.
- e. “Interoperability” means a set of arrangements, procedures and standards that allow participants in different payment schemes to conduct and settle payments across systems while continuing to operate also in their own respective systems;
- f. “operator” the entity that is in charge of the operation or administration of the payment system;
- g. “Oversight of payment and securities settlement systems” means a central bank function whereby the objectives of safety and efficiency are promoted by monitoring existing and planned systems, assessing them against these objectives and, where necessary, inducing change;
- h. “Payment services”: The following activities are payment services:
 - i. Services enabling cash to be placed on and/or withdrawn from a payment account in the Institutions Supervised by the Central Bank as well as all the operations required for operating a payment account;
 - ii. Execution of payment transactions, including transfers of funds on a payment account in the Institutions Supervised by the Central Bank with the user's payment service provider or with another payment service provider;
 - iii. Execution of payment transactions on a payment account in the Institutions Supervised by the Central Bank where the funds are covered by a credit line for a payment service user;
 - iv. Issuing and/or acquiring of payment instruments;
 - v. Money remittance;
 - vi. Execution of payment transactions where the consent of the payer to execute a payment transaction is given by means of any telecommunication, digital or IT device and the payment is made to the telecommunication, IT system or network operator, acting only as an intermediary between the payment service user and the supplier of the goods and services.

- i. "Payment Services Provider" means any entity providing services enabling cash deposits and withdrawals, execution of payment transactions, issuing and/or acquisition of Payment Instruments, money remittances and any other services functional to the transfer of money;
- j. "Payment Instruments" means checks, electronic money, credit cards and debit cards or any other instrument through which people can make payments, with the exception of banknotes and coins;
- k. "Payment System" means a formal arrangement or a framework, which is binding between two or more participants, with common rules and standardised arrangements for the processing, clearing and/or settlement of payment obligations or payment messages;
- l. Risks in financial market infrastructures mainly are as follows:
 - i. Liquidity risk means a risk that a counterparty (or participant in a settlement system) will not settle an obligation for full value when due. Liquidity risk does not imply that a counterparty or participant is insolvent since it may be able to settle the required debit obligations at some unspecified time thereafter.
 - ii. Credit risk means a risk that a counterparty will not settle an obligation for full value, either when due or at any time thereafter. In exchange-for full value systems, the risk is generally defined to include replacement cost risk and principal risk.
 - iii. Legal risk means a risk of loss because of the unexpected application of a law or regulation or because a contract cannot be enforced.
 - iv. Systemic risk means a risk that the failure of one participant in a transfer system, or in financial markets generally, to meet its required obligations will cause other participants or financial institutions to be unable to meet their obligations (including settlement obligations in a transfer system) when due. Such a failure may cause significant liquidity or credit problems and, as a result, might threaten the stability of financial markets.
 - v. Reputational Risk is the loss of confidence in the payment system due to a lack of management control, capacity, security, business continuity plans and / or contingency measures.
 - vi. Operational risk is the risk that deficiencies in information systems or internal controls could result in unexpected losses.
 - vii. Strategic risk is the risk associated with the financial institution's future business plans and strategies.
 - viii. Fraud risk is the risk that entails intentional misconduct, designed to evade detection in payment and settlement transactions.
 - ix. Confidentiality Risk is the risk that sensitive information is accessible to not only those authorized to have access to it but also to the unauthorized individuals and organizations
- m. "settlement" the act of discharging obligations by transferring funds, securities or financial instruments between two or more parties;

Appendix II: PRINCIPLES AND RESPONSIBILITIES OF CENTRAL BANKS, MARKET REGULATORS, AND OTHER RELEVANT AUTHORITIES FOR FINANCIAL MARKET INFRASTRUCTURES (BIS-IOSCO:2012)

General organisation

Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Principle 2: Governance

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 relevant stakeholders.

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Credit and liquidity risk management

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes.

Principle 5: Collateral

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.

Principle 6: Margin

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.

Principle 7: Liquidity risk

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 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 liquidity obligation for the FMI in extreme but plausible market conditions.

Settlement

Principle 8: Settlement finality

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.

Principle 9: Money settlements

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 minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Principle 10: Physical deliveries

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

Central securities depositories and exchange-of-value settlement systems

Principle 11: Central securities depositories

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

Principle 12: Exchange-of-value settlement systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Default management

Principle 13: Participant-default rules and procedures

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.

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.

General business and operational risk management

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net 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 materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise 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.

Principle 17: Operational risk

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 fulfillment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Access

Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Principle 20: FMI links

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

Efficiency

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Transparency

Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Principle 24: Disclosure of market data by trade repositories

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

RESPONSIBILITIES OF CENTRAL BANKS, MARKET REGULATORS, AND OTHER RELEVANT AUTHORITIES FOR FINANCIAL MARKET INFRASTRUCTURES

Responsibility A: Regulation, supervision, and oversight of FMIs

FMIs should be subject to appropriate and effective regulation, supervision, and oversight by a central bank, market regulator, or other relevant authority.

Responsibility B: Regulatory, supervisory, and oversight powers and resources

Central banks, market regulators, and other relevant authorities should have the powers and resources to carry out effectively their responsibilities in regulating, supervising, and overseeing FMIs.

Responsibility C: Disclosure of policies with respect to FMIs

Central banks, market regulators, and other relevant authorities should clearly define and disclose their regulatory, supervisory, and oversight policies with respect to FMIs.

Responsibility D: Application of the principles for FMIs

Central banks, market regulators, and other relevant authorities should adopt the CPSS-IOSCO Principles for financial market infrastructures and apply them consistently.

Responsibility E: Cooperation with other authorities

Central banks, market regulators, and other relevant authorities should cooperate with each other, both domestically and internationally, as appropriate, in promoting the safety and efficiency of FMIs.

Appendix III : GENERAL PRINCIPLES FOR INTERNATIONAL REMITTANCE SERVICES (BIS : 2007)

General Principle 1.

The market for remittance services should be transparent and have adequate consumer protection. The key issues to be addressed include pricing, speed of service, comparison of different services, and cost of transparency and consumer protection.

General Principle 2.

Improvements to payment system infrastructure that have the potential to increase the efficiency of remittance services should be encouraged. Networks of access points need to be established as well as cross border arrangements.

General Principle 3.

Remittance services should be supported by a sound, predictable, non discriminatory and proportionate legal and regulatory framework in relevant jurisdictions. The cost of regulation should be measured against the benefits. Anti money laundering guidelines should be adhered to.

General Principle 4.

Competitive market conditions, including appropriate access to domestic payment infrastructures, should be fostered in the remittance industry.

General Principle 5.

Remittance services should be supported by appropriate governance and risk management practices.

Appendix IV: RISKS IN PAYMENT AND SETTLEMENT SYSTEMS AND MITIGATION MEASURES

	Type of Risk	Mitigation
1.	Legal Risk	<ul style="list-style-type: none"> ▪ Legal framework (PS Law, regulations and rules) ▪ Continuous review of legal framework ▪ Contractual agreements ▪ Cross-border arrangements ▪ Enforcement of the legal framework through the oversight function
2.	Operational Risk	<ul style="list-style-type: none"> ▪ Encryption of Data Transmission ▪ Operational rules and procedures ▪ Periodic review of rules and procedures ▪ Use of the Business Continuity facilities ▪ Presence of an audit trail in the systems ▪ Continuous monitoring of the systems ▪ Training and multi-skilling of staff ▪ Adequate human resources with experience, qualified and competent. ▪ Backup Facility ▪ Logging and Reporting System Disruptions
3.	Systemic Risk	<ul style="list-style-type: none"> ▪ Collateralization of Clearing obligations ▪ Oversight activities ▪ RIPPS system ▪ Provision of liquidity by BNR ▪ Real time monitoring of participants' accounts ▪ Implementation of adequate "failure to settle" arrangements ▪ Maintain profiles of all participants
4.	Credit Risk	<ul style="list-style-type: none"> ▪ Use of RIPPS ▪ Collateralization of obligations. ▪ Intra-day credit limits ▪ Clearing and Settlement procedures ▪ Prompt and final irrevocable settlement ▪ Constant monitoring and evaluation of participants' financial status ▪ Failure-to-settle arrangements ▪ Intra-day settlement
5.	Liquidity Risk	<ul style="list-style-type: none"> ▪ Settlement account balance monitoring ▪ Queuing of transactions in RIPPS

		<ul style="list-style-type: none"> ▪ Intraday facility and Overnight accommodation ▪ Counselling of participants ▪ Intra-day settlement ▪ Participant profiles ▪ Minimum Reserve Requirements
6.	Reputational Risk	<ul style="list-style-type: none"> ▪ Enforcement of rules and regulations ▪ Training ▪ Adoption of international best practice ▪ Transparent oversight framework and risk management framework are in place ▪ Communication strategy
7.	Strategic Risk	<ul style="list-style-type: none"> ▪ Performance management system ▪ Clear policy framework ▪ Adoption of international best practice ▪ Strategic Plan ▪ Liaison with stakeholders
8.	Fraud Risk	<ul style="list-style-type: none"> ▪ Password Management ▪ Segregation of duties with dual authorization ▪ Maintenance of audit trail ▪ System Design ▪ Comply with security standards
9.	Confidentiality Risk	<ul style="list-style-type: none"> ▪ Ensure internal and external collaboration ▪ Prevent data loss ▪ Ensure proper authorization to applications and data

Appendix V: PAYMENT AND SETTLEMENT SYSTEMS RISK ASSESSMENT MATRIX

This matrix has been structured to assess various risk areas and the adequacy of the risk controls employed by any payment and settlement system. The matrix is intended to reveal the normal range of risks that a participant in that system could face.

Type of Risk	Level of Inherent Risk	Adequacy of Risk Management Systems	Overall Composite Risk	Direction of Overall Composite Risk
Credit				
Interest Rate				
Foreign Exchange				
Liquidity				

Confidentiality				
Operational: People				
Operational: Fraud				
Operational: processes				
Operational: Information Systems				
Operational: External Events				
Operational: Security				
Operational: Fire				
Legal & Compliance				
Reputation				
Strategic				
Overall				

Level of Inherent Risk

Low – reflects a lower than average probability of an adverse impact on the system’s objectives. Losses in a system with low inherent risk would have little negative impact on the financial condition of participant in the system.

Moderate – could reasonably be expected to result in a loss which could be absorbed by a participant in system in the normal course of business.

High – reflects a higher than average probability of potential loss. High inherent risk could reasonably be expected to result in a significant and harmful loss to the participant in system.

Adequacy of Risk Management Systems

Weak – risk management systems are inadequate or inappropriate given the size, complexity and risk profile of the system. The risk management systems are lacking in important ways and therefore a cause of more than normal concern. The internal control systems will be lacking in important aspects particularly as indicated by continued control exceptions or by the failure to adhere to written policies and procedures.

Acceptable – management of risk is largely effective but lacking to some modest degree. While the system might be having some minor risk management weaknesses, these have been recognized and are being addressed. Management information systems are generally adequate.

Strong – management effectively identifies and controls all types of risk posed by the relevant functional activities or per inherent risk. Management actively participates in managing risk and

ensures appropriate policies and limits are put in place. The policies comprehensively define the risk tolerance, responsibilities and accountabilities are effectively communicated.

Overall Composite Risk

Low Risk – would be assigned to low inherent risk areas. Moderate risk areas may be assigned a low composite risk where internal controls and risk management systems are strong and effectively mitigate much of the risk.

Moderate Risk – risk management system appropriately mitigates inherent risk. For a given low risk area, significant weaknesses in the risk management systems may result in a moderate composite risk assessment. On the other hand, a strong risk management system may reduce the risk so that any potential financial loss from the activity would have only a moderate negative impact on the financial condition of the participant.

High Risk – risk management systems do not significantly mitigate the high inherent risk. Thus the activity could potentially result in a financial loss that would have a significant impact on the participant’s overall condition, even in some cases where the systems are considered strong.

Direction of Overall Composite

Increasing - based on the current information, composite risk is expected to increase in the next twelve months.

Decreasing - based on current information, composite risk is expected to decrease in the next twelve months.

Stable - based on the current information, composite risk is expected to be stable in the next twelve months.

Appendix VI: PAYMENT SYSTEMS CATEGORIES

CATEGORY	COMPONENTS	CRITERIA
Large value payment system	Rwanda Integrated Payments Processing System (RIPPS)	Handles large values Handles interbank payments Transfers of financial assets such as securities and related funds transfers
Retail payment system	Card based payment Mobile payment Mobile banking Internet banking Paper based payment: Cheques, credit transfers Remittances	Handle large volumes of payments of relatively low value.

Appendix VII: DESIGNATION CRITERIA FOR PAYMENT SYSTEMS IN RWANDA

A. LARGE VALUE PAYMENTS SYSTEMS (LPS)

BNR categorizes a LPS to be of systemic importance based on the following criteria:

- When it is a system settling high values and interbank transactions.
- When it transfers of financial assets such as securities and related funds transfers are both settled.

B. SYSTEMICALLY IMPORTANT RETAIL PAYMENT SYSTEMS (SIRP)

A disruption in this system can threaten the stability of the financial markets:

- When it is the only one such system in Rwanda;
- When it is principal retail payments system operating in the country;
- If it has market share of 75% of the existing retail payments market;
- If it is processing payments in excess of 10% of the value of the real time gross settlement system;
- In case concentration ratio of the net debit position of one of the largest participant exceeds 70%;
- If it is used for the settlement of financial market transactions or for the settlement of other payments.

C. PROMINENTLY IMPORTANT PAYMENT SYSTEM (PIRPS)

A disruption in this system could severely impact financial market operations and undermine public confidence in the payments systems and in the currency:

- When it has market share of more than 25% of the retail payments market;
- The only existing system of this nature processing payments through the interbank market.

REFERENCES

1. BIS, CPSS-IOSCO, (2012), *Principles for financial market infrastructures*, Switzerland ;
2. BIS, (Committee on Payment and Settlement Systems (CPSS), (2006). *General principles for international remittance services*, Switzerland ;
3. BIS, (Committee on Payment and Settlement Systems (CPSS), (2007). *Central Bank oversight of payment and settlement systems*, Switzerland ;
4. BIS, (Committee on Payment and Settlement Systems (CPSS), (2003). A glossary of terms used in payments and settlement systems, Switzerland.
5. ECB, Assessment of Euro Retail Payment Systems against the Applicable Core Principles, August 2005-July 2012