



नेपाल राष्ट्र बैंक

भुक्तानी प्रणाली विभाग

पत्र संख्या: भु.प्र.वि./०८१/८२

बालुवाटार, काठमाडौं
फोन: ५७९६४४/५/६
एक्स्टेन्सन: १३५४
E-mail : psdept@nrb.org.np
Web : www.nrb.org.np

मिति : २०८२/०१/०३

सूचना

सम्पूर्ण सरोकारवाला व्यक्ति तथा निकायहरु ।

विषय :- राय/सुझाव उपलब्ध गराईदिने बारे ।

यस बैंकबाट तयार गरिएको “Framework for Identifying Systemically Important Payment Systems (SIPS)” को मस्यौदा बैंकको वेबसाइट www.nrb.org.np मा राखिएको व्यहोरा अनुरोध गर्दछु । उक्त मस्यौदा परिमार्जनको लागि राय/सुझाव २०८२ जेठ ४ भित्र यस विभागको ईमेल psdnic@nrb.org.np मा उपलब्ध गराई दिनुहुन अनुरोध गर्दछु ।

भवदीय,

(किरण पण्डित)

कार्यकारी निर्देशक



Framework for Identifying Systemically Important Payment Systems (SIPS)

Nepal Rastra Bank

Payment Systems Department

April, 2025

Contents

List of Abbreviations	3
1. Definitions.....	1
2. Introduction.....	2
3. Objective	4
4. Scope of the Framework	5
5. Criteria for the Determination of Systemically Important Payment Systems.....	5
6. Responsibilities of Designated Payment Systems	6
7. Evaluation of Payment Systems.....	8
8. List of Designated Payment Systems.....	8
Annexure: General Applicability of PFMI to Payment Systems	9

List of Abbreviations

BFI	Banks and Financial Institutions
CCP	Central Counterparties
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
CSD	Central Securities Depositories
ECC	Electronic Cheque Clearing
FMI	Financial Market Infrastructure
IOSCO	International Organization of Securities Commissions
LVPS	Large Value Payment System
NRB	Nepal Rastra Bank
PFMI	Principles for Financial Market Infrastructures
PSO	Payment Systems Operators
PSP	Payment Service Providers
RTGS	Real-Time Gross Settlement
SIPS	Systemically Important Payment Systems
TR	Trade Repositories

Disclosure

This document mainly draws upon the Principles for Financial Market Infrastructures (PFMI), published by the Bank for International Settlements (BIS) in collaboration with the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO), as the global standard for resilient financial market infrastructures.



Nepal Rastra Bank

Payment Systems Department

Baluwatar, Kathmandu

April, 2025

1. Definitions

- 1) **Interconnectedness:** The degree to which a Financial market Infrastructure (FMI) is linked- directly or indirectly- to other FMIs, financial institutions, markets, systems, or shared service providers. These interconnections and interdependencies, whether horizontal (between FMIs of similar functions) or vertical (across different types of FMIs), can create channels through which financial and operational risks may propagate, potentially amplifying systemic risk. Understanding and managing interconnectedness is essential for safeguarding the stability and resilience of the broader financial system.
- 2) **Designated Payment System:** A payment system identified as a Systemically Important Payment System (SIPS) based on specific criteria set forth in this framework. Designated Payment Systems are subject to enhanced regulatory oversight and compliance requirements to ensure safety, efficiency, and the mitigation of systemic risk.
- 3) **Financial Market Infrastructure (FMI):** An FMI is a multilateral system among participating institutions for clearing, settling, or recording financial transactions such as payments or securities.
- 4) **High/Large Value Payments:** Transactions that typically involve substantial monetary amounts, as determined by NRB, and are processed through payment systems designed to minimize risk. These payments are crucial due to their potential to impact financial stability and liquidity if delayed or disrupted.
- 5) **Payment Systems (PS):** A payment system is a set of instruments, procedures, and rules for the transfer of funds between or among participants; the system includes the participants and the entity operating the arrangement.
- 6) **Principles for Financial Market Infrastructure (PFMI):** International standards, developed by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO), as the guidelines to enhance the safety, efficiency, and transparency of FMIs while minimizing systemic risk and promoting financial stability.
- 7) **Systemically Important Payment System (SIPS):** A payment system is systemically important if it has the potential to trigger or transmit systemic disruptions.
- 8) **Time critical:** It is the urgency and precision required for processing payments or transactions within a specific timeframe to ensure the smooth functioning of financial markets and the broader economy. Transactions classified as time-critical typically involve strict deadlines and have significant implications for financial stability, liquidity management, and operational risk if not settled promptly.

2. Introduction

Safe, efficient, and resilient payment systems are essential for the effective functioning of the financial system, serving as the backbone of economic stability and growth. Payment systems provide the infrastructure for transferring funds between individuals, businesses, and financial institutions, supporting economic activities and financial intermediation. They enable clearing, settling, and recording payments, ensuring smooth monetary transactions and fostering trust among participants. In developing economies like Nepal, payment systems also play a key role in enhancing financial inclusion, driving access to financial services across urban and rural areas.

Systemically Important Payment Systems (SIPS) are critical components of the financial system, handling large-value and time-critical transactions. Their interruption can lead to systemic shocks with extensive consequences for financial stability. Poorly designed systems can amplify risks, interrupt markets, and weaken economic confidence. Therefore, ensuring their safety, efficiency, and resilience is vital for the overall stability of the financial ecosystem. Nepal Rastra Bank (NRB), under the Payment and Settlement Act, 2019, is mandated to oversee, regulate, and develop the country's payment systems, ensuring alignment with international standards like the Principles for Financial Market Infrastructures (PFMIs).

The PFMI, established by the CPMI and IOSCO, provides a globally accepted framework to enhance the safety, efficiency, and resilience of financial market infrastructures. These principles guide key areas such as governance, risk management, settlement finality, operational resilience, and transparency. In Nepal, adopting PFMIs posits opportunities to strengthen the payment systems, reduce systemic risks, and support the efficient operation of large-value payment systems like the Real-Time Gross Settlement (RTGS) and retail payment systems such as mobile banking and QR-based payments.

Resilient payment systems are also crucial for monetary policy implementation, as they serve as channels for the smooth transmission of monetary instruments. By enabling secure and timely payments, they minimize risks, reduce transaction costs, and support economic confidence.

NRB aims to enhance the robustness of Nepal's payment infrastructure through the regulatory and catalytic role as mandated by the NRB Act, 2002. In this light, designating payment systems as SIPS and strengthening oversight can enhance the preparedness of Nepalese payment systems to withstand potential interruptions, whilst promoting innovation, inclusivity, and sustainable development.

This document proposes a framework to identify and regulate SIPS in Nepal, ensuring they meet international best practices while contributing to financial stability and economic growth.

2.1 Payment Institutions in Nepal

The Payment and Settlement Act, 2019 has classified licensed payment institutions as follows: -

- 1) **Payment System Operators (PSOs):** A payment system operator (PSO) is an entity that provides the infrastructure and services necessary for the processing and transfer of funds between parties in a payment system. PSOs facilitate the secure and efficient movement of money in various forms, such as electronic funds transfers, card payments, and mobile payments. PSOs are established with the objective of processing, routing/switching, operating, controlling and clearing payment-related transactions/activities. PSOs play a crucial role in enabling secure, efficient, and reliable payment services, facilitating financial transactions between individuals, businesses, and other entities. As per the act, clearing house, institutions operating electronic card network, and institutions operating other electronic payment network are classified as PSOs.
- 2) **Payment Service Providers (PSPs):** A payment system provider (PSP) refers to an entity that offers services and infrastructure to facilitate the electronic fund transfer and enable various types of financial transactions. These providers play a crucial role in the modern economy by connecting merchants, consumers, and financial institutions, allowing them to send and receive payments securely and efficiently. PSPs offer a range of solutions and technologies to support different types of transactions, such as online payments, mobile payments, peer-to-peer transfers, and point-of-sale transactions. They typically implement the necessary infrastructure, software, and security measures to process payments, verify identities, and protect sensitive financial information. These providers often act as intermediaries between buyers and sellers, enabling the seamless transfer of funds from the payer to the payee. They may offer virtual terminals and other tools that allow businesses to accept payments from customers using various methods, such as credit cards, debit cards, bank transfers, digital wallets, or alternative payment systems. Overall, payment system providers play a vital role in enabling businesses and individuals to conduct electronic transactions securely, efficiently, and conveniently, contributing to the growth of e-commerce and the digital economy. These institutions have direct relationship with customers.

2.2 Payment Systems

Payment systems in Nepal can be broadly categorized into large value payment systems and Retail Payment Systems.

- 1) **Large Value Payment System:** A large value payment system (LVPS) is a financial infrastructure that facilitates the secure and efficient transfer of high-value funds between financial institutions or participants. LVPSs are typically operated by central banks or other designated financial authorities within a country or region. The primary purpose of an LVPS is to enable the settlement of large-value transactions, such as interbank transfers, large corporate payments, government securities transactions, and other high-value

financial transactions. These systems play a crucial role in the stability and functioning of a country's financial system by providing a secure and reliable mechanism for the timely settlement of large-value payments. RTGS which is owned and operated by NRB, is a large value payment system that processes high value and time critical payments on a real-time basis.

2) Retail Payment System: A retail payment system refers to the infrastructure and processes involved in facilitating financial transactions between consumers, banks and financial institutions/ PSPs and their merchants. These systems enable customers to make payments for goods and services they purchase from physical stores or online retailers or carry out person-to-person transfers. These are the payment systems which typically handle a large volume of payments of relatively small value. The major retail payment systems operating in Nepal are:

- i. Electronic Cheque Clearing (ECC):** ECC is a cheque processing and settlement (cheque truncation) solution where a paper cheque is processed electronically between participating member banks and financial institutions (BFIs), without requiring the physical movement of
- ii. Interbank Payment System:** Interbank payment is a system to electronically transfer funds from one account to any other account held at any of the participating member BFIs. The transactions are settled on the basis of deferred net settlement.
- iii. Faster Payment System:** Faster payment system allows transfer of funds of smaller value across the accounts held at different BFIs on a real time basis.
- iv. Card Payment Network:** A card payment network facilitates transactions of payment cards such as debit cards, credit cards and prepaid cards.

3. Objective

The purpose of this framework is to define criteria to assess and designate systemically important payment systems in Nepal. The framework aims to ensure that all SIPS are subjected to appropriate oversight and regulation to mitigate the risk of systemic interruptions within the financial system. The primary objective of this framework is to promote financial stability by:

- 1) Identifying payment systems whose interruption could transmit risks throughout the financial system.
- 2) Safeguarding the functioning of critical payment systems by ensuring resilience during financial stress or operational interruptions.
- 3) Identifying various types of risks and understanding how they may arise and are transmitted in the system.
- 4) Assessing and analyzing the risks to develop appropriate and effective mechanisms for monitoring, managing, and controlling them.

4. Scope of the Framework

This framework highlights the criteria to be used by the NRB for the identification of SIPS. It is applicable to:

- 1) **Payment Systems Operated by NRB:** Systems directly managed by NRB to ensure secure and efficient clearing, settlement, and payment operations.
- 2) **Payment Systems Operated by Licensed Institutions:** Systems managed by institutions authorized under the Payment and Settlement Act, 2019 to conduct payment-related activities within Nepal.

5. Criteria for the Determination of Systemically Important Payment Systems

Central Banks usually designate SIPS because deficiency in or failure of such systems can trigger and transmit further interruptions among participants or systemic interruptions in the financial system as whole. The designated payment systems can be state-owned or owned by private entities. The purpose of designation is to manage contagion of risks associated with the operations of critical payment systems. Since the failure of designated payment systems can affect the financial system as a whole, such systems are subject to comprehensive oversight, in accordance to domestic regulations as well as the PFMI. These principles provide guidance for the design, operation, and oversight of FMIs such as payment systems, central securities depositories, central counterparties (CCP), and trade repositories (TRs).

- 1) **Systems that meet at least one of the following criteria may be recognized as systemically important:**
 - a. The systems that mainly handle *time-critical and large value* payments as defined by NRB,
 - b. The *sole* payment system in the country that is crucial in country's financial market infrastructure,
 - c. The *largest* payment system in terms of aggregate value of payments,
 - d. A *market share* of more than one-third of the corresponding retail market in terms of value of transactions or two-third of the corresponding retail market in terms of volume of transactions,
 - e. High degree of *interconnectedness* with other payment systems.
- 2) Furthermore, NRB reserves the authority to identify and designate SIPS based on their criticality, as defined and determined by NRB, to the financial system.

NRB will review and amend the criteria as deemed necessary.

6. Responsibilities of Designated Payment Systems

Designated payment systems play a pivotal role in ensuring the stability, safety, and efficiency of the financial system. They are integral to the smooth functioning of payment, clearing, and settlement processes. The PFMI outlines responsibilities for designated payment systems to comprehensively manage risks, uphold transparency, and maintain robust governance. The key responsibilities of designated payment systems are detailed below:

1) Ensuring a Sound Legal Basis

Designated payment systems must operate within a robust legal framework that ensures enforceability for all material aspects of their operations. Rules for settlement finality must be legally certain, reducing risks of reversal or dispute. The system's netting arrangements, collateral frameworks, and participants' obligations should be enforceable under applicable laws. Regular review and updates of existing legal provisions are vital to align them with changing legal and regulatory environments.

2) Developing Clear and Understandable Rules and Procedures

The system must provide clear, consistent, and transparent rules for participation and operation. Participation criteria must be well-defined and accessible to eligible entities. Procedures should clearly outline the roles, responsibilities, and liabilities of participants and the system operator, along with participant-default rules. Communication of rules in an understandable format ensures informed participation and compliance.

3) Managing Risks Effectively

Designated systems must have comprehensive frameworks for identifying, measuring, monitoring, and mitigating risks, including legal, credit, liquidity, operational, and general business risks. Credit risk should be managed through collateral requirements, guarantee funds, and robust default management procedures. Liquidity risk mechanisms, such as pre-funding requirements and credit lines, should ensure timely settlement. Operational risks should be addressed with advanced technology, system redundancy, and disaster recovery/business continuity plans.

4) Ensuring Timely and Final Settlement

Timeliness and certainty of settlement are critical for reducing systemic risk. Settlements should be conducted in real-time (RTGS) or completed within the same business day for netting arrangements. Clearly defined finality rules must provide assurance to participants regarding the irrevocability of transactions.

5) Establishing Effective Governance Arrangements

Governance frameworks must ensure accountability, transparency, and alignment with public interest. The designated payment systems must define strategic objectives, allocate resources effectively, and monitor system performance. Decision-making processes should be transparent

and consider the views of stakeholders. Conflicts of interest should be identified and managed appropriately.

6) Notifying Significant Changes to the Central Bank or Regulatory Authorities

Designated payment systems must report significant changes in their operations, rules, or infrastructure to NRB. Advance notification of changes ensures appropriate regulatory oversight and enhanced risk mitigation. Changes could include adjustments to risk management policies, operational arrangements, or participant rules.

7) Conducting Periodic Self-Assessments

Self-assessment is vital for continuous improvement and compliance with PFMI principles, requiring regular evaluation of the system's alignment with international standards, identification and resolution of gaps, and the use of globally accepted benchmarks and tools. Assessment results should be shared with NRB for review and guidance.

8) Promoting Transparency and Disclosure

Designated systems must ensure transparency to build confidence among participants and regulators by publishing relevant information on governance, risk management policies, and operational rules. They should disclose self-assessment results and system performance metrics to stakeholders and maintain open communication with participants and regulators regarding risks and any changes.

9) Supporting Financial Stability and Systemic Risk Mitigation

Designated systems must operate in alignment with the broader goals of financial stability and mitigation of systemic risk. To achieve this, they should collaborate with regulators, participants, and other FMIs. Additionally, they must establish robust crisis management protocols to ensure preparedness for handling system disruptions. Continuous monitoring and proactive management of interdependencies with other FMIs and participants are essential to minimize contagion risks and maintain the stability of the financial system.

10) Aligning Operations with International Standards

Designated payment systems are expected to meet or exceed international standards, such as the PFMI, to ensure global confidence and interoperability. They should align their operations with PFMI principles to enhance safety, efficiency, and resilience. Regular participation in international benchmarking and peer reviews is essential to identify and adopt best practices. Additionally, engaging with international organizations helps designated systems stay updated on evolving standards and technologies, ensuring they remain globally competitive and effective.

By adhering to these responsibilities, designated payment systems not only fulfill their regulatory obligations but also contribute to the overall stability and efficiency of the financial ecosystem. The integration of these responsibilities into daily operations ensures resilience against system disruptions, builds trust among participants, and supports economic growth.

7. Evaluation of Payment Systems

NRB shall evaluate the payment systems, annually, or when significant changes occur in the markets, systems, and/or in the volumes traded. For this purpose, it will apply the criteria set forth in Section 4. Similarly, periodic assessment of the designated payment systems shall be conducted by the Bank.

8. List of Designated Payment Systems

The list of designated payment systems shall be maintained and published on the official website of NRB.

Consultative Document

Annexure: General Applicability of PFMI to Payment Systems

Principle	Payment Systems
1. Legal basis	•
2. Governance	•
Framework for the comprehensive management of risks	•
4. Credit risk	•
5. Collateral	•
6. Margin	
7. Liquidity risk	•
8. Settlement finality	•
9. Money settlements	•
10. Physical deliveries	
11. Central Securities Depositories	
12. Exchange-of-value settlement systems	•
13. Participant Default Rules and Procedures	•
14. Segregation and Portability	
15. General business risk	•
16. Custody and Investment Risks	•
17. Operational risk	•
18. Access and participation requirements	•
19. Tiered participation arrangements	•
20. FMI Links	
21. Efficiency and effectiveness	•
22. Communication procedures and standards	•
23. Disclosure of rules, key procedures, and market data	•
24. Disclosure of market data by TRs	

Source: CPSS (Committee on Payment and Settlement Systems) -IOSCO – Principles for financial market infrastructures – April 2012