CENTRAL BANK OF LESOTHO

NATIONAL PAYMENT SYSTEM DIVISION

NATIONAL PAYMENT SYSTEM OVERSIGHT FRAMEWORK

JUNE, 2018

Contents

1 INTRODUCTION

Payment systems provide channels through which funds are transferred among financial institutions to discharge the payment obligations arising in the financial markets and across the wider economy. As such, they are a vital part of the economic and financial infrastructure and their efficient functioning contributes to overall economic performance. Payment systems by their very nature and the central role they play in the economy may also involve significant exposures and risks for participants and provide a channel for shocks to be transmitted across the financial system. If payment and settlement systems are seen as inefficient, unreliable or unsafe, this would erode public confidence in their use. For this reason, as the public institutions responsible for preserving public trust in the national currencies, and in line with their mandate for financial stability, central banks exercise a special form of supervision of payment systems called "oversight", the aim of which is to ensure that national payment systems operate safely and efficiently.

The national payments system (NPS) comprises the financial market infrastructures (FMIs) as well as retail payment systems, instruments and payment service providers (PSPs). FMIs comprise the infrastructures for the transfer, clearing and settlement of funds and securities and are essential for the effective implementation of monetary policy and the smooth functioning of financial markets. Networks and platforms for the delivery of retail payments play an important role today in supporting financial access, especially in developing countries. Indeed, modern retail payment technologies are already being used in Lesotho to integrate underserved segments of the population into the formal financial sector and are central to the achievement of the authorities' financial inclusion goals.

The legal foundation for the oversight of the NPS derives from the Central Bank of Lesotho Act 2000 which mandates the Central Bank of Lesotho (CBL) to promote the efficient operation of the payments system. This is buttressed by the Payment Systems Act, 2014 (PSA) which empowers the CBL to oversee, inspect and monitor the payment and settlement systems in Lesotho. The purpose of this oversight framework document is to define and disclose how the CBL conducts oversight in the discharge of its statutory mandate. It provides a framework for the management of risk and presents the oversight objectives and scope, the organizational arrangements for oversight, and the activities, instruments and tools that the Central Ban of Lesotho will deploy to fulfill its oversight objectives. It replaces the earlier version, which was initially drafted in 2008 and updated in 2012 due to significant developments that have taken place in the legal and regulatory framework since then.

2 OVERSIGHT OF THE NATIONAL PAYMENTS SYSTEM

2.1 The National Payments System in Lesotho - Overview

The NPS landscape in Lesotho is characterized by Financial Markets Infrastructures (FMIs) and Retail Payment Systems and Instruments. First, FMIs consist of the real time gross settlement system (Lesotho Wire - LSW), which is the backbone of the payment system in Lesotho, centralized securities Depository(CSD), which handles all types of securities (government, central bank, equities and corporate bonds). The CSD is linked to the LSW to allow the settlement of securities transactions on a delivery versus payment basis, thereby mitigating settlement risk. Other FMIs include the Southern African Development Community (SADC) Integrated Regional Electronic Settlement System (SIRESS), which settles transactions among banks within the SADC countries on a real time gross basis using settlement accounts at the South African Reserve Bank and the Lesotho Automated Clearing house (LACH), which processes checks and electronic funds transfers (EFTs)[1] with settlement taking place in the LSW. Second, the retail payment systems and instruments consist of Mobile Money (M-pesa and Eco-cash), Automated Teller Machines (ATMs), Point of Sale networks, debit and credit cards as well as remittance services.

2.2 The Objectives of Oversight

The oversight function in the CBL aims to ensure the payment systems are designed and operated in a safe manner and that risk exposures are managed so that they do not compromise financial stability. While safety is the primary oversight objective, the CBL will also seek to ensure that the infrastructure components and the markets for the provision of payment services work smoothly, efficiently, and fairly for participants and users and that the level of technological and institutional development necessary to satisfy the payment needs of the economy is achieved. Overseeing the NPS involves putting in place policies and instituting procedures to monitor existing and planned systems, instruments and payment service providers, assessing them against these objectives and, where necessary, inducing change.

In discharging its oversight responsibilities, the CBL shall consider the risks participants and PSPs face in the course of their business; its main concern; however is with the risks that each of them poses to the NPS. The CBL shall act to improve public education and awareness and cooperate with the NPS stakeholders to minimize the risk of market failures(refer to Annex 2 for possible market failures) and promote the development of innovative payment services, with a view to making such services convenient, secure, accessible and affordable. In the

[1] The CBL considers the LACH – the main retail payment system – to be of systemic importance and an FMI.

financial inclusion context, six key risks are of special relevance. Oversight aims to address these risks to avert a loss of confidence in electronic payments, which could slow or reverse their adoption and directly impact the achievement of financial inclusion goals. These risks include: information technology and fraud, reliability and business continuity, business risk, contract enforceability, outsourcing and the use of third parties as agents and credit and liquidity risks.

2.3 The Scope and Intensity of Oversight

The scope of oversight as set out in the PSA is (interbank) *payment systems, the operations of the payment system body, system participants and service providers*. The Payment System Act, 2014 mandates the establishment of the Payment Systems Management Body (PSMB) as a core element of the governance and oversight framework for the NPS. It vests in the PSMB the responsibility to assist the CBL in carrying out its oversight role. The Payment Association of Lesotho (PAL) has been established as the executing agency for these responsibilities. The Bank shall seek to fulfill the responsibilities and align its oversight policy with international best practice as set out in the PFMI (Annex 1). The Bank shall also be guided by the practices described in the CPSS report: *Central bank oversight of payment and settlement systems, 2005*.

The Bank's approach to oversight shall be:

Universal: all systems, instruments and service providers must be authorized by the CBL to operate in Lesotho. This will ensure that, based on the law and regulation, the CBL can exercise full jurisdiction over all NPS entities.

Functional: irrespective of their legal nature, all PSPs – including bank, non-bank and non-financial entities – will be subject to the same regulation. This will level the playing field for fair competition among different entities offering the same or similar services.

Risk-based: oversight requirements will be guided by considerations concerning risks to NPS safety, efficiency and consumer rights. This will enable the CBL to adapt the oversight requirements to different types of entities based on objective, transparent criteria reflecting the relative importance of the risks associated with each type.

Proportional: the intensity of oversight and the oversight priorities will reflect the perceived riskiness of each overseen entity.[2] This corresponds to a principle of fairness and, operationally, it will allow the Bank to prioritize its oversight action and to allocate its oversight resources to areas where needs are more pressing. In other words, NPS entities,

[2] The intensity of oversight reflects the extent to which the overseer monitors, analyzes, assesses and evaluates the performance of the overseen entity or system, and hence the resources it devotes to these activities for the entity under oversight.

say PSPs, must be treated *consistently* under the same rules, but not necessarily *equally* if their risk profile is different.

2.4 The Instruments of Oversight

The Bank's oversight policy framework incorporates the following instruments:

2.4.1 Rules & Standards

Systems: The Bank shall require the NPS to conform to the relevant international standards and best practices. For the oversight of "systemically important" FMIs – the Systematically Important Payment System (SIPS), CSD and securities settlement systems – the Bank shall adopt the PFMIs. For "prominent" payment systems, the Bank shall adopt less demanding standards. For the oversight of retail payment systems, the Bank shall adopt an appropriate subset of the PFMI, as well as international standards applicable to remittances and best practices implemented by other central banks.[3] For the FMIs and for 'prominent' systems, the standards will be complemented as appropriate, by the recent guidance from the Committee on Payments and Market Infrastructure (CPMI) and International Organisation of Securities Commission (IOSCO) on central bank FMIs and on cyber risk.

Payment Service Providers: The CBL has issued regulations for the licensing and oversight of issuers of electronic payment instruments. The regulations set rules for licensing these payment service providers and establish terms and conditions for the provision of payment services. The regulations address, inter alia, the issuance of payment instruments, the use of agents, the outsourcing of services, the management of funds, financial integrity and reporting and consumer protection and recourse. Where service providers fail to comply, the CBL is responsible for administering appropriate sanctions as provided in the law and regulations.

Payment Instruments: For the oversight of payment instruments, the CBL shall draw on the practice developed by other central banks with significant experience in this area.

2.4.2 Policy, Research & Development

The Bank shall design NPS policies, rules and regulations, and shall revise them when necessary to ensure that the performance and behavior of payment system operators and providers are consistent with the oversight policy objectives. The Bank shall promote research and development activities on NPS-related issues. These activities range across several areas:

---

[3] See www.bis.org/cpmi/publ/d76.pdf the *"General principles for international remittance services"*, Committee on Payment and Settlement Systems and The World Bank, January 2007, and www.ecb.europa.eu/.../recommendationsforthesecurityofinternetpaymentsen *"Recommendations for the security of Internet payments"*, European Central Bank, February 2013.

operational, legal, institutional and technological. The CBL shall study payment system and payment service developments and provide essential inputs to their evolution.

2.4.3 Policy dialogue

The CBL shall promote an active policy dialogue with NPS stakeholders, including users. The dialogue will secure a fair representation of all relevant public and private interests involved in NPS activities, and shall offer a channel to communicate the Bank's policy perspective, collect views from stakeholders, and share knowledge within the stakeholder community. The CBL shall consult with NPS stakeholders on policy issues and options to enhance its knowledge, raise awareness, and build consensus around policy decisions. The National Payments System Council (NPSC) provides the forum for such collaboration and cooperation. It is established to give strategic direction to the payment systems evolution/modernisation in Lesotho on an on-going basis. It comprises all relevant stakeholders with an interest or involvement in payment system matters. Along with PAL it forms a key part of the institutional and governance framework for the NPS.

2.5 The Activities of Oversight

The Bank conducts a range of oversight activities focused on ensuring that the payment services offered comply both with the law and with prescribed standards. Although the activities are integral to the same policy framework, for illustrative purposes they can be separated into six different categories: *licensing, designation, continuous activities, periodic activities, change-driven activities, and cross-cutting activities*.

2.5.1 Licensing

The Bank shall license any entity that intends to provide payment services or to operate a system after submission of appropriate documents and information, as prescribed by the Payment Systems (Issuers of Electronic Payment Instruments) regulations, 2017. Banks licensed under the FIA may be exempt from this licensing requirement.[4] A license is granted based on the fulfillment by the applicant of the prescribed eligibility criteria, and is renewable annually. The aim of licensing is to bring payment system operators and service providers within the regulatory ambit of the Bank, and to obtain from them the information necessary for oversight monitoring, analysis and performance assessment. Where a license is withdrawn, the CBL shall issue a public notice to that effect.

[4] Commercial banks are deemed to be registered payment service providers under the terms of their banking license.

2.5.2 Designation

The CBL shall designate systems, PSPs, and instruments for oversight. It shall subject the designated entities to oversight requirements of different intensity reflecting their differing levels of risk. Systems with greater exposure to systemic risks (such as the SIPS) will require more intensive oversight, while those dealing with low value transactions (typically, retail payment systems [RPS] shall require less intensive oversight and a greater focus on the protection of consumer interests.

a) Designation of systems

The Bank shall set criteria to designate payment systems that are deemed to be:

Systemically important – systems that are exposed to systemic risk, that is, the risk that the failure of one participant to meet its obligations in the system can result in other participants being unable to meet their obligations, with the potential to create financial instability.

Prominent – systems that are not systemically important but whose failures have the potential to disrupt economic activity and to affect public confidence.

The criteria to designate payment systems as "systemically important" include:

- The system's potential to create significant credit and liquidity exposures, or disruptions in the economy, should it fail to perform as expected
- Whether the system is used to settle other systems
- Whether the system is the only one used for the settlement of a given financial instrument or transaction type
- The system settles transactions for critical financial markets
- The system settles a high proportion of large-value or time-critical transactions
- The system settles large volumes of small value transactions that cumulatively are of large value.[5]

[5] The FMIs – the SIPS and the CSD/ securities settlement system, the SIRESS and the LACH – are deemed to be systemically important.

Payment systems that are not "systemically important" but whose domestic market share in terms of volume of transactions is equal or above a threshold (to be determined) will be designated as "prominent".

b) Designation of Payment Service Providers

The CBL shall set criteria to designate PSPs that are deemed to be **prominent –** PSPs whose failure may significantly disrupt business and economic activity and affect public confidence.

The CBL may decide to keep other PSPs on a "watch list" and assess the oversight requirements as they evolve. The criteria to designate PSPs include:

- The value of transactions that the PSP sends/receives to/from the NPS
- The volume of transactions that the PSP sends/receives to/from the NPS
- The number and size of entities that access the NPS through the PSP
- The number of interconnections existing between the PSP and other NPS entities
- The number of customers served.

All PSPs whose domestic market share in terms of volume of transactions is equal to or above a threshold (to be determined) will be designated as "prominent".

c) Designation of instruments

The Bank shall set criteria to designate payment instruments that are deemed to be critical – instruments that are widely used by the public and whose malfunctioning may affect the integrity of the NPS and public confidence. The criteria for designation of a payment instrument include:

- Individual average transaction size
- Total volume of transactions
- Total value of transactions
- Number of customers.

The CBL shall set the appropriate threshold, and review and amend these from time to time.

2.5.3 Continuous activities

a) System monitoring and analysis

The CBL shall monitor the functioning of the NPS by monitoring the FMIs' operations and risks through access to real-time system information. CBL shall also prescribe reporting obligations for systems and PSPs and access information through ad hoc inquiries and consultations. Through offsite oversight, the CBL shall analyze NPS performance and the need for improvement or change, and shall identify sources of risk and system design weaknesses that might require intervention. The CBL shall follow the evolution of selected statistical indicators on NPS operations, shall run ad-hoc analyses whenever statistical observations reveal significant divergence from trends and/or expected performance, or when unusual circumstances materialize.

b) Incident analysis

The CBL shall analyze NPS (Payment System) incidents. In the event of an incident, the Bank shall determine the overall scale of the incident, thereby triggering specific types of investigation and reporting. Incidents are classified as "relevant" or "not relevant", based on the evaluation of factors indicating the impact and consequences of the event. If the incident is judged to be "relevant", the Oversight Department/Division (OD) shall examine the action plan proposed by the operator of the affected system both to restore normal operation, if this has been compromised, and to prevent the recurrence of similar incidents in future. The OD shall recommend further action if necessary, and shall prepare reports on the incidents and the related follow-up action. The OD shall meet with system operators on a periodic basis, or when circumstances require, to exchange information and to discuss operational issues with special attention to vulnerabilities and related responses.

c) Evaluation of user complaints

The Bank shall review complaints from users to gain insights into the safety and efficiency of the payment services and instruments[6]. The purpose here is for claim information and statistics to be used by the Bank as a source of information for it to be able to infer on the quality of payment system operation and service provision. The Bank shall therefore receive from the PSPs reports on user claims/compliants at regular intervals, and shall analyze these reports with a view to identifying problems that may point to the need for corrective action or policy intervention, including in the form of change in standards, rules, practices or infrastructures.

---

[6] This activity should not be confused with the activities aimed at redressing user claims in the context of consumer rights protection.

2.5.4 Periodic activities

These activities comprise:

a) Risk-based planning

This task consists of developing an annual work plan to identify and organize periodic oversight activities to be carried out over a specific time horizon. The plan will reflect oversight priorities determined through risk-based analysis, which allows the CBL to identify the NPS infrastructures that require special attention and dedicate resources based on their risk profile. A key dimension that will feed into risk-based planning is the occurrence of system changes, incidents or crisis events. The oversight annual work plan will be updated as new occurrences alter the risk profiles of NPS infrastructures in any significant way.

b) Risk Analysis, Assessment & Compliance

Risk analysis of the FMIs shall be conducted at three different control levels. The first control level shall be the responsibility of payment system operators to assess system compliance with the PFMI. The second control level will be the responsibility of the OD. A third control level may be performed by external independent evaluators, at the request of the central bank. Assessments shall largely draw on the outcomes of the continuous oversight activities, the impact analysis of payment system changes, and the analysis of incidents. The CBL shall also undertake stocktaking exercises and identify specific actions to be taken regarding existing or planned systems and instruments. The CBL may also request the assistance of international institutions, such as the IMF and World Bank, in the context of their periodic assessment programs[7].

The CBL shall conduct onsite oversight of designated PSPs, where its offsite assessment suggests the need for such. Onsite oversight complements the off-site review, focusing on the aspects of operations which either present high risks or where control process deficiencies are observed. As such, the frequency of on-site examination shall vary from system to system and PSP to PSP. To discourage market abuse, the CBL shall ensure that dispute resolution mechanisms for customer claims are in place and effective. CBL shall act to protect the values stored in electronic money instruments and require PSPs to submit relevant information on a regular basis or on an ad hoc basis where appropriate. The CBL may also request external audits of PSPs. The information requirements (content and frequency) shall be consistent with the risk-based approach mentioned above.

[7] For example, this could take place as part of the Financial Sector Assessment Program.

2.5.5 Change-driven activities

These activities will include ex-ante and ex-post evaluation of the impact of changes in NPS components, including on their continued compliance with the applicable standards. Changes may relate to the architectural, functional, technical, operational, and legal aspects of the NPS. Changes can be planned and implemented directly by the system operators, or they may be the consequence of regulations or recommendations by the CBL. The CBL shall evaluate the likely impact of any proposed changes and mandate amendments as appropriate.

2.5.6 Cross-cutting activities

These activities cut across various areas of oversight, including:

a) Relationships with other regulators

In carrying out its oversight activities the CBL shall need to have regular or ad hoc contacts with other regulatory and supervisory institutions through established lines of communication and information exchange. Protocols of mutual collaboration may be agreed upon between the CBL and other authorities and national agencies to define the terms of the collaboration, determine the information flows and design the operational modalities. The most direct and effective lines of inter-institutional communication will be established and contact points identified, thereby ensuring that communication channels remain active and open, especially in crisis situations. In Lesotho, the CBL is responsible for the supervision of both bank and non-bank financial institutions and for the oversight function, so the internal mechanisms already exist for effective information-sharing and cooperation. Cooperative arrangements with oversight agencies in other jurisdictions will also need to be established. With respect to SIRESS, the CBL participates as a member of the regional oversight body, the SADC Payment System Oversight Committee.

b) External reporting

The CBL shall release an annual report on its oversight activities. The report shall provide an overview of the functioning of the NPS, its progress in terms of operation, level of safety and efficiency, new features, instruments and services, relevant problems and the solutions adopted to address them. The report will indicate progress in complying with standards, and summarize the results of risk analysis and system assessments. The report shall present plans to further develop and modernize the NPS. A summary of the report shall be included in the Central Bank's Annual Report and an evaluation of NPS-related developments, risks and oversight findings will be included in its annual publication of the Financial Stability Report. In addition, the CBL shall also release a quarterly payment system performance report, which shall cover issues related to the quarterly performance of various payment systems in Lesotho, highlight the risks inherent in payment systems and compliance of the payment systems participants with the domestic legal and regulatory framework as well as international standards. The section of the CBL's website dedicated to oversight developments shall be kept up to date.

c) Validation of Information

The CBL shall assess the adequacy of the information used and the statistical information produced; assess the adequacy and timeliness of the information received from the overseen entities; identify information gaps as well as redundancies; and update the information and statistical base. The CBL shall always balance the need for collecting additional information with the value and the cost implications for the respondent institutions at all times.

d) Crisis management

In the event of a critical event, three stages of crisis management are considered in this Oversight Policy Framework: pre-crisis, crisis and post-crisis.

The FMI Operator

- <u>Pre-crisis</u>: the FMI operator must establish, exchange, and maintain complete and correct contact lists with all relevant participants and providers. Drill tests will be conducted periodically to ensure that communication, information flows, and agreed procedures function effectively in emergency situations.

- <u>Crisis:</u> in the event of a crisis, the operator must ensure that the critical aspects of FMI operations are preserved or recovered as soon as possible, by prompting the intervention and cooperation of all the relevant parties and institutions, including the overseer, as circumstances require. The operator will exercise flexibility in settlement time frames, and in processes and procedures, to enable participants to execute transactions before end of day, even under critical conditions. The operator must develop an action plan to mitigate the risk and/or prevent a recurrence.

The Overseer

- <u>Post-crisis:</u> After the crisis, the Oversight Division shall report to the Bank's Management on how systems have performed during the crisis, pointing to any weakness or vulnerability that the crisis has manifested, and shall review the operator's proposed action plan to resolve them.

e) Inducing change

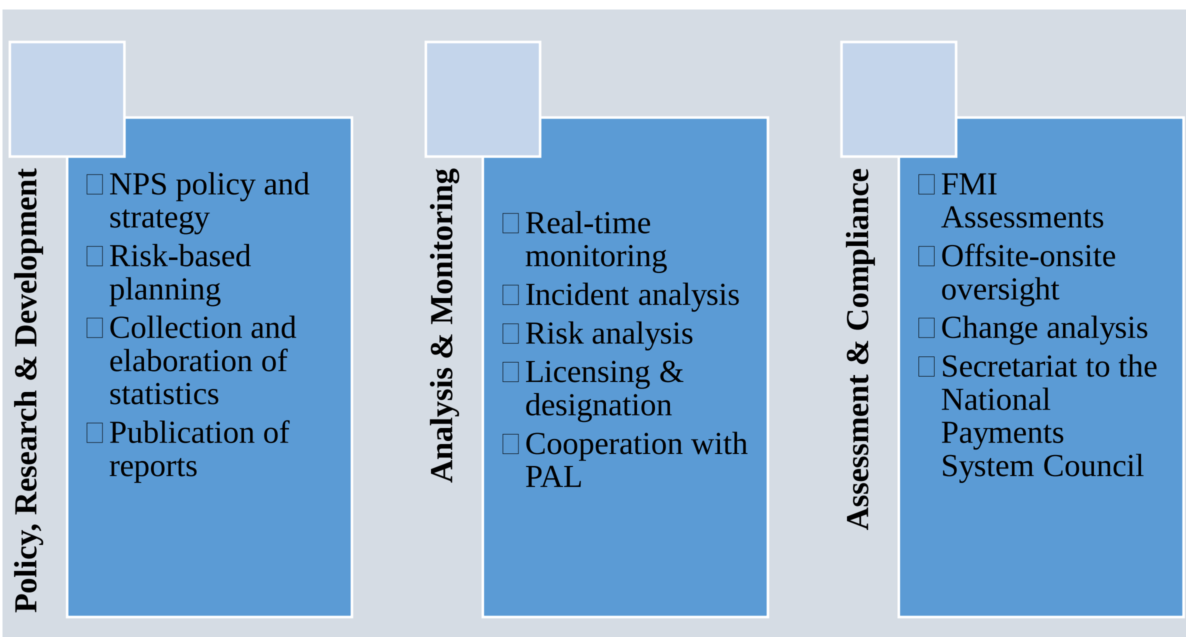
The results of NPS assessments and risk analysis, as well as emerging issues and trends, may point to the need for new or amended technical, procedural and governance structures. The CBL shall seek to agree on solutions with other NPS stakeholders and cooperate in implementing them. The CBL aims to induce change through policy dialogue and moral suasion. However, where moral suasion proves to be ineffective, it shall invoke its statutory powers and issue directives to system operators, participants, service providers, and payment institutions; impose sanctions; or revoke the authorization/license if warranted.

f) Protection of electronic money

Besides the offsite and onsite oversight activities described above, the CBL devotes special attention to protecting funds of e-money holders (e.g. mobile money) against insolvency risk. Under the current regulations, non-bank entities issuing payment instruments are required to maintain their outstanding balance in a trust account with a commercial bank, and the balance must only be used to redeem e-money. For the schemes operated by banks and other entities licensed under the FIA, the outstanding balance shall form part of the demand and time liabilities used to determine reserve requirements.

3 THE ORGANIZATION OF OVERSIGHT

The Bank is committed to exercising an effective oversight of the NPS and shall deploy adequate resources (in number and expertise) in line with Responsibility B of the PFMI. The allocated resources shall be commensurate with the importance of the oversight function. The Oversight Division shall exercise three distinct functions:



This arrangement creates the necessary separation between the staff responsible for designing rules and regulations, those responsible for licensing payment system operators and providers, and those assessing their performance and compliance, thus minimizing conflict of interest and ensuring the highest level of transparency in the execution of the oversight function. In addition, the oversight responsibilities are separate from, and independent of, the operations and back-office responsibilities undertaken by the Bank as system operator (Operations), settlement agent or banker (Banking Division [payments] and Financial Markets Department [securities]). Such separation eliminates the risk of conflict of interests between the different functions (or the perception thereof), and grants full autonomy to the OD in exercising its oversight activities. The separation also ensures consistent and uniform application of the oversight rules and regulations across all NPS infrastructures, including those that in the future might be owned and operated by private sector entities, thus enforcing the principles of fairness and market transparency. The staff responsible for monitoring and assessing payment systems is granted the same level of autonomy that protects the actions of auditors and bank supervisors.

ANNEX 1: DEFINITION OF SOME TERMS

Efficiency: The concept of efficiency generally refers to the resources required by a system to perform its functions**.** Applied to payment systems, efficiency entails several aspects. One is the overall effect of the payment system on the cost of exchanging goods, services, and

assets (including money) in the economy: a more efficient payment system reduces that cost. An efficient payment system provides its users with speedy, affordable and accessible services. Another aspect of efficiency relates to the resources necessary to operate a system: by introducing specific efficiency solutions, some systems may economize on the use of (costly) liquidity to settle payments, for any given level of settlement risk. Further aspects of payment system efficiency refer to the volume of transactions the system makes possible for any given quantity of money or to the speed of the transmission across the economy of monetary policy impulses.

Financial Market Infrastructure - The term financial market infrastructure (FMI) refers to systemically important payment systems, central securities depositories (CSDs), securities settlement systems (SSSs), central counterparties (CCPs), and trade repositories (TRs). When they operate efficiently, FMIs contribute to financial and overall economic stability and development. However, they concentrate risk and can be sources of financial shocks that can be transmitted across domestic and international markets. In 2012, following the global financial crisis, the Bank for International Settlements (BIS) Committee on Payment and Settlement Systems and the Technical Committee of the International Organization of Securities Commission (CPSS-IOSCO) published new international standards for FMIs, the *CPSS-IOSCO Principles for Financial Market Infrastructures (PFMI)*. The PFMI establish risk management standards that FMIs should observe and responsibilities that the regulatory, supervisory and oversight authorities should fulfill to address the risks in FMIs. It is in the fulfillment of these responsibilities that the oversight objectives of safety and efficiency are achieved.

Key Elements of Consumer Protection - The key elements of consumer protection are: education, privacy/confidentiality, service reliability, transparency of products and services, prompt response to enquiries and complaints, refunds and dispute resolution mechanisms

Payment System - Payment system is defined as 'a set of instruments, banking procedures and rules utilising interbank funds transfer systems that ensure the circulation of money'.

Safety: The term safety is about protecting systems and stakeholders from hazards. In relation to large value transfer systems, safety means containment of the financial and non-financial risks which typically arise within these systems, or are transmitted by them, and which threaten not only to impair the functioning of the systems but also to jeopardize the financial stability of the overall economy. Safety requires that systems are secure, reliable, and operate without service interruption or recover operation promptly in the event of interruption. As the scope of central bank oversight extends to retail payment systems and instruments, the concept of safety necessarily broadens and involves other aspects, as users' expectations of payment service quality take center stage. So here safety refers to the protection of user rights, in particular those concerning safeguards of user funds, data integrity and privacy, prevention of fraud and cybercrime, information disclosure and transparency, claim redress and dispute resolution.

ANNEX 2. POSSIBLE MARKET FAILURES IN THE NPS

- **Coordination failures**: The CBL coordinates among competing payment system providers to achieve optimal networking of systems and integration to allow interoperability between and/or among such payment systems. This promotes and encourages the introduction of more efficient payment systems.
- **Non-contestable monopolies**: The level of investment for the payment systems infrastructure can give rise to monopolies as it can pose a significant barrier to entry. These payment service providers, as monopolies, may abuse their power by not introducing cost-saving measures and not making new investment in improved technologies in a timely way. This results in inefficiency in the provision of payment services. In light of this, the CBL aims to level the playing field for new players to counter exploitative, anti-competitive practices.
- **Information asymmetry**: Lack of transparency regarding the design of systems and their weaknesses and inadequate information on the terms and conditions of service delivery (including pricing) for participants and customers create risks within the payment systems.
- **Negative externalities**: Payment systems participants may fail to take account of the effect of their own failures on other system participants, the financial system and the economy and underinvest in the mechanisms necessary to mitigate such risks. These negative externalities expose the payment systems to inherent risks.

ANNEX 3: CPSS-IOSCO PRINCIPLES FOR FINANCIAL MARKET INFRASTRUCTURES

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. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover 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 potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

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 minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised 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 fulfilment 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.

ANNEX 4: CPSS- WORLD BANK – GENERAL PRINCIPLES FOR INTERNATIONAL REMITTANCE SERVICES

Transparency and consumer protection

General Principle 1. The market for remittance services should be transparent and have adequate consumer protection.

Payment system infrastructure

General Principle 2. Improvements to payment system infrastructure that have the potential to increase the efficiency of remittance services should be encouraged.

Legal and regulatory environment

General Principle 3. Remittance services should be supported by a sound, predictable, nondiscriminatory and proportionate legal and regulatory framework in relevant jurisdictions.

Market structure and competition

General Principle 4. Competitive market conditions, including appropriate access to domestic payment infrastructures, should be fostered in the remittance industry.

Governance and risk management

General Principle 5. Remittance services should be supported by appropriate governance and risk management practices.

Roles of Remittance Service Providers and Public Authorities

A. *Role of remittance service providers.* Remittance service providers should participate actively in the implementation of the General Principles.

B. *Role of public authorities.* Public authorities should evaluate what action to take to achieve the public policy objectives through implementation of the General Principles.