Person to Merchant Scheme Rulebook

National Bank of Ethiopia

Version 1.0
10.12.2023

Document Information

Project	Ethiopian Instant Payment System
Document Title	Person to Merchant Scheme Rulebook
Prepared by	National Bank
Version Number	1.0
Version Date	10.12.2023

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1   Preamble

This document serves as the Scheme Rule Book for P2M transactions. The P2M Scheme Rule Book outlines the rules, technical specifications, and operational guidelines governing the entire P2M Scheme, designed to ensure the orderly and secure conduct of Person-to-Merchant (P2M) transactions. This Scheme Rule Book for Person-to-Merchant (P2M) Transactions is hereby established and governed by the National Bank of Ethiopia and implemented by EthSwitch, National Switch of Ethiopia, referred to as "the Scheme Operator." This document serves as a comprehensive guide for all participants in the P2M payment ecosystem, ensuring the efficient and secure flow of funds between customers and merchants.

National Bank is vested with the authority to oversee and regulate P2M transactions in accordance with applicable laws and regulations. This Scheme Rule Book is designed to establish the framework within which P2M transactions will be governed and conducted, promoting transparency, safety, and reliability for all stakeholders involved. Furthermore, the scheme rule aims to promote digital payments through a secure, efficient and seamless interoperable services and infrastructures.

The Ethswitch as a national switch and owner and operator of interoperable infrastructure will implement the scheme rule under a close follow up and monitoring of the National Bank of Ethiopia.

This Scheme Rule Book is subject to periodic updates and amendments, which will be duly communicated to all scheme participants. Compliance with the rules and guidelines outlined in this document is mandatory for all participants within the P2M payment ecosystem. Failure to adhere to these rules may result in penalties, suspension, or expulsion from the scheme.

This Scheme Rule Book, as an essential tool for P2M transactions, aims to provide clarity and consistency for the benefit of all. Please refer to the specific sections of this document for detailed information on the rules and guidelines governing P2M transactions. It is imperative that all scheme participants familiarize themselves with the contents of this Scheme Rule Book to ensure the seamless operation of P2M transactions.

2 Document Information

2.1 Definition

2.1.1   P2M (Person-to-Merchant) Transactions

P2M transactions, refer to the process of making electronic payments or transfers from an individual (the payer) to a business or merchant (the payee) for the purchase of goods and/or services facilitating payments in a real-time. These transactions are typically conducted through digital payment channels, including but not limited to mobile applications, online platforms, or other electronic means. P2M transactions may involve various payment instruments, such as cards, mobile wallets, or bank transfers, and are integral to enabling seamless and swift payments for commercial transactions.

2.2 List of Defined Terms

Term	Definition
Account	A Sender or Receiver Account used to send and receive Transactions. Accounts may be bank accounts, mobile wallets, and/or electronic money accounts. An account is identified by an IBAN or an Institution + Account Number (BIC + A/c Number)
Accepted	An "Accepted" response to a payment transaction indicates that the Payee Participant has Accepted the Payment and will provide immediate funds availability to the Payee
Account Number	A unique thirteen-digit numbers that is assigned to Participants. An Account Number is an acceptable Address. An Account Number is a unique set of numbers that is associated with an individual Account.
Address	An Address identifies the Account and Participant where the Account is held. An Address may be an Account Number or an Alias.
Addressing Function	The Addressing Function allows an Address, and the corresponding Transaction, to be routed and aligned to the appropriate Receiving Participant and to the appropriate Account.
Addressing Message	An Addressing Message is a Message that supports the Addressing Function.

Alias	An Alias is an acceptable Address, Document or ID with which an Alias Management provides Customers a possibility to initiate Merchant payments using aliases of Registered Customers instead of Account numbers. An Alias may be a mobile phone number, an email address, National ID issued by relevant authority or another type of Alias, as approved by the NBE Scheme.
API (Application Programming Interface)	An API is an HTTP Interface exposing a set of functions and procedures that allow other applications to access the features or data.
Beneficiary	Beneficiary Is the person to whom funds are being sent or have been sent previously
Bank Identification Code (BIC)	A unique eight to eleven-character code that is assigned to Participants by SWIFT or relevant local authority. A BIC is used to identify a specific bank when executing an international or local Transaction.
Customer	Any person or entity who is responsible for an Account held by an EthSwitch Scheme Participant. The term "Customer" refers indifferently to a Consumer (Individual) or Merchant, Business, Government (Corporate).
Channel	The different means through which a Customer or a Merchant can access the EthSwitch or FIs Services. This includes mobile banking, online banking, USSD, Branch, ATM, or any other facility approved to provide such access.
Clearing	The process of transmitting, reconciling and, in some cases, confirming transactions prior to settlement, potentially including the netting of transactions and the establishment of final positions for settlement.
Direct Participant	A Direct Participant is a Participant that has a Settlement Account with the National Bank. A Direct Participant holds End User Accounts and connects directly to the Payment System to initiate or receive Financial and Non-Financial Messages.
Direct Participant Agreement	An agreement that binds a Direct Participant to all relevant IPS Scheme rules.
Dispute	A Dispute is an issue surfaced by an entity related to an IPS Transaction that has been Cleared and settled through the Payment System.

Dispute Arbitration	The process by which IPSL's Dispute Resolution team resolves and decides upon the Dispute.
Dispute Portal	The IPS ET Value Added service component providing the capabilities and functionalities to manage Disputes related to the IP System.
End User	An End User is a Sender or Receiver.
Entity	An Entity is a party that may be involved in an IPS Transaction. An Entity could be a Participant, a Use Case Party, an Approved Third-Party Provider, or an End User.
Fee	A Fee is a value in Ethiopian Birr charged to one Entity by another Entity.
Financial Institution (FI)	A Financial Institution can be either the Parent Organization for one or many Participants (and can be a Participant itself). A Participant can only be associated to only one Financial Institution.
Government	Government is the Government of Ethiopia.
Government Agency	A Government Agency is an agency, ministry, or any other officially designated part of the Government of Ethiopia.
Individual	A person that consumes or makes use of the goods or services produced by businesses, merchants or other to fulfil his/her personal need or others' needs.
Indirect Participant	An Indirect Participant is a Participant that does not have a Settlement Account with the central bank. An Indirect Participant holds End User Accounts and connect directly to the Payment System to initiate or receive Financial and Non-Financial Messages.
Indirect Participant Agreement	An agreement that binds an Indirect Participant to all relevant IPS Scheme rules.
IPS	IPS is a Real-Time Retail Payments System that facilitates Credit Push Transactions and provides Instant Payment Functions to Entities involved in the IPS Scheme. The term 'IPS' is interchangeable with 'IPS Scheme'.

IPS Function	An IPS Function is a core, mandatory function provided by the IPS Scheme to all Participants. IPS Functions sit inside of the Payment System. In order to Participate in the IPS Scheme, Participants are required to use all IPS Functions.
IPS Scheme Management	IPS Scheme Management is a term used to describe the structures, activities, and approaches to governance, IP, and rules amendments.
Irrevocable	Irrevocable means that once a Transaction Order is confirmed by the Sender, the Sender cannot cancel the Transaction and with finality the corresponding value of the transaction cannot be reversed without a consent of the Receiver or applicable laws of the Federal Democratic Republic of Ethiopia.
Licensed Bank	An Entity that has a Banking license from NBE to hold End User Accounts and a Settlement Account at NBE.
Licensed Micro-Finance Bank	An Entity that has an MFI license from NBE to hold End User Accounts.
Licensed Non-Bank	An Entity that has a Non-Bank license from NBE to hold End User Accounts.
Licensed Operator	An Entity that has an Operator license from NBE to provide payments processing.
Licensed Payments Instrument Issuer	An Entity that has a Payments Instrument Issuer license from NBE to hold End User Accounts.
Message	A Message is an exchange of information. A Message can be Financial Message or a Non-Financial Message.
Non-Financial Message	Non-Financial Messages are informational communications that do not carry a value and an instruction to move funds from a Sending Account to a Receiving Account.
Optional Services	An Optional Service is a non-mandatory function provided by the Company to Entities. Optional Services sit outside of the Payment System.
Participant	A Participant is an Entity that holds End User Accounts and connects to the Payment System to Clear Transactions. A Participant may be a Direct

	Participant or an Indirect Participant. A Participant has been approved by the Company to Participate in the IPS Scheme.
Participant Portal	The Participant Portal allows Participants to view and, in some instances, monitor, and manage all activities relevant to all Transactions the Participant may be involved in, including related Fees. The Administrative Portal Function may be referred to as the Administrative Portal.
Payment	A transaction; the performance of an obligation to pay money.
Payment System	A Payment System is the technology infrastructure operated by the Payment System Operator to send and receive Transactions through the IPS Scheme.
Payment System Operator	The Payment System Operator is the Entity licensed by the National Bank and that routes Transactions between the Sending Participant and Receiving Participant. The Payment System Operator provides the IPS Functions. The Payment System Operator is EthSwitch, the Company.
Penalty	The charge levied on the offended Participant for violation of Scheme Rules.
Person	A Person is an Individual.
Person-to-Merchant	Person-to-Merchant means the Sender is a Person and the Receiver is a Business or a Merchant. P2M Transactions include but are not limited to in-person merchant payments, remote merchant payments, and bill payments to commercial providers.
Payee	The customer who has an account at the Payee Participant and who would ultimately receive the final payment.
Payee Bank	A Participant Bank or FI that holds the Payee's Account and receives a Payment.
Payer	An individual who sends a payment through its payer bank.
Payer Bank	A Participant that holds the Payer's Account and initiates a Credit Transfer or Payment Return or any kind of transaction to the IPS System.

Real-Time	Real-Time is an action that takes place immediately.
Receipt Message	A Receipt Message is a communication from the Payment System to acknowledge that it has received a Message that carries an instruction.
Receiver	A Receiver is the intended beneficiary of the Transaction Instruction. A Receiver is an End User. The Receiver is an Accountholder.
Accepted	An "Accepted" response to a payment transaction indicates that the Payee Participant has Accepted the Payment and will provide immediate funds availability to the Payee
Receiver Confirmation Notification	A Receiver Confirmation Notification is a communication from the Receiving Participant to the Receiver that confirms funds have been Credited.
Receiving Participant	A Receiving Participant is an authorized Direct or Indirect Participant. A Receiving Participant is the holder of the Receiver's Account.
Request to Pay Message	A Request to Pay Message is a communication sent by a Receiving Participant or a Use Case Party to a Sending Participant through the Payment System that 'requests' funds to be transferred from the Sender's Account at the Sending Participant to the Receiver's Account at the Receiving Participant.
Retail Transaction	A Retail Transaction is a Transaction of low value that meets value limits as defined by the IPS ET Scheme Rulebook.
Same-Day Settlement	Same-Day Settlement is when an IPS Transaction is Settled on the same day that the IPS Transaction takes place.
Sender	A Sender is the initiator of the Transaction Instruction. A Sender is an End User. The Sender is an Accountholder.
Sender Confirmation	A Message sent from the Sender to the Sending Participant or Use Case Party confirming the Sender's intention to transfer funds to the Receiver and to pay applicable fees, if any. If received by a Use Case Party, a Sender Confirmation Message is forwarded to the Payment System then to the Sending Participant.

Sender Confirmation Notification	A Sender Confirmation Notification is a communication from the Sending Participant to the Sender that serves as a receipt for the Sender, confirming funds have been Debited and Fees have been paid, if relevant.
Sending Participant	The Sending Participant is an authorized Direct or Indirect Participant. The Sending Participant is the holder of the Sender's Account.
Settlement Bank	The Settlement Bank is responsible for maintaining Settlement Accounts for both Sending Participants and Receiving Participants. In the case of the IPS ET Scheme, the designated Settlement Bank is the National Bank of Ethiopia, which serves as Ethiopia's central bank.
Settlement Function	The Settlement Function facilitates the Settlement approach for IPS ET Scheme Participants by Debiting the Sending Participant and Crediting the Receiving Participant in the amount of each Transaction Order and periodically communicating those obligations to the Settlement Bank.
Settlement Window	The Settlement Window is a designated period of time, after which the Payment System sends the Net Settlement Instruction to the Settlement Bank.
Sponsor	A Direct Participant that provides Settlement Services to another Participant.
Sponsor Registration	An agreement between a Direct Participant and an Indirect Participant in which the Direct Participant agrees to assume liability for Settlement on behalf of the Indirect Participant. A Sponsor Registration is shared with the Company.
Status Inquiry Message Response	A Status Inquiry Message Response returns a response to a Status Inquiry Message.
Status Inquiry Messages	A Status Inquiry Message allows the Sender or Receiver to inquire about the status of a Transaction.
Third Party Provider	An Entity that acts on behalf of a Sending Participant or a Receiving Participant to send and receive Messages within IPS.
The Company	The Company is EthSwitch.
Transaction Instruction	A Transaction Instruction is a communication from a Sender to the Sending Participant or Use Case Party that directs the initiation of a Transaction Order.

Turn Around Time	Turn Around Time is the time a Participant or the Payment System has to confirm or decline a Transaction or respond to a Dispute or a Fraud alert.
Use Case Parties	Use Case Parties are government agencies, billers, or Payment Service Providers that have been approved by EthSwitch to enable a technical connection to the Payment System for the purpose of sending and/or receiving approved Messages as defined in the IPS Scheme Rulebook.
Use Case Party Agreement	An agreement that binds a Use Case Party to all relevant IPS Scheme rules.
Use Cases	A Transaction that identifies the purpose of the Transaction by recognizing the Sender and Receiver as a Person, Business/Merchant or Government Agency.
Warrant	An agreement between a Participant and an Approved Third-Party Provider in which the Participant agrees to assume liability for the Approved Third-Party Provider's adherence to relevant IPS Scheme Rules. A warrant is shared with the Company.

2.3   List of Acronyms

Acronyms	Expanded Form
ADC	Access Device Channels
API	Application Programming Interface
BIC	Bank Identification Code
CAS	Customer Addressing Scheme
DBA	Doing Business As
EFT	Electronic Funds Transfer System
EMI	Electronic Money Institutions
ID	Identification
IPS	Instant Payment System
IPS ET	Instant Payment System EthSwitch
IBAN	International Bank Account Number
KYC	Know Your Customer
MSP	Merchant Service Provider
NBE	National Bank of Ethiopia
NRT	Near Real-Time
P2M	Person-to-Merchant
QR	Quick Response Code
RTP	Request to Pay
VPA	Virtual Private Address

2.4   List of Variable Inputs

Variable	Values	Placement in the Doc
M.E.T. (Max. Execution Time)	17 seconds	Responsibilities of P2M Payment Processing
M.C.T. (Max. Crediting Time)	10 seconds	Responsibilities of P2M Payment Processing
M.N.T. (Max. Notification Time)	10 seconds	Responsibilities of P2M Payment Processing
N.R.T. (Min. RTP Now expiration Time)	120 seconds	Responsibility of Participants related to Request to Pay Processing

Variable	Values	Placement in the Doc
M.R.T. (Max. RTP Now expiration Time)	600 seconds	Responsibility of Participants related to Request to Pay Processing
L.R.T. (RTP Later Expiration Time)	40 days	Responsibility of Participants related to Request to Pay Processing
L.E.T. (Max. RTP Later Execution Time)	38 days	Responsibility of Participants related to Request to Pay Processing
R.R.T. (Request for return Response Time)	7 days	Responsibilities of Participants related to Request for Return
M.R.V. (Max. Return request Validity)	15 days	Responsibilities of Participants related to Request for Return
A.E.T. (Account inquiry request Execution Time)	10 seconds	Responsibility of Participants related to CAS Service
E.N.D. (End of Next Day)	End of next day	Responsibilities of Participants related to Request for Return
T.A.T. (Turn Around Time)	3 days	Principles of Dispute
D.D.T (Dispute Decision Timeline)	7 working days	Dispute Decision

2.5 Document Text Usage

Participants are required to treat all P2M business related documents, including but not limited to presentations, technical integration specifications, training materials, and any such related materials, as the intellectual property of the scheme owner and operator. Therefore, Participants must exercise discretion when sharing such documents with their internal business and technical teams, external vendors, or any other relevant entities. Participants must note that:

1. The National Bank reserves the right to make updates to this document as necessary. The NBE will provide written notification to participants before any updates to these rules are implemented.

2. Terms defined within this Scheme Rulebook are identified through capitalization and have the meanings attributed to them within the System Rules.

3. Section headings within this Scheme Rulebook are intended for reference and navigation purposes and shall not impact the interpretation of the Scheme Rulebook.

4. The term "Variable" may be employed in the Rulebook to indicate situations where specific rules may be adapted for particular entities or under specific circumstances. Unless explicitly stated as "Variable" within this Rulebook, no variations to the rules are permitted.

2.5.1 Other Related Documents

This Scheme Rulebook acknowledges the existence of other related documents which are pertinent to its operation, and any additional related documents that may be introduced from time to time.

3 P2M Scheme Overview
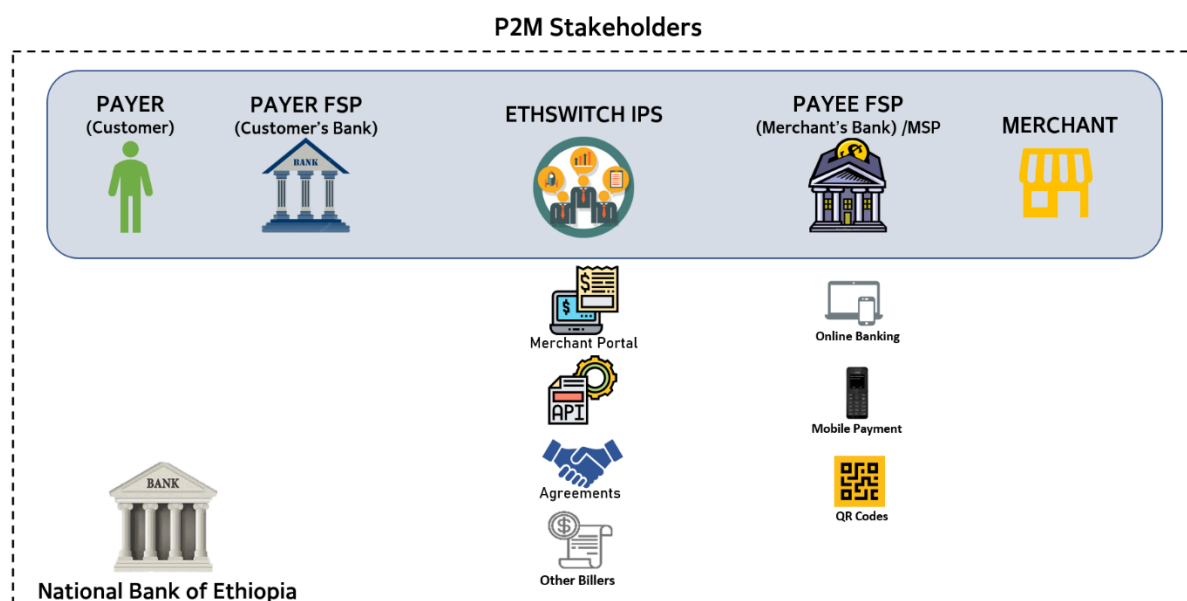
3.1 Objectives

The primary objective of the P2M Scheme Rule Book is to establish a comprehensive framework for the governance and operation of Person-to-Merchant (P2M) transactions encompassing to creating an efficient payment ecosystem for consumers to make secure electronic payments to merchants for goods and services, ensuring a clear understanding of rules and regulations, encouraging innovation and the adoption of emerging payment technologies while upholding the highest security standards, and extending the benefits of P2M transactions to a broader spectrum of society, including underbanked and underserved populations, through accessible and inclusive payment solutions.

3.2   Scope

The P2M Scheme Rule Book applies to all entities that participate in the P2M Scheme, including customers, merchants, financial institutions, payment service providers, and any other relevant stakeholders engaged in P2M transactions.

While the P2M Scheme operates within the framework of relevant proclamations, regulations and directives, this Rule Book provides additional, scheme-specific rules and guidelines that participants must adhere to in the context of P2M transactions.

The interoperable system Rules which issued by the National Switch, shall always be compatible with this scheme rule. In cases of contradiction between this P2M Scheme Rule Book and directives or regulation, the regulations or directives shall prevail.

3.3   Services Offered

The services offered under the P2M Scheme include:

3.3.1   Customer Addressing Scheme (CAS) Service

The Customer Addressing Scheme (CAS) service comprises a set of services designed to provide participants and customers, a functionality to initiate payments using Aliases of registered customers instead of account numbers, which may include identifiers such as a mobile number, Fayda ID, Virtual Private Address VPA, email address, and any other, into an IBAN or an Institution + Account Number (BIC + A/c Number). This enables customers, whether individuals or merchants, registered within CAS, to initiate fund transfers using the beneficiary's alias in place of an account number.

3.3.2   Payment Processing Service for P2M Transactions

A group of services for customer payments sent by the system Members on individual basis. Transactions are processed after confirmation of counterparty member within clearing session on 24*7 mode.

3.3.3   Payment Request Service I.e. Request to Pay (RTP)

A service group which caters to the initiation of payments by service providers, MSPs, including Request to Pay on an individual basis.

3.3.4   Return Payments Service

A service group for managing payment returns and refunds.

3.3.5 Query and Reporting Service

A support service which allows participants to setup, modify, and request and receive information on clearing session and get status or copy of payments.

3.3.6 Dispute service

A support service that facilitates the creation, monitoring, and management of disputes on the processed payments between participants.

3.4 P2M Scheme Participants

P2M Scheme participants include financial institutions, payment service providers, and other entities involved in P2M transactions in two categories.

Direct Participants: These participants have the option to connect directly to the IPS ET Scheme as Direct Participants or Settlement Agents. Direct Participants maintain a settlement account with the Ethiopia's Central Bank, NBE and establish connectivity with the IPS. They play a pivotal role in the settlement process and have direct access to the IPS ET Scheme to initiate or receive P2M transactions including financial and non-financial messages.

Indirect Participants: Alternatively, entities can participate as Indirect Participants or Non-Settlement Agents. Indirect Participants engage through an account maintained with Direct Participants for the settlement of P2M transactions. They do not maintain a direct settlement account but have access to the P2M Scheme's services via their relationships with Direct Participants. Indirect Participants will have direct access to the IPS ET participant portal, enabling them to interact with the ecosystem effectively.

3.5 P2M Roles for Specific Entities

3.5.1 RTP Initiator

RTP Initiators are entities, extending a financial regulated entity, including financial institutions (banks), payment service providers, Fintech companies and other relevant entities, that are responsible for creating and initiating RTP transactions, ensuring compliance with the Scheme Rules and regulations.

They can be either Direct Participants with direct access to the IPS ET Scheme or Indirect Participants working through a settlement account with Direct Participants. RTP Initiators should manage the entire RTP transaction process, including facilitating the request and ensuring timely and accurate payments.

3.5.2   Merchant Service Provider

Merchant Service Providers are entities that offer payment services and solutions to merchants. These entities can be an RTP initiator, Payment Service Provider or even fully regulated financial institutions. These are the entities responsible for offering user-friendly payment solutions to merchants such as providing a POS machine, merchant account management services, dispute management etc.

MSPs will be responsible for onboarding and assisting merchants in integrating with the P2M Scheme. They must ensure that merchants can accept P2M payments efficiently and securely. This includes providing technical support, offering payment processing services, and enabling merchants to use aliases for customer payments. MSPs are expected to comply with Scheme Rules and contribute to the smooth functioning of the ecosystem.

3.5.3   Payee FSP

Payee Banks or FSPs are financial institutions that maintain the accounts of payees, including merchants and individuals, in the P2M Scheme. It is an entity responsible for payment processing, facilitating payments, providing different payments methods like QR codes, mobile apps etc., basically, a fully regulated financial entity having a direct settlement account (an account created for the facilitation of net settlement generation and clearing services) in the IPS EthSwitch system.

Payee Banks are responsible for managing payee accounts, receiving funds on behalf of payees, ensuring the secure receipt of payments, and providing mechanisms for accessing funds thereby playing a vital role in settling payments received by merchants and other payees. Payee Banks must adhere to the Scheme Rules to guarantee efficient and reliable payment processing.

3.5.4   Payment Service Provider (PSP)

Payment Service Providers are entities that offer various payment-related services to customers and businesses within the P2M Scheme. These are the entities offering payment processing services, providing different payments channels such as QR codes, USSD service, but they may not necessarily have a settlement account in the Central bank, and may not be a direct participant in the IPS ET Scheme. They may include mobile payment providers, digital wallet services, and other organizations facilitating financial transactions.

PSPs are responsible for offering user-friendly payment solutions, ensuring secure transactions, and enhancing the overall customer experience within the P2M Scheme. They should provide options for customers to initiate P2M transactions, access their funds, and manage their payment preferences.

The specific responsibilities, obligations, and privileges of each participant category related to P2M transactions are detailed in subsequent sections of this Rule Book.

3.6 Specific Responsibilities of Participants for P2M Scheme Rules

Participants in the P2M Scheme are expected to adhere to specific responsibilities tailored to their respective roles within the ecosystem:

3.6.1 Responsibilities of P2M Payment Processing:

a) The paying customer must have the capability to initiate near real-time Person-to-Merchant (P2M) payments at their Bank (Participant) through one of the access channels. These channels must facilitate the submission of essential payment information, including payment amount, beneficiary customer details, Merchant DBA name obtained through QR or CAS, IBAN number of the recipient or an Institution + Account Number (BIC + A/c Number) in another Participating Member, and the purpose of the payment.

b) The Paying Customer's Bank is responsible for performing validation and authorization of the customer's payment. It is their duty to verify that the Paying Customer's Account has sufficient funds, conforming to the technical and format requirements specified in the system specifications.

c) Upon authorization, the Paying Customer's Bank is also required to block the payment amount until its completion in the IPS ET.

d) The IPS ET is responsible for validating incoming near real-time P2M payments. It will block the payment amount on the position account of the Paying Customer's Bank and subsequently forward the payment to the Beneficiary Customer's Bank.

e) Upon receiving the payment, the Beneficiary Customer's Bank has the responsibility of performing technical and business validations including but not limited to verifying the IBAN or an Institution + Account Number (BIC + A/c Number) which is the primary identification of the Beneficiary Customer in the incoming P2M transaction; and must send an authorization indicating acceptance to credit the Beneficiary Customer's Account after the completion of the transaction in the IPS, or refusal in authorization of the payment. This authorization or refusal should be transmitted to the IPS ET within a timeframe no later than **M.E.T**.

f) The Beneficiary Customer's Bank shall not reject a P2M transaction due to any reason other than the following technical reasons:
   ❖ The beneficiary is reported as deceased.
   ❖ The beneficiary's account is closed.
   ❖ The beneficiary's account is blocked or frozen.
   ❖ The beneficiary's account does not exist.
   ❖ The beneficiary's account is dormant.

g) In cases where a P2M payment is issued based on RTP, Participant issuing of the payment should fill the payment details the way they match initial payment request. The system

supports the processing of one underlying payment per one request to pay, with a status of the payment being either rejected, declined, or posted.

h) Upon receiving authorization from the Beneficiary Customer's Bank, the IPS ET immediately debits the paying customer's account and credits the payee customer account. As well as, adjusts the account positions of the payer and payee customers as well as notifies both the Paying Customer's Bank and the Beneficiary Customer's Bank about the successful completion of the payment.

i) Upon receiving the refusal in authorization from the Beneficiary Customer's Bank, the IPS ET shall reject the payment without delay by unblocking the amount of the payment on the position account of the Paying Customer's Bank as well as notifying both the Paying Customer's Bank and the Beneficiary Customer's Bank about the rejection of the payment.

j) Upon receiving notification confirming the successful completion of the payment, the Beneficiary Customer's Bank is required to credit the full amount of the Fund Transfer Instruction in the Beneficiary Customer's Account without delay, and no later than **C.E.T.**

k) Upon receiving notification confirming the successful completion of the payment, the Beneficiary Customer's Bank is required to credit the full amount of the Fund Transfer Instruction in the Beneficiary Customer's Account without delay, and no later than **M.N.T.** from the receipt of the notification.

3.6.2 Responsibilities of Merchant Service Providers (MSPs):

a) Ensuring onboarding of Merchant is done in-line with existing regulations for Digital Merchant onboarding.

b) Complying with the requirements and responsibilities of being a Merchant Service Provider for merchants. This includes integrating with the Customer Addressing Scheme and implementing measures to safeguard the security of customer information during P2M transactions.

c) Maintain merchant KYC information on an on-going basis and also share information with IPS ET -CAS as and when it is updated.

d) Ensure payment to a Merchant (after deducting merchant fees) on receiving of funds destined to it within time interval defined by the agreement with Merchant and no later than the time interval limits recommended by the EthSwitch defined in **Annexure D**.

e) Ensuring the timely disbursement of payments to merchants, after deducting applicable merchant fees **(Annexure D)**, upon receiving funds destined to them. These disbursements must occur within the agreed-upon time intervals defined in agreements with merchants and it should also adhere to the provided timeline as defined in **Annexure D**.

f) Supplying equipment/channel and facilities to Merchant for payment initiation and receiving of statuses for payments and Request to Pay (if applicable) while communicating the same to Merchant in timely manner.

g) Providing facilities for QR code generation (based on RTP) for merchants, enabling them to offer this payment initiation method to customers.

h) Ensuring a notification to merchant within **M.N.T.** of receiving payment confirmation from IPS ET.

i) Ensure that any disputes related to merchant payments are managed as per guidelines provided by the EthSwitch. The national Bank of Ethiopia ensures that the dispute mechanisms are efficient and effective time to time.

j) Managing any disputes related to merchant payments in accordance with the guidelines provided by the EthSwitch, ensuring fair and efficient resolution.

k) MSP desirous of offering such service should first share with EthSwitch the details of rules and how they will secure Merchant's consent prior to enabling such service.

l) MSPs shall ensure that customers paying for their transactions are not charged for any fee by merchants or third parties unless specifically stipulated in **Annexure D.**

m) MSPs shall ensure that their onboarded Billers and/or Bill-aggregators support bill payments via RTP.

3.6.3 Responsibility of Participants related to Request to Pay Processing

a) **Request to Pay Initiation**

    i. The payee party, whether a customer or merchant, must have the capability to initiate a Request to Pay through an IPS ET Participant, who may act as a Merchant Service Provider (MSP). This initiation can occur via one of the access channels provided to them, through which essential payment information, including the payment amount, beneficiary customer's IBAN or (BIC + A/c Number) in another Participating Member, and the purpose of the transfer, can be passed as part of the Request to Pay. Depending on the context of the payment, merchants can also include additional information within an RTP request.

    ii. MSPs are responsible for ensuring that if the initiating channel allows the transmission of an RTP using an alias, sensitive information such as the "Complete Account number" or (BIC + A/c Number) of Payer" is not disclosed to the payee on the RTP initiating channel.

    iii. Request to Pay shall be categorized into two types: RTP Now or RTP Later, clearly identified in the request message.

        a. "RTP Now" requests must include the exact date and time of expiration,

b. "RTP Later" requests must specify the date of expiration.

iv. For "RTP Now," the definition of the time of RTP expiration should be in seconds. The expiration time should not be less than **N.R.T.** and should not exceed **M.R.T.**

v. For "RTP Later," the definition of the expiration date should be in days. The expiration time should not exceed **L.R.T.**

vi. The System will not accept payments referenced to RTP if the corresponding Request to Pay has expired.

vii. Participants, including MSPs, are responsible for monitoring Request to Pay issued with the "RTP Later" type for their validity and expiration period. If a participant intends to change the expiration date, the current RTP should be canceled, and a new RTP with the same parameters and the new expiration date should be issued. If a payment is still expected for an expired RTP, a new RTP should be issued with a new expiration date to facilitate payment.

viii. Both "RTP Now" and "RTP Later" requests necessitate confirmation by the receiving participant.

ix. "RTP Later" requests must be confirmed or declined by the receiving participant within **L.E.T.** Acceptance of the RTP by the receiving financial institution does not guarantee payment unless approved by the payer.

x. The Request to Pay service allows the transfer of invoices related to the selected request as scanned images using a dedicated end-to-end API service. The API service enables the RTP receiver to request scanned images from the RTP sender.

xi. After receiving a payment against an RTP, the MSP is obligated to fulfill its obligations as outlined in Section 3.5.2. of this Scheme Rule Book.

b) **Request to Pay -Receiving**

i. Participants who are recipients of RTP requests must ensure that RTP requests are effectively communicated to the customer on various Access Device Channels (ADC), including push notifications on Mobile Apps, as well as other communication mediums such as SMS and email.

ii. If the customer is registered on Mobile App then Participant must communicate the RTP request using push notifications on Mobile App besides notification via SMS or email on customer's registered mobile number or email address.

iii. Customers should be able to see the Contextual information shared by Payee within the ADC (Mobile App, Internet Banking). In case the RTP contains information about associate scanned Image e.g. invoice, receipts then ADC channel should provide functionality to pull the Image and display to customer.

iv. Participants are responsible for providing customers with clear instructions regarding the expiry of RTP requests. These instructions should enable customers to make informed decisions on whether to pay or decline the RTP.

v. Customers should be provided with a view of pending RTP requests that have not yet expired. This allows customers to revisit and review these requests at their convenience and make payments against them.

3.6.4 Responsibilities of Participants related to Request for Return:

a) Participants shall respond on received Request for Return within **R.R.T.** with confirmation of receiving or declining the request. The R.R.T. timeframe is counted from the date of the original transaction.

b) Participant shall return the payment by the **E.N.D.** after accepting the request for return.

c) Once payment is posted the payment becomes irrevocable. However, Participant may issue a return payment request along with the defined reasons for returns.

d) The return of a near real time P2M payment must be submitted in accordance with the agreement between Financial Institutions (FIs) and merchants, but the return request must be made within a period less than **M.R.V.** from the original transaction.

e) A Request for Return can be initiated by the Paying Customer's Bank if the payer (Payer) has requested the Paying Customer's Bank to obtain reimbursement for a settled payment. This request may be made for reasons such as duplicate sending, or technical problems resulting in erroneous or fraudulently originated payments. The request shall contain a reason for the Request for Return by the Originator.

f) Participants shall allow the merchant the ability to accept or reject the request for return/refund of a transaction initiated by the customer.

g) Both the Payer and Payee institutions are responsible for notifying the Payer and Payee customers, respectively, about the successful completion of a payment or its subsequent return.

3.7 Responsibility of Participants related to CAS Service

a) Participant shall have an internal process to control the selection of alias for a Customer account and to ensure that the alias reasonably and accurately represents Customer.

b) The IPS ET will initially support the following alias types:

i. "Mobile Number" as Alias: This alias consists of 12 digits and follows the "251xxxxxxxxx" format for individuals.

ii. "Merchant ID" as Alias: This alias comprises 9 digits and adheres to the "XX9999999" format for Merchants. Here, "XX" represents a 2-digit prefix allocated to each

participant, while "9999999" represents a 7-digit sequence number issued to Merchants.

iii. "Virtual Payment Address" (VPA): A VPA consists of an 8-letter short name of the merchant followed by '@,' or a 3 or 4-letter short name of the Merchant Service Provider (MSP) that has onboarded the merchant.

iv. "Till Code": A unique number designated to a merchant for customers to use when paying for goods and/or services.

v. "Free Text Alias" for Merchants: Participants have the responsibility to manage free text aliases for merchants separately. The management mechanism in CAS should ensure the accuracy and completeness of alias information registered and maintained in the Customer Directory.

vi. To enhance the accuracy and security of CAS, participants should:

- ❖ Ensure the accuracy and completeness of alias information registered and managed in the Customer Directory.
- ❖ Verify and block any unacceptable content in free-text alias values.
- ❖ Implement a verification process at the back office before submitting free text aliases to CAS, rather than directly taking free text aliases from customers on the front-end channel.

vii. Participant shall de-register any aliases associated with an account which the registering Participant reasonably suspects to have been used for a fraudulent purpose.

viii. Participants are required to ensure that customers provide consent for the collection, storage, usage, and disclosure of their alias information in alignment with relevant laws and regulations.

ix. Participants must establish and maintain effective internal systems and procedures to prevent the unauthorized disclosure of restricted alias information. Furthermore, they should be equipped to identify and address any instances of unauthorized disclosure of alias information.

x. Participants shall respond to every received "Account Inquiry Request" within A.R.T. from the time of receiving the request.

xi. Participants are responsible for providing the following CAS-related services to their customers through their access channels:

- ❖ Registering customer in CAS and linking alias (e.g., mobile numbers) with its accounts.
- ❖ Unlinking alias from customer accounts
- ❖ Re-linking alias to customer accounts.

xii.   Participants should utilize appropriate CAS APIs to manage the Customer Directory. This includes updating information in cases where customer, account, or alias-related details have been modified in their internal systems. For instance, this could involve updating information due to a change in mobile number or the closure of a bank account.

xiii.   When a customer intends to unlink their alias from their account, the participant must ensure that this service is immediately accessible through self-service channels and/or customer support channels.

xiv.   Participants are responsible for obtaining customer consent and adhering to the necessary due process before registering and updating any information related to the customer, their account, or alias within the Customer Directory.

4   Customer Directory Service

4.1   P2M Payment Service using Customer's Alias

The IPS system provides a service that enables the conversion of an alias associated with a payment account number. These aliases may include mobile numbers, email addresses, and Fayda ID. This conversion service allows customers to initiate payments using the beneficiary's alias instead of the account number.

Participants are responsible for associating each alias in the CAS with the customer registration record including a list of eligible accounts linked to the customer. Participants are only permitted to link one alias with one bank account signifying that one customer ID is to be linked with a single bank account, in turn, linked with one alias. Participants can only access information in the CAS which are onboarded by them.

In line with the objectives of the P2M Scheme, access to the Customer Directory will be granted to all Participants. Participants are granted access to the Customer Directory for the following purposes:

o   Registering, Deregistering, and Maintaining Customer and Alias Information
o   Processing Requests on Customer Accounts Using Alias

4.1.1   Merchant Records in CAS:

Participants acting as Merchant Service Providers (MSP) are granted the capability to add Merchant Records within the Central Addressing Service (CAS). Merchant Records in CAS enable Alias-based payments to Merchants. When a Merchant Alias is provided, CAS will return the "Merchant's DBA (Doing Business As)" name to the Payer institution, in addition to other pertinent payment information.

4.1.2 Customer's Record in CAS:

Customer records are assigned an "Inactive" or "Active" status at the time of customer registration, depending on the registration parameters. Participant can change the status of Customer record to:

- o "Suspended" status may applied in cases of fraud detection related to customer accounts or legal processing involving the customer.
- o "Deleted" status is assigned upon the de-registration of customer data and is considered "final". Customer records in this status cannot be altered or subjected to further operations.

4.1.3 Registration of Alias

Participants are authorized to register one alias per customer, unless otherwise directed by EthSwitch. If a specific alias has already been registered by another Participant, any subsequent attempts to create new aliases will be rejected by the system.

- **For Customer**, only mobile phone numbers in the format of 11 digits are permissible. The system is equipped to accommodate additional alias types, such as:
  - i. Fayda ID
  - ii. Email address
  - iii. Virtual Private Address (VPA)
  - iv. Phone Number
- **For Merchants**, a range of alias types are allowed, including:
  - i. Merchant ID
  - ii. VPA (Virtual Payment Address)
  - iii. Free text alias
  - iv. Till code.
- Any attempts to register aliases in an invalid format will be rejected by the system.
- EthSwitch retains the prerogative to introduce new alias types into the system, with the obligation to notify Participants at least **30 days** in advance of such additions.

4.1.4 Managing Alias Records

The following statuses are applicable for alias records:

- **Active:** This status allows using of registered Alias to access Customer's account details.
- **Inactive:** Alias records marked as inactive are registered but not yet activated for use.
- **Suspended:** Alias records marked as suspended are disabled and cannot be used for account resolution. This status is also assigned to expired aliases.

- **Deleted:** It signifies that the record is deleted. This status is considered "final," and can't be changed to any other status. Operations with this Alias record are not allowed.

4.1.5   Expiration of Aliases

Participants can define expiration dates for registered aliases. If an alias has an established expiration date, it will become unavailable for receiving information after reaching the specified expiry date.

4.1.6   Account Inquiry Request

Participant can initiate the Account Inquiry Request to obtain the Customer's name (Account Title) and account type (account or wallet) information from the counterparty. The title may be fetched from the CAS records as well.

4.1.7   Payment Addressing

An Address is an identifier used to direct a Transaction from a Sender to a Receiver.

a) The Addressing Function facilitates an Address and the corresponding Transaction to be routed and aligned with the appropriate Receiving Participant and the specific Account.

b) An Address identifies the Account and the Participant where the Account is held. An Address may be in the form of an Account number/IBAN or an Alias.

c) An Alias may take various forms, including a mobile phone number (MSISDN), an email address, a social network account ID, a Taxpayer Identification Number (TIN), Open Text Format, Merchant ID, or other forms as determined by the ERTP Scheme.

d) The Addressing Function must approve any proposed Address.

e) An Address must be unique.

f) An Address may only correspond to one Account.

g) An Account may have up to one registered Address.

h) The Addressing Function maintains an up-to-date directory that maps an Address to the corresponding Account and the Participant where the Account is held.

i) Participants are responsible for confirming the existence of the proposed Account once the Address and Account information is received from the Payment System.

5   Transaction Types

5.1   Transaction type and process flows

a) Transaction type codes are specified in **Annexure E**.

b) Detailed transaction flows supported by the P2M Scheme are provided in **Annexure A**.

5.2 Transaction limits

c) The current available daily transaction limit on mobile money will apply.

d) National Bank and issuers reserve the right to impose transaction limits on Merchants payments in the future.

e) Participants will receive notifications of any updates to transaction limits at least thirty (30) working days before implementation.

5.3 Limits and Caps

f) Participants are required to impose minimum transaction limits. However, they may establish appropriate upper transaction limits or intra-day limits for their customers, considering their risk profile, account type, and other relevant factors, while ensuring customers can make payments without unnecessary hindrance.

g) Participants may refer to the limits proposed in **Annexure B** as a reference point for setting their transaction limits.

6 Dispute Resolution

6.1 Principles of Dispute

Disputes that arise within the P2M Scheme, whether involving EthSwitch, a participant, or between two participants, will be resolved based on the following principles:

a) The participants involved in a dispute may be Direct or Indirect Participants.

b) Participants must respond to a Dispute in a given stage within **T.A.T.** Turnaround Time.

c) Dispute resolution should be conducted with a commitment to equality, mutual benefit, and mutual respect among the parties involved.

d) The parties in dispute are encouraged to engage in negotiation and reach mutually agreeable solutions to resolve conflicts.

e) Disputes between EthSwitch and other financial institutions participating in the IPS system will be resolved as stipulated in the contracts and written agreements signed between EthSwitch and the respective financial institutions.

f) Etswitch shall put in place automated and efficient dispute management and resolution system.

g) Participants can link internal Dispute management system(s) to the IPS using the API Management Layer provided by the IPS ET.

h) Dispute resolution procedures adhere to the guidelines outlined in the P2P Scheme Rulebook, without surpassing the limitations and regulations defined therein.

6.2 Steps of Conflict Resolution

When a dispute arises between participants, the resolution process will follow these steps:

6.2.1 Step 1:

The involved parties will utilize the Dispute Portal of the IPS System, as outlined in Section 7 of these system rules, to attempt to resolve the dispute.

6.2.2 Step 2:

If, after following the prescribed steps for dispute resolution, the parties remain unable to resolve the conflict, they must proactively engage in written negotiations with each other.

6.2.3 Step 3:

If a dispute remains unresolved, either one or both parties hold the right to refer the dispute to the National Bank Conciliation Council for resolution, as mandated by law.

Additionally, disputes will be automatically submitted to the EthSwitch / NBE Conciliation Council if the recipient participants fail to respond within a maximum of **five (5) days**.

The maximum duration for resolving a dispute by the EthSwitch Conciliation Council is set at thirty **(30) working days**, starting from the day the dispute is officially registered in the Dispute Portal of IPS.

7 Dispute Portal

The P2M scheme provides participants with a web-based interface, to register, track, escalate, and maintain a historical record of complaint and grievance resolutions. Complaints received from customers and system participants can be uploaded to the Dispute Portal of IPS. The Dispute Portal supports the communication and exchange of information in relation to fraud and the management of Transaction failures, enquiries, complaints, or disputes between a Participant and its Customers; between two or more Participants or; between a Participant and the EthSwitch Scheme Operator. These enquiries, complaints and disputes can be those initiated by either a Participant, a Participant's Customer or an EthSwitch System User. This system allows handling of complaints from both customers and system participants, each of which is assigned a unique reference number to facilitate monitoring of their status.

7.1 Scheme Rules for Disputes

7.1.1 Dispute Initiation

A Participant may present a Dispute to another Participant through a Dispute Initiation: the beginning of a Dispute, where a Participant sends an issue about a Transaction Cleared and Settled in the Payment System to another Participant.

Variable: An Indirect Participant must present a Dispute to their Direct Participant Sponsor, who can submit the Dispute on their behalf.

7.1.2 Dispute Response

The Participant that receives a Dispute Initiation must provide a Dispute Response: a reply from one Participant to another Participant, sent in an effort to resolve or manage an Initiated Dispute.

Variable: A Dispute intended for an Indirect Participant must be presented to their Direct Participant Sponsor, who must respond to the Dispute on their behalf.

7.1.3 Dispute Escalation

If a Dispute is not resolved between Participants within seven working days of Dispute Initiation, any Participant may submit a Dispute Escalation: A notification sent by a Participant to IPS ET Conciliation council dispute resolution team to initiate **Dispute Arbitration**.

Variable: An Indirect Participant must present a Dispute Escalation to their Direct Participant Sponsor, who can submit the Dispute Escalation on their behalf.

Results: A Dispute Escalation results in Dispute Arbitration: the process by which IPS ET Conciliation Council or Dispute Resolution team resolves and decides upon the Dispute.

7.1.4 Dispute Decision

Dispute Resolution team must provide a Dispute Arbitration Decision: a notification from IPS ET Dispute Resolution team to relevant Participant's, or their Sponsor if relevant, notifying the Participants of the decision related to the Dispute Arbitration.

Timeline: The Dispute Resolution team must provide a Dispute Arbitration Decision within D.D.T. from receiving the Dispute Escalation.

7.1.5 Finality

Dispute Arbitration Decisions are final, at which point the Dispute is closed.

7.1.6 Resubmission of Dispute

- Participants may not resubmit a Dispute.
- Participants may not submit a new Dispute on a Transaction that has already been Disputed and closed.

7.1.7 Dispute Statuses

The IPS ET Dispute Resolution team must share the status of a Dispute with relevant Participants.

Participants may find the status of a Dispute on the Participant Portal's sub section Dispute Portal.

Variable: Direct Participants must share the status of a Dispute with the Indirect Participants they Sponsor, when relevant.

7.1.8 Dispute Statuses

Dispute Statuses include:

1. **OPEN:** Dispute is created
2. **RJCT:** Dispute Rejected by the Entity that received the Dispute
3. **WFEE:** Waiting for the Entity that received the Dispute to reply
4. **EXPI:** Dispute is expired
5. **DECL:** Dispute is declined
6. **ARBT:** Escalation for Arbitration
7. **RSLV:** Dispute is resolved
8. **CLSD:** Dispute is closed.

7.2 Dispute Categories

The Dispute Portal accommodates various dispute categories, including but not limited to a set of the following parameters:

a) Dispute Type
b) Payment Method
c) Transaction Type
d) Instrument Type
e) Transaction Amount
f) Transaction Priority

The detailed description of dispute resolution periods can be found in P2M Payments, **Annexure C**

7.3   Regulations on Disputes

a) Upon the occurrence of a dispute, participants are mandated to retain all pertinent supporting documents related to the dispute and any subsequent resolution procedures.

b) Participants will utilize the Dispute Portal for escalating and addressing disputes efficiently.

c) At the closure of the dispute, both participating parties are obligated to inform their respective customers about the final resolution of the dispute through regular customer communication channels. These channels may include, but are not limited to, email, SMS, phone calls, and others.

8   Fees

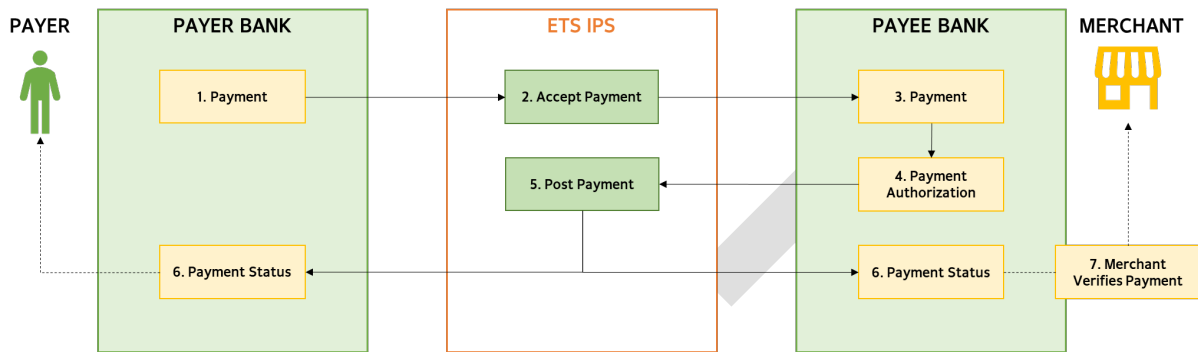Fees and Pricing structure is described in the **Annexure D** of this scheme rulebook.

Annexure A – Transaction Flows

P2M Currently supports the following flows,

1. P2M payment pushed directly from Payer to Merchant.
2. P2M payment based on a Request to Pay through a RtP Service Provider that is an IPS Participant and also a Regulated Financial Institution
3. P2M payment based on a Request to Pay through a RtP Service Provider that is an IPS Participant but not a Regulated Financial Institution
4. P2M payment initiated based on a Merchant Presented Static QR code.
5. P2M payment initiated based on a Merchant Presented Dynamic QR code.
6. Merchant reimbursement by Merchant Service Provider that is an IPS participant.
7. Merchant reimbursement by Merchant Service Provider that is not an IPS participant.
8. P2M Return Payment initiated by Merchant.
9. P2M Return Payment initiated by Payer.

1. P2M payment pushed directly from Payer to Merchant

#	Step
1	• The payer initiates payment to the merchant via channel provided by the Payer FI. • FI registers the payment which includes Merchant name (Account Title), Bank Code (BIC) and Account Number. • FI holds the payment amount on the Payer Account. • FI delivers the payment to IPS ET.
2	IPS ET accepts the payment.
3	IPS ET delivers payment to Payee Bank (Merchant bank). FI to verify the payment and confirm back to IPS ET.
4	FI to deliver payment confirmation.
5	IPS ET posts the payment.
6	IPS ET delivers payment status for both parties. Payer bank to finalize transaction and notify Payer. Merchant bank to top-up merchant's account and notify merchant.
7	Merchant to verify payment receiving. Merchant can hold its goods until payment notification is not received.

2. P2M payment based on a direct Request to Pay through a Merchant Service Provider that is an IPS Participant and a Regulated Financial Institution
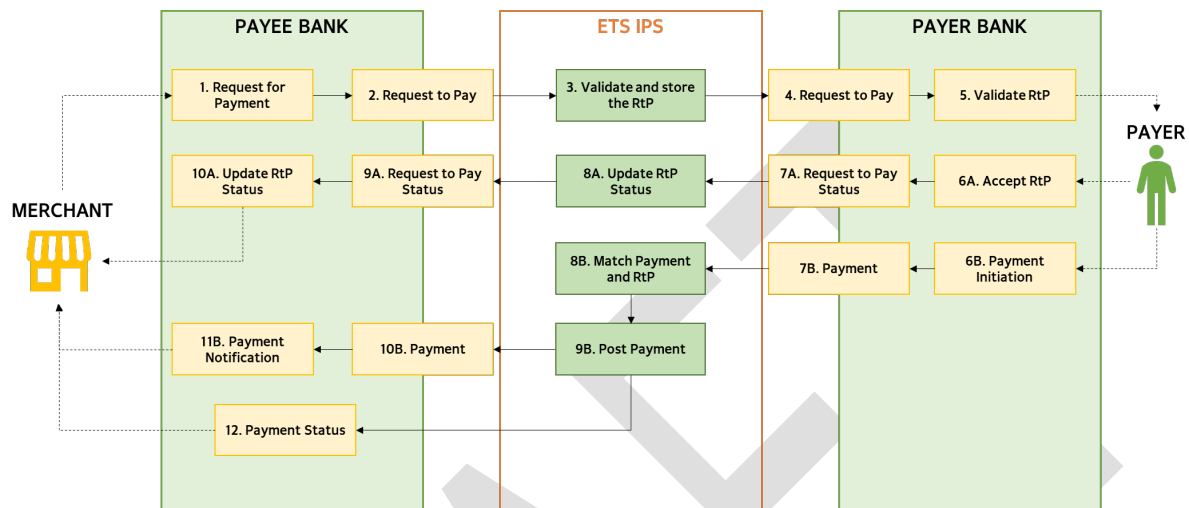
#	Step
1	• Merchant initiates request for payment via channel provided by its FI. • Payee is able to use IPS ET Addressing services (CAS) to resolve account and bank of payer by alias of Payer
2	• FI creates and stores RTP in its own systems. • FI delivers RTP message to IPS ET.
3	IPS ET validates the request, including: - access right. - format validation. - receiver side. IPS ET can reject the request on this step.
4	IPS ET delivers RTP to Payer Bank.
5	FI receives and validates the request and presents it to the Payer for acceptance or rejection.
6A	In the positive flow, the Payer accepts the RtP.
7A	The updated RtP Status is sent to IPS ET.
8A	IPS ET updates the RtP status in its RtP directory.
9A	The updated RtP Status is sent to the Payee Bank.
10A	The Payee Bank updates the Merchant that the RtP has been accepted, however, it is not yet paid.

#	Step
6B	The Payer Bank in parallel to step 6A, once the RtP is accepted initiates the Payment Message.
7B	The payment message flows to IPS ET.
8B	IPS ET matches the RtP Id that is echoed in the Payment Message and matches to check that this is not a duplicate or payment with incorrect value.
9B	If matching is successful, IPS ET posts the payment on FI Position Accounts.
10B	The payment message flows to the Payee Bank.
11B	The merchant is notified of successful payment against the RtP.
12	The Payment Acceptance Status is pushed to Payee Bank.

3. P2M payment based on a Request to Pay through a RtP Service Provider that is an IPS Participant but not a Regulated Financial Institution

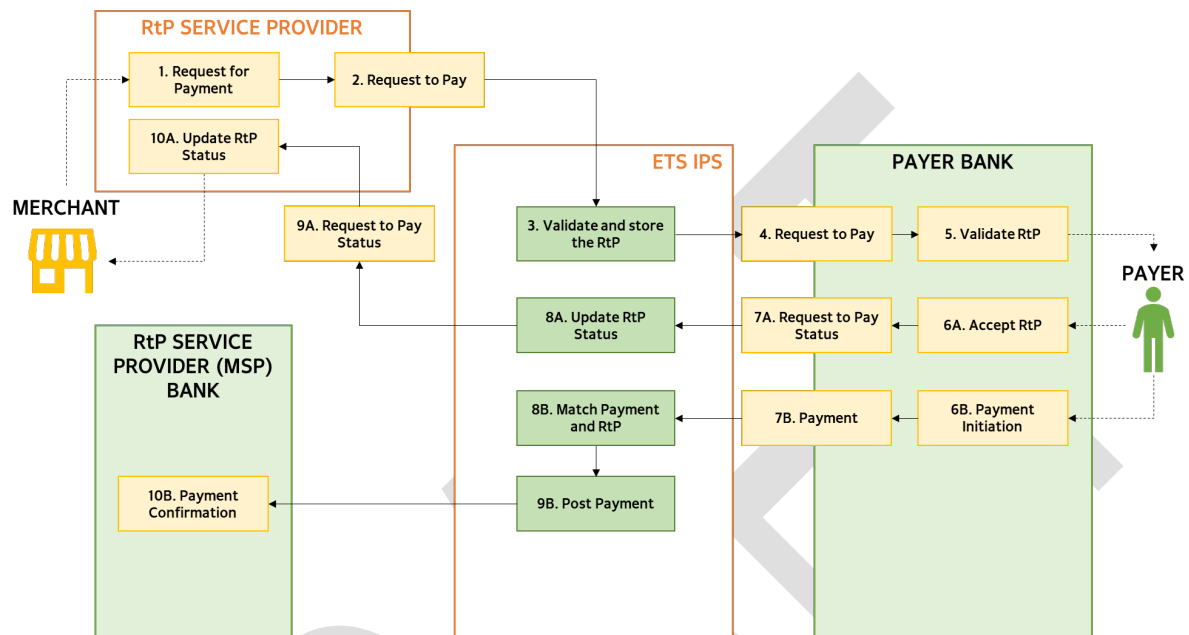| #	Step
1	• Merchant initiates request for payment via channel provided by its Merchant Service Provider. In this case the RtP Service Provider is a Technical Aggregator of Merchant Aggregator and not where the Merchant's Settlement Account lies, the Merchant's settlement account may be separate. All funds are first routed to the MSP Settlement Account. • Payee is able to use IPS ET Addressing services (CAS) to resolve account and bank of payer by alias of Payer
2	• RtP Service Provider creates and stores RTP in its own systems. • RtP Service Provider delivers RTP message directly to IPS ET.
3	IPS ET validates the request, including: - access right. - format validation. - receiver side. IPS ET can reject the request on this step.
4	IPS ET delivers RTP to Payer Bank.
5	FI receives and validates the request and presents it to the Payer for acceptance or rejection.

#	Step
6A	In the positive flow, the Payer accepts the RtP.
7A	The updated RtP Status is sent to IPS ET.
8A	IPS ET updates the RtP status in its RtP directory.
9A	The updated RtP Status is sent to the RtP Service Provider.
10A	The RtP Service Provider updates the Merchant that the RtP has been accepted, however, it is not yet paid.
6B	The Payer Bank in parallel to step 6A, once the RtP is accepted initiates the Payment Message.
7B	The payment message flows to IPS ET.
8B	IPS ET matches the RtP Id that is echoed in the Payment Message and matches to check that this is not a duplicate or payment with incorrect value.
9B	If matching is successful, IPS ET posts the payment on RtP Service Provider's Position Account under the RtP Service Providers Settlement Limit Account in IPS ET.
10B	The payment status is sent to the RtP Service Provider's Sponsor Bank.

4. P2M payment initiated based on a Merchant Presented Static QR Code

#	Step
PR	• The Merchant has a static QR code that is in accordance with the EthioQR Specifications.
1	• Customer scans the QR Code using an EthioQR Compliant Issuer Application.
2	• The payer initiates payment to the merchant via channel provided by the Payer FI. • FI registers the payment which includes Merchant name (Account Title), Bank Code (BIC) and Account Number. • FI holds the payment amount on the Payer Account. • FI delivers the payment to IPS ET.
3	IPS ET accepts the payment.
4	IPS ET delivers payment to Payee Bank (Merchant bank). FI to verify the payment and confirm back to IPS ET.
5	FI to deliver payment confirmation.
6	IPS ET posts the payment.
7	IPS ET delivers payment status for both parties. Payer bank to finalize transaction and notify Payer. Merchant bank to top-up merchant's account and notify merchant.
8	Merchant to verify payment receiving. Merchant can hold its goods until payment notification is not received.

5. P2M payment initiated based on a Merchant Presented Dynamic QR Code
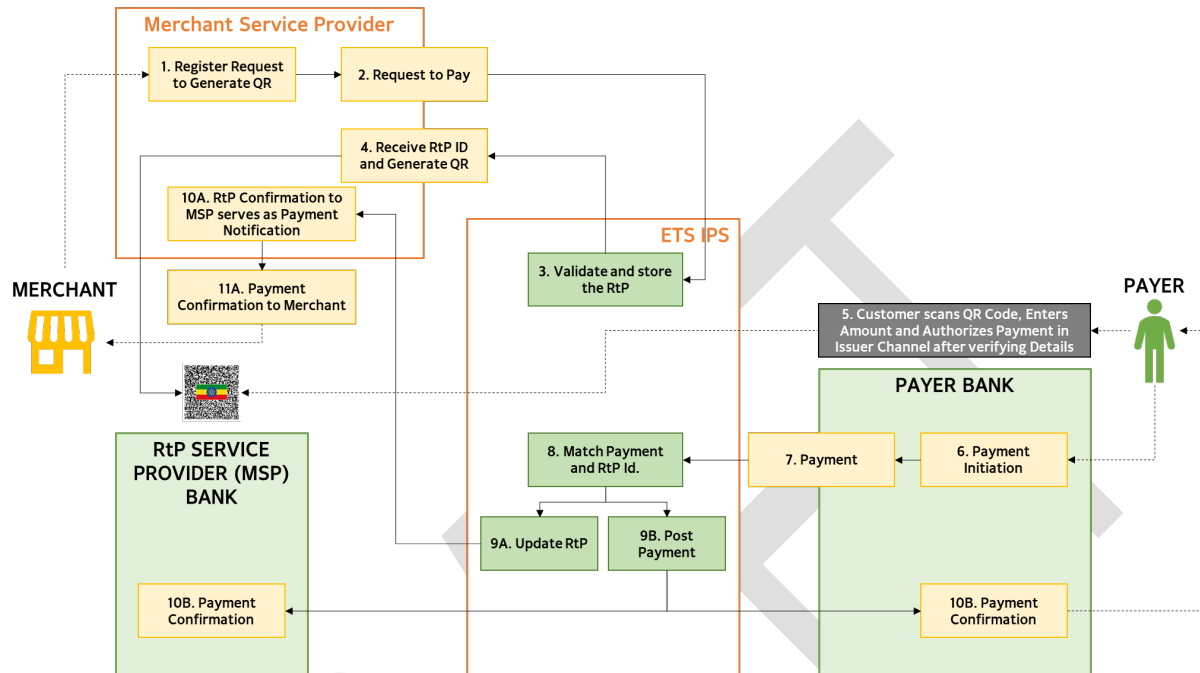
#	Step
1	The MSP receives request from Merchant to generate a Dynamic QR. For this purpose the MSP calls the IPS API to generate a RtP since each QR is represented by an RtP in the IPS.
2	Request to Pay is sent to IPS.
3	IPS ET validates the request, including: - access right. - format validation. - receiver side. IPS ET can reject the request on this step.
4	MSP receives the RtP ID and includes it in the QR String which it uses to generate and display the QR Code to the Merchant.
5	Customer scans the dynamic QR using their Issuer Channel. This Issuer channel must be conformant to EthioQR Specifications.
6	The Scanning of the QR results in presentment of QR information to the Payer on the Payer Channel. The Payer verifies that all information is as expected and approves the transaction using Issuer authentication controls developed in the Issuer Channel.
7	The payment message flows to IPS ET.

#	Step
8	IPS ET matches the RtP Id that is echoed in the Payment Message and matches to check that this is not a duplicate or payment with incorrect value.
9A	IPS ET updates the RtP status in its RtP directory.
10A	The updated RtP Status is sent to the Merchant Service Provider, and this serves as Payment confirmation to the MSP.
11A	MSP provides confirmation of Payment to the Merchant.
9B	If matching is successful, IPS ET posts the payment on RtP Service Provider's Position Account under the RtP Service Providers Settlement Limit Account in IPS ET.
10B	The payment status is sent to the RtP Service Provider's Sponsor Bank and the Payer Bank as well.

6. Merchant reimbursement by Merchant Service Provider that is an IPS Participant

#	Step
1	MSP receives from IPS ET P2M payments addressed to its Merchants.
2	For each incoming p2m payment MSP identifies the end beneficiary Merchant, then refers to own internal information systems and checks: - Applicable Merchant Fees. - Target reimbursement approach: separately for each payment or cumulatively, when many payments get reimbursed by a single transfer with a total amount. - Merchant payment details, such as: creditor agent BIC, creditor IBAN and creditor name.
3	MSP charges merchant fees.
4	• If cumulative reimbursement is the target approach for the given Merchant, funds get accumulated up to a certain threshold. • This step is omitted if the given Merchant is reimbursed separately for every single payment.
5	Payment for amount due to Merchant cleared of fees is transferred to Merchant Settlement FI.
6	IPS ET accepts the payment.

#	Step
7	IPS ET delivers payment to Payee Bank (Merchant bank). FI to verify the payment and confirm back to IPS ET.
8	FI to deliver payment confirmation.
9	IPS ET posts the payment.
10	IPS ET delivers payment status for both parties. Merchant bank to finalize transaction and notify after crediting Merchant account.

7. Merchant reimbursement by Merchant Service Provider that is not an IPS participant

#	Step
1	MSP's FI receives from IPS ET P2M payments addressed to Merchants onboarded by its MSP. This request is forwarded to the MSP by the MSP's FI.
2	For each incoming P2M payment MSP identifies the end beneficiary Merchant, then refers to own internal information systems and checks: - Applicable Merchant Fees. - Target reimbursement approach: separately for each payment or cumulatively, when many payments get reimbursed by a single transfer with a total amount. - Merchant payment details, such as: creditor agent BIC, creditor IBAN and creditor name.
3	MSP charges merchant fees.
4	• If cumulative reimbursement is the target approach for the given Merchant, funds get accumulated up to a certain threshold. • This step is omitted if the given Merchant is reimbursed separately for every single payment.
5	Payment for amount due to Merchant cleared of fees is transferred to Merchant Settlement FI.
6	IPS ET accepts the payment.

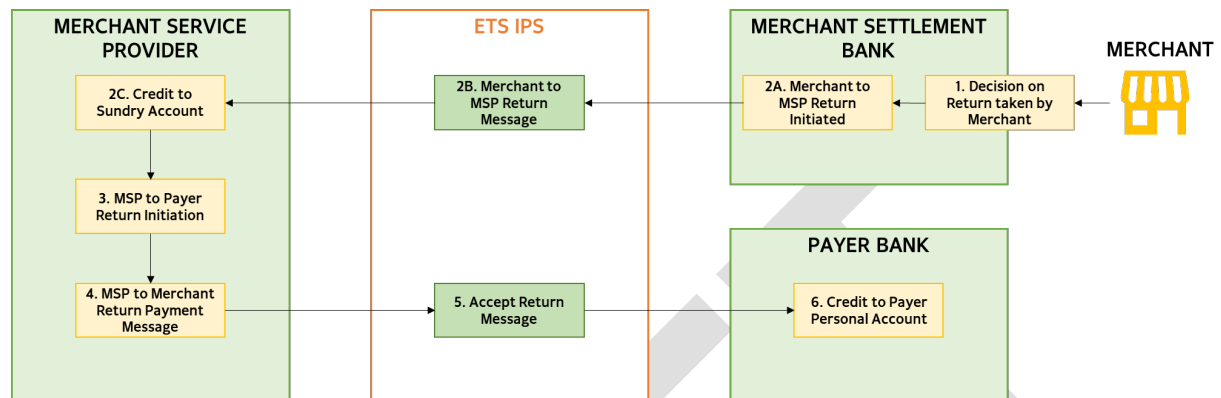| #	Step
7	IPS ET delivers payment to Payee Bank (Merchant bank). FI to verify the payment and confirm back to IPS ET.
8	FI to deliver payment confirmation.
9	IPS ET posts the payment.
10	IPS ET delivers payment status for both parties. Merchant bank to finalize transaction and notify after crediting Merchant account.

8. P2M Return Payment initiated by Merchant

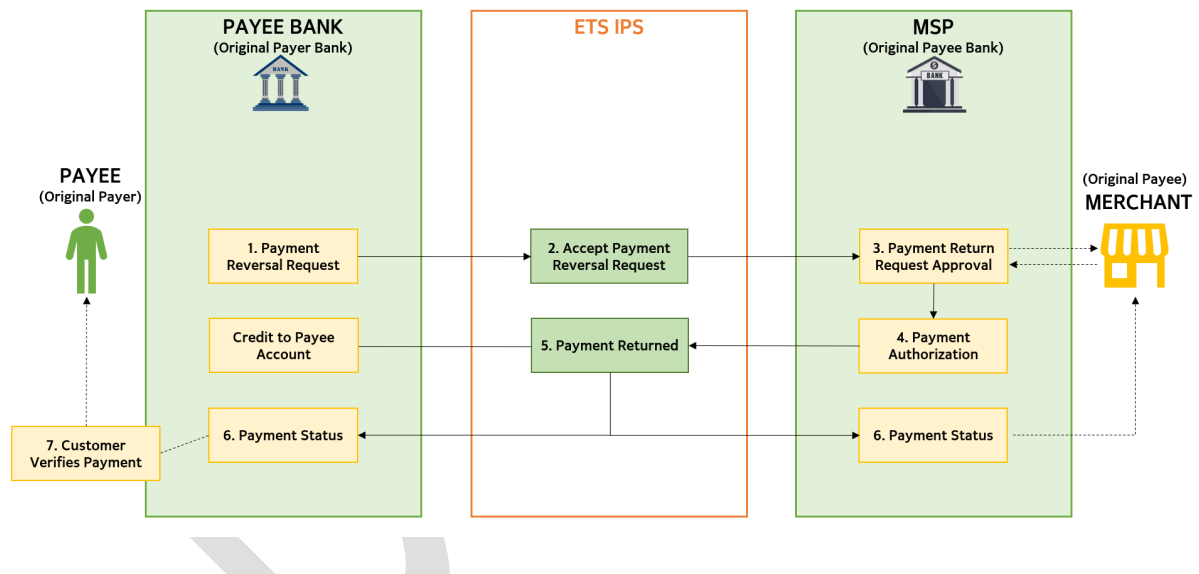| #	Step
1	Merchant decides that particular payment is to be returned to the original payer.
2	**Option 1:** Return is initiated via Merchant FI software. Merchant traces the reimbursement received for the given original payment and processes the first-stage return, which is directed from Merchant FI to MSP. Special care must be taken to the facts: - if reimbursement for the original payment was received with accumulation or single payment approach. - arrangements regarding Merchant fees. If MSP apples no-return policy for Merchant fees, return amount needs to be adjusted properly to cover the amount of the ultimate return. Such particularities of returns must be agreed upon between MSP and Merchant. **Option 2:** Return is initiated via MSP software. For the case when merchant uses MSP software to initiate return, MSP need to create request for return to Merchant FI to initiate return of the reimbursement.
3	Once the first-stage return is complete, Merchant initiates the second stage return by selecting the original payment and running the dedicated software operation. The system provided by MSP should be used for that.
4	MSP: - checks that the reimbursement payment is returned. - checks that particularities explained at step 2 are properly accounted for; and executes the return for of the original payment.

#	Step
5	Money goes back to the FI of the original payer.
6	FI credits the amount to the target account and notifies the creditor.

9. P2M Return Payment initiated by Payer (Request for Return)

P2M PAYMENT REVERSAL INITIATED BY CUSTOMER

#	Step
1	Payer based on the original payment and initiates "Request for Return" to MSP (System provided by payer FI should be bused for that).
2	Request for Return is created and transmitted by payer FI via RAAST to MSP.
3	MSP identifies the target Merchant, traces the relevant Merchant reimbursement payment, and creates a new Request for Return to Merchant. Special care must be taken:

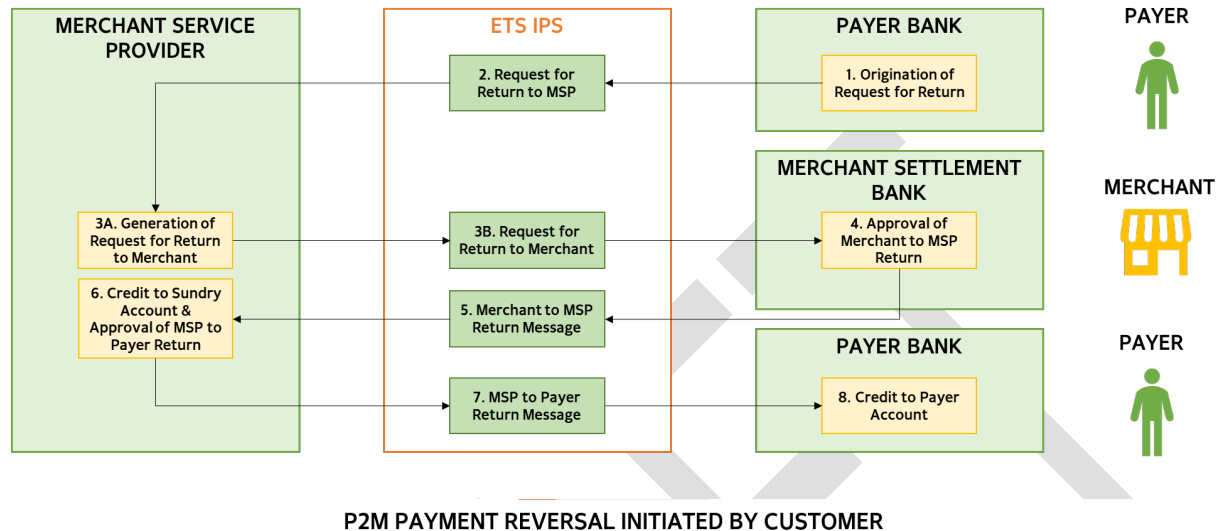| #	Step
	- if reimbursement for the original payment was done with accumulation or single payment approach. - of the arrangements regarding Merchant fees. If MSP apples no-return policy for Merchant fees, return amount needs to be adjusted properly to cover the amount of the ultimate return. Such particularities of returns must be agreed upon between MSP and Merchant.
4	Merchant decides that payment is to be returned to the original payer.
5	Merchant based on received Request for Return from MSP initiates return payment. Either system provided by MSP or that provided by Merchant FI can be used for the operation. Reimbursement goes back to MSP.
6	Once the first-stage return (from Merchant) is complete, MSP finalizes the second stage return (to Customer).
7	Money goes back to the FI of the original payer.
8	FI credits the amount to the target account and notifies the creditor.

Annexure B – Definition of Transaction Limits in P2M Payments

In this table

- Transaction Type = The category of payments, this is similar to how MCC or Merchant Categories are defined in legacy card schemes.
- Maximum limit in Ethiopian Birr for a single transaction
- Settlement between consumer and MSP, and confirmation communication to merchant by MSP will be near instant; the settlement between MSP and merchant will be different for different transaction type.
- These limits are for discussion purposes and they should be finalized after industry consultation

Transaction Type	Limits (Birr)	Settlement between MSP and Merchant	Additional handling for this Transaction Type	Notes on Limits
Online Payments - Mobile Top-up	1,500	End of Day	• Payer institutions should put a limit check for customer-initiated payments. • Payer institutions should inform consumers regarding expected duration for top-up amount to be updated (if not instant) • If the payment is done via scanning QR, then Payer will need to pass Mobile Number as part of Payment messages for top-up to happen.	
Online Payments - Mobile Postpaid	15,000	End of Day	• Payer institutions should put a limit check for customer-initiated payments.	Presence of security deposit reduces risk exposure

Transaction Type	Limits (Birr)	Settlement between MSP and Merchant	Additional handling for this Transaction Type	Notes on Limits
			• Payer institution payments should develop handling for payments past due date to ensure clarity for consumers.	hence the limits are much higher.
Online Payments - Utility Payments	150,000	End of Day	• Participant institutions serving utility companies as MSPs can develop customer-initiated payments (e.g., via QR) to pay utility bills. • IPS ET RTP registrations for utility companies' bills will require special approval from the operator prior to execution (to prevent RTP overload onto the system) • Payer institution payments should develop handling for payments past due date to ensure clarity for consumers (in case of RTP Later payments)	
Online Payments - Other Bill Payments (for e.g., School Bills)	150,000	End of Day	• Payer institution payments should develop handling for payments past due date to ensure clarity for consumers.	
Online Payments - Credit Card Payment	250,000	End of Day	• Credit card issuers should ensure application of minimum payment amount checks in customer-initiated payment or while initiating request to pay.	

Transaction Type	Limits (Birr)	Settlement between MSP and Merchant	Additional handling for this Transaction Type	Notes on Limits
			• Payer institution payments should develop handling for payments past due date to ensure clarity for consumers (in case of RTP Later payments).	
Online Payments - Government Payments	Maximum Limit allowed on Accounts	End of Day	• Payer institution payments should develop handling for payments past due date to ensure clarity for consumers (in case of RTP Later payments).	
Proximity Payments (Curbside Merchants, Hawkers etc.)	1,500	Instant		
Proximity Payments (Fuel Payments)	5,000	End of Day		
Proximity Payments/Online Payments (Ride Sharing)	5,000	Instant	• Consumers should be provided with interface to add tip to the amount paid; tips should have a maximum limit of 20% of invoiced amount.	
Proximity Payments (Small Shops + Related SMEs)	15,000	Instant		
Proximity Payments (Grocery Stores/Chain	25,000	End of Day		

Transaction Type	Limits (Birr)	Settlement between MSP and Merchant	Additional handling for this Transaction Type	Notes on Limits
Stores + Related SMEs)				
Proximity Payments (Restaurants)	25,000	Instant	• Consumers should be provided with interface to add tip to the amount paid; tips should have a maximum limit of 20% of invoiced amount.	
Online Payments (Food Delivery/ Restaurants)	25,000	Escrow (with payment released on delivery)	• Consumers should be provided with interface to add tip to the amount paid; tips should have a maximum limit of 20% of invoiced amount.	
Online Payments (Electronics/ Accessories)	150,000	Escrow (with payment released on delivery)		
Online Payments (Aggregators/ Marketplace)	150,000	Escrow (with payment released on delivery)		
Other proximity / online merchants with large value transactions (e.g., real estate payments, jewelry, car payments, etc.)	250,000	Instant	• Extra authorization is recommended prior to enabling these transactions. • Merchants registering in this category need to have special KYC to receive higher limits.	Limit will need to be increased to allow for all kinds of payments - industry engagement will be required to ensure that only limited

Transaction Type	Limits (Birr)	Settlement between MSP and Merchant	Additional handling for this Transaction Type	Notes on Limits
				merchants are signed up to access this limit, and that there are strong checks in place when transactions are being made.

Annexure C – Definition of Dispute Resolution Periods in Person to Merchant Payments

In this table

- Transaction Type = The category of payments, this is similar to how MCC or Merchant Categories are defined in legacy card schemes.
- Dispute Registration Period = Max days from date of transaction that dispute can be registered with complete evidence.
- Dispute Registration Period = Max days from date of dispute registration that dispute needs to be resolved by MSP / Biller.

Transaction Type	Dispute Registration Period in Days	Dispute Resolution Period in Days	Notes on Chargeback/Dispute Resolution
Online Payments - Mobile Top-up	2 Days	5 Days	The customer may claim that their account was not topped-up, however, the scheme will not entertain claims such as wrong number was credited, or wrong type of package was selected etc.
Online Payments - Mobile Postpaid	30 Days	7 Days	The customer may claim that their bill has not been marked paid, however, the scheme will not entertain claims such as wrong number was provided to pay bill.
Online Payments - Utility Payments	30 Days	30 Days	The customer may claim that their bill has not been marked paid, however, the scheme will not entertain claims such as wrong number was provided to pay bill.
Online Payments - Other Bill Payments (for e.g., School Bills)	30 Days	30 Days	The customer may claim that their bill has not been marked paid, however, the scheme will not entertain claims such as wrong number was provided to pay bill.
Online Payments - Credit Card Payment	30 Days	30 Days	If customer pays the bill of a wrong credit card number, then it is the credit card Issuing bank's discretion if they can recover money from other card, if yes, such disputes may be accepted. Any payment done digitally on the Due Date as per IPS ET system date must be treated as paid on time.

Transaction Type	Dispute Registration Period in Days	Dispute Resolution Period in Days	Notes on Chargeback/Dispute Resolution
Online Payments - Government Payments	30 Days	30 Days	No claim of paying to wrong bill id or voucher number can be entertained. In case customer has paid but Biller/Govt agency has not received payment instruction in their system then customer can dispute and the Biller/Govt agency will ensure on confirmation that payment was indeed made no additional penalty/charges will be applied and service will be delivered.
Proximity Payments (Curbside Merchants, Hawkers etc.)	2 Days	5 Days	Since ticket size will be very low, the cost of investigating such disputes will be disproportional to the earning. If the merchant denies service/goods even after they got paid (say because they have not got timely any notification), in such cases, if MSP gets more than 5% customers raising disputes with same merchant then MSP needs to investigate and penalize merchant. Banks/MSP need to provide such merchants with easy way to check if payment is indeed received by them. Ideally the SMS sent to merchant should be using high priority delivery. Merchant need to be educated to keep their Phone SMS memory clear to receive new messages. Alternate method is to push USSD message to small merchants.

Transaction Type	Dispute Registration Period in Days	Dispute Resolution Period in Days	Notes on Chargeback/Dispute Resolution
Proximity Payments (Fuel Payments)	2 Days	5 Days	Slip printed from POS or e-receipt in App should be given to the customer and the fuel station should retain their own copy also. Ideally Dynamic QR should be used for this payment. Typical disputes could be over or under payment or Debit to customer but merchant claiming they did not receive funds. If customer's account is debited but sales approval did not come through, then POS should have means to check transaction status
Proximity Payments/Online Payments (Ride Sharing)	2 Days	5 Days	Slip printed from POS or e-receipt in App should be given to the customer and the fuel station should retain their own copy also. Ideally Dynamic QR should be used for this payment. Typical disputes could be over or under payment or Debit to customer but merchant claiming they did not receive funds. If customer's account is debited but sales approval did not come through, then Merchant App/POS or any solution provided by MSP should have means to check transaction status.
Proximity Payments (Small Shops + Related SMEs)	2 Days	5 Days	Shopkeeper must make a Sales bill and give to customer and keep a Sales bill copy. In case of dispute, Sales bill copy will be used as piece of evidence. Typical disputes could be over or under payment or debit to customer but merchant claiming they did not receive funds.

Transaction Type	Dispute Registration Period in Days	Dispute Resolution Period in Days	Notes on Chargeback/Dispute Resolution
			If customer's account is debited but sales approval did not come through, then Merchant App/POS or any solution provided by MSP should have means to check transaction status.
Proximity Payments (Grocery Stores/Chain Stores + Related SMEs)	2 Days	5 Days	Shopkeeper must make a Sales bill and give to customer and keep a Sales bill copy. In case of dispute, Sales bill copy will be used as piece of evidence. Typical disputes could be over or under payment or debit to customer but merchant claiming they did not receive funds. If customer's account is debited but sales approval did not come through, then Merchant App/POS or any solution provided by MSP should have means to check transaction status.
Proximity Payments (Restaurants)	2 Days	5 Days	Receipt from app/system must be shared with the consumer.
Online Payments (Food Delivery/ Restaurants)	2 Days	5 Days	Receipt from app/system must be shared with the consumer.
Online Payments (Electronics/ Accessories)	2 Days	5 Days	Receipt from app/system must be shared with the consumer.
Online Payments (Aggregators/ Marketplace)	2 Days	5 Days	Receipt from app/system must be shared with the consumer.

Transaction Type	Dispute Registration Period in Days	Dispute Resolution Period in Days	Notes on Chargeback/Dispute Resolution
Other proximity / online merchants with large value transactions (e.g., real estate payments, jewelry, car payments, etc.)	2 Days	5 Days	Receipt from app/system must be shared with the consumer.

Annexure D – Definition of Fee Breakup in Person to Merchant Payments

In this table

- Transaction Type = The category of payments, this is similar to how MCC or Merchant Categories are defined in legacy card schemes.
- Merchant Fee - Charged by the Merchant Service Provider to the Merchant.
- Interchange - Charged by Issuer to MSP.
- Consumer Fee - Charged by Issuer to Customer.

Transaction Type	MERCHANT FEE Charged by MSP to Merchant	INTERCHANGE Charged by Issuer to MSP	CONSUMER FEE Charged by Issuer to Customer	Notes
Online Payments - Mobile Top-up	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Online Payments - Mobile Postpaid	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Online Payments - Utility Payments	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Online Payments - Other Bill Payments (for e.g., School Bills)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Online Payments - Credit Card Payment	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	

Transaction Type	MERCHANT FEE Charged by MSP to Merchant	INTERCHANGE Charged by Issuer to MSP	CONSUMER FEE Charged by Issuer to Customer	Notes
Online Payments - Government Payments	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Proximity Payments (Curbside Merchants, Hawkers etc.)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Proximity Payments (Fuel Payments)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Proximity Payments/Online Payments (Ride Sharing)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Proximity Payments (Small Shops + Related SMEs)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Proximity Payments (Grocery Stores/Chain Stores + Related SMEs)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Proximity Payments (Restaurants)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Online Payments (Food Delivery/ Restaurants)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	

Transaction Type	MERCHANT FEE Charged by MSP to Merchant	INTERCHANGE Charged by Issuer to MSP	CONSUMER FEE Charged by Issuer to Customer	Notes
Online Payments (Electronics/ Accessories)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Online Payments (Aggregators/ Marketplace)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	
Other proximity / online merchants with large value transactions (e.g., real estate payments, jewelry, car payments, etc.)	At MSP Discretion and NBE Oversight	At Scheme Discretion and NBE Oversight	At Issuer Discretion and NBE Oversight	

Annexure E – Transaction Type Codes Definitions

In this table

- Transaction Type = The category of payments, this is similar to how MCC or Merchant Categories are defined in legacy card schemes.
- Transaction Type Code = The transaction code to be used to identify this transaction in IPS ET Payment Messages.

Transaction Type	Transaction Type Code
Online Payments - Mobile Top-up	50
Online Payments - Mobile Postpaid	51
Online Payments - Utility Payments	52
Online Payments - Other Bill Payments (for e.g., School Bills)	53
Online Payments - Credit Card Payment	54
Online Payments - Government Payments	55
Proximity Payments (Curbside Merchants, Hawkers etc.)	56
Proximity Payments (Fuel Payments)	57
Proximity Payments/Online Payments (Ride Sharing)	58
Proximity Payments (Small Shops + Related SMEs)	59
Proximity Payments (Grocery Stores/Chain Stores + Related SMEs)	60
Proximity Payments (Restaurants)	61
Online Payments (Food Delivery/ Restaurants)	62
Online Payments (Electronics/ Accessories)	63
Online Payments (Aggregators/ Marketplace)	64
Other proximity / online merchants with large value transactions (e.g., real estate payments, jewelry, car payments, etc.)	65