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सूचना

सम्पूर्ण सरोकारवाला संस्थाहरु ।

प्रणालीगत रुपमा महत्वपूर्ण भुक्तानी प्रणालीहरुको पहिचान गरी त्यस्ता प्रणालीहरुको सञ्चालन एवं व्यवस्थापनलाई थप सुदृढ, सुरक्षित तथा प्रभावकारी बनाउने उद्देश्यले "Framework for Identifying Systemically Important Payment Systems (SIPS)" जारी गरिएको व्यहोरा सम्बन्धित सबैको जानकारीको लागि अनुरोध छ ।



कार्यकारी निर्देशक



Framework for Identifying Systemically Important Payment Systems (SIPS)

Nepal Rastra Bank

Payment Systems Department

September, 2025

Contents

List of Abbreviations	ii
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.....	9
9. Review and Update	9
Annexures	10

List of Abbreviations

BIS	Bank for International Settlements
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
PSD	Payment Systems Department
PSO	Payment Systems Operators
PSP	Payment Service Providers
QR	Quick Response
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

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Baluwatar, Kathmandu

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1. Definitions¹

- 1) **Interconnectedness:** The degree to which a Financial Market Infrastructure (FMI) is linked-directly or indirectly- to other FMIs, banks and financial institutions (BFIs), 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, supervision, and compliance requirements to ensure safety, efficiency, integrity, and resilience, and to mitigate systemic risk within the financial system.
- 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 Nepal Rastra Bank (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:** 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

¹ Approved by Management Committee Meeting No. 8/082/83 dated August 20,2025.

if not settled promptly. NRB shall consider transactions that meet the criteria specified in Annex 1, Criteria 1, Sub-Criteria a., points 1, 2, and 3 as time critical payments.

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 processing, clearing, recording and settlement of 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 systems², ensuring alignment with international standards such as the Principles for Financial Market Infrastructures (PFMIs)³.

The PFMIs, established by the CPMI and IOSCO, provide a globally accepted framework to enhance the safety, efficiency, and resilience of FMIs. These principles guide key areas such as, but not limited to, 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 Quick Response (QR) code-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.

² The Payment and Settlement Act, 2019 confers regulatory authority to the NRB over payment systems in Nepal. Section 5 prohibits any individual or institution from operating as a Payment System Operator (PSO) or Payment Service Provider (PSP) without prior approval/license from NRB. Section 7 authorizes NRB to issue a Letter of Intent (LOI), and Section 9 provides NRB discretion to grant PSO/PSP licenses. Further, NRB is empowered to issue regulatory directions (Section 45), conduct supervision, monitoring, and inspection of licensed entities (Section 42), and enforce reporting requirements (Section 27). In accordance with Section 46, NRB has promulgated the Payment and Settlement Bylaw, 2020 to operationalize the Act's provisions.

³ Per Directive No. 13/081, Point 4 of the Payment Systems-related Unified Directives, 2081, licensed institutions are suggested to consider PFMIs as guiding principles for their risk management practices.

NRB aims to enhance the robustness of Nepal's payment infrastructure through the regulatory and catalytic role as mandated by the NRB Act, 2002⁴. 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 outlines the 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 service 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

⁴ Section 4 of the NRB Act, 2002 has stated developing a secure, healthy, and efficient system of payment as one of the objectives of the NRB.

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 and retail payment systems.

- 1) **Large Value Payment System (LVPS):** A large value payment system processes, clears or settles high/large value payments. 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 system, which is owned and operated by NRB, is a large value payment system that processes large/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 visit to the clearing house or paying bank/branch.
 - 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 establish clear and comprehensive criteria for the identification and designation of SIPS in Nepal. It aims to ensure that such systems are subject to appropriate

regulatory oversight and risk management practices to prevent systemic disruptions within the financial system.

The framework is designed to promote financial stability by:

- 1) Identifying payment systems whose interruption could generate and transmit risks across the broader financial system.
- 2) Ensuring the resilience and continuity of critical payment systems during periods of financial stress or operational disruptions.
- 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 outlines the criteria for identifying SIPS and the responsibilities of designated payment system. 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 or critical* 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 are integral to the smooth functioning of payment, clearing, and settlement processes. Given their critical role in maintaining financial stability, they are subject to enhanced regulatory oversight and compliance obligations. These systems must comprehensively manage systemic risks, ensure operational resilience, and promote transparency and sound governance. In line with the PFMI and other supporting guidelines such as “Guidance on cyber resilience for financial market infrastructures”, designated payment systems are required to uphold the highest standards of safety, efficiency, and risk management by assuming the following responsibilities:

1) Ensuring a Sound Legal Basis

Designated payment systems must operate within a clear and enforceable 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. Further, the NRB may define additional regulations/rules for designated payment system from time-to-time. Thus, designated payment systems must ensure regular review and updates of existing legal provisions on an annual basis to align them with changing legal and regulatory environments.

2) Establishing Clear and Understandable Rules and Procedures

Designated payment system must have 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 system 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 payment 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. General business losses should be managed by holding sufficient liquid net assets funded by equity to ensure continued operations and services if losses materialize. The liquid net assets should further be sufficient at all times to ensure a recovery or orderly wind-down of critical operations and services. Designated payment systems must conduct stress testing of their risk management frameworks on an annual basis and update them based on the results of testing.

4) Ensuring Timely and Final Settlement

Timeliness and certainty of settlement are critical for reducing systemic risk. Settlements should be conducted in real-time 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) Seeking Approval or Notifying Significant Changes to the Central Bank or Regulatory Authorities

Designated payment systems must seek approval, if required by the regulatory provisions, or report significant changes in their operations, rules, or infrastructure to NRB. Prior approval, as required, or 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 and best practices, identification and resolution of gaps, and the use of globally accepted benchmarks and tools. Self-assessment shall be conducted following the official assessment methodology and templates specified by CPSS-IOSCO, and the results should be shared with NRB for review and guidance.

8) Promoting Transparency and Disclosure

Designated payment systems must ensure transparency to build confidence among participants and regulators by publishing relevant information on governance, risk management policies, and operational rules. In line with Principle 23 of the PFMI, designated payment systems should follow the CPSS-IOSCO Disclosure Framework by making publicly available, at least:

- a. a description of the FMI's function and the markets it serves; basic data and performance statistics on its services and operations; and a description of the FMI's general organization, legal and regulatory framework, and system design and operations;
- b. a comprehensive narrative disclosure for each applicable principle with sufficient detail and context to enable a reader to understand the FMI's approach to observing the principle; and
- c. a list of publicly available resources, including those referenced in the disclosure, that may help a reader understand the FMI and its approach to observing each applicable principle.

9) Supporting Financial Stability and Systemic Risk Mitigation

Designated payment 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 and Best Practices

Designated payment systems are expected to meet or exceed international standards and best practices, such as the PFMI and supporting guidance like "Guidance on cyber resilience for financial market infrastructures", to ensure operational resilience, interoperability, and global confidence. They should align their operations with PFMI 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 seamless economic transactions.

7. Evaluation of Payment Systems

Payment Systems Department (PSD), 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 5. Similarly, licensed institutions shall conduct periodic self-assessment of their designated payment systems against the PFMIIs within the period defined by NRB.

8. List of Designated Payment Systems

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

9. Review and Update

The NRB shall review and update the framework at least every two years or more frequently if necessary, to align the framework with developments in payment ecosystem, emerging risks, and international best practices.

Annexures

Annex 1: Sub-Criteria for Identifying Systemically Important Payment Systems (SIPS)

Criteria	Assessment Procedure	Weight
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.	<u>Time Critical:</u>	
	1. Does the system process, clear or settle payments that strictly need to be settled within hours or same day ?	-
	2. If unsettled, do the payments processed, cleared or settled by the system lead to penalties or default?	-
	3. Does the system process, clear or settle liquidity injection or absorption transactions?	-
	<u>Large Value Payments:</u>	
	4. Is the payment system mandated to process the high value threshold prescribed by the NRB?	-
b. The sole or critical payment system in the country that is crucial in country's financial market infrastructure.	1. Does the payment system have an alternative system in the country to process, clear, or settle similar or same type of transactions?	-
	<u>If the answer to 1. Is No:</u>	
	2. Is the payment system the main channel for large-value interbank settlements?	-
	3. Is the system used for monetary policy operations by the NRB?	-
	4. Does the system facilitate net settlement of other payment systems/FMIs?	-
	5. Does the system process, clear, or settle more than 60 percent of government transactions?	
c. The largest payment system in terms of aggregate value of payments.	6. Does the system process, clear or settle the cash leg of foreign currency transactions carried out by the central bank?	-
	1. Aggregate Annual (fiscal year) 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.	2. Highest Historical Peak value during one year (Fiscal Year) period among all FMIs	-
	<u>Transaction Volume:</u> Annual (Fiscal Year) Data: Transaction share of payment system in corresponding retail market	-
	<u>Transaction Value:</u> Annual (Fiscal Year) Data: Transaction share of payment system in corresponding retail market	-
	1. Is the central bank participating member?	0.1

Criteria	Assessment Procedure	Weight
e. High degree of interconnectedness with other payment systems	2. Are other FMIs interconnected in the system?	0.35
	2.1 Does the FMI have vertical interdependency with other FMI(s)?	0.1
	2.2 Do other FMIs have horizontal interdependency with the FMI?	0.07
	2.3 Does the FMI depend on the same liquidity provider or credit provider as that of other FMIs?	0.08
	2.4 Are more than 60 percent of the participating members of the FMI also the participating member of other FMIs?	0.05
	2.5 Does the FMI use the common service providers (for cyber security, system audits, etc.) as used by other FMIs?	0.05
	Direct Participation:	
	3. Are more than 60 percent of the licensed BFIs directly interconnected with the FMI's system?	0.15
	Indirect Participation:	
	4.1 Are more than 60 percent of participants of the FMI indirect participants?	0.05
	4.2 Do the indirect participants process more than 60 percent of FMI's overall transactions?	0.05
	5. Does the FMI process, clear or settle more than 50 percent of overall cross-border payments to and from Nepal?	0.1
	6. Are more than 60 percent of brokerage firms interconnected with the FMI/payment system?	0.1
	7. Does the system process insurance payments of more than 60 percent of insurance companies?	0.1

Note: A threshold score ≥ 0.50 shall denote high degree of interconnectedness and such FMI shall be designated as SIPS. Even for a threshold score of < 0.50 , NRB may consider interconnectedness if any of the specified criteria is highly relevant and has the chance of raising systemic risk in overall payment systems

Annex 2: 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