

# **System Rules of the National e-Payment Switch of Ethiopia**

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**EthSwitch S.C.**

**Addis Ababa, Ethiopia**

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# 1. Terms and Definitions

Unless inconsistent with the context, the terms used in these rules and the dispute management procedures have the following meanings:

Term	Meaning
Access Device	A device, other than a Card, that uses at least one Payment Application to provide access to an Account in compliance with the Rules and Standards. A Contactless Payment Device is a type of Access Device.
Activity	The undertaking of any act that can be lawfully undertaken only pursuant to Participant Agreement.
Acquirer	An acquirer is a participant financial institution that accepts and processes card payments from participant card-issuing banks or through international card schemes.
Arbitration	A procedure in which an issuer continues to dispute all or part of the amount of an interchange transaction after the acquirer has returned the transaction as a representment, in accordance with EthSwitch dispute management procedure.
ATM Journal Request	The request for either an original or legible copy of the ATM transaction information document or other supporting documents as identified in the electronic record.
Board	The Board of Directors of EthSwitch S.C.
Business Day	A Business Day for EthSwitch is a 24-hour period. A typical business day extends from 12.00.00 am (midnight) to 11.59.59 pm, GMT + 3:00 (i.e., local time).
Card	A payment card issued by Member Bank pursuant to License and in accordance with the Rules and Standards and that provides access to an Account. Unless otherwise stated herein, Standards applicable to the use and acceptance of a Card are also applicable to an Access Device and, in a Card-not-present environment, to an Account.
Cardholder	The person to whom a financial transaction card is issued or an additional person authorized to use the card.
Chargeback	A transaction that is challenged by a cardholder or card Issuer bank and is sent back through EthSwitch to the Acquirer bank for resolution.
Direct Participant	Participant which opens and settles its obligations due through its settlement account at the National Bank of Ethiopia. Banks, including the National Bank of Ethiopia, are by default Direct Participants.
Dispute	The cardholder claiming that he/she did not execute a specific transaction or not receiving the service/ goods as agreed.

Term	Meaning
EATS	The Ethiopian Automated Transfer System (EATS) operated by the National Bank of Ethiopia.
EMV	Europay, MasterCard and Visa (EMV) is a technical standard for smart payment cards and payment terminals which accept payment cards.
End-of-Day	End-of-Day procedures by EthSwitch shall be conducted starting 12:00:00 am (midnight) at the close of each Business Day
e-Payment	Electronic Payment.
EthSwitch	Owner and operator of the National e-Payment Switch.
Fallback Transaction	Fallback transactions occur when a chip card is used in an ATM/POS intended for chip cards, but an error is encountered upon reading the chip and the transaction is performed on the basis of the data read from the card's magnetic strip.
Fee Guide	A document entitled "EthSwitch Fee Guide" which defines EthSwitch and Members fees and charges and their corresponding amounts as determined by the Board and approved by the National Bank of Ethiopia.
Financial Institutions	A bank, a microfinance institution, postal savings, money transfer institution, insurance company or such other similar institution as determined by the National Bank of Ethiopia;
Fraud	The fraudulent use of card account through the theft of the account holder's card number, card details and personal information, through a wide variety of methods in order to perform unauthorized transactions from the compromised account.
Fulfillment (when used in disputes)	The satisfaction of a request for copy or ATM journal request.
Hosted Member	Member Bank which entirely use EthSwitch to drive its acquiring device (ATM, POS, etc.), issue payment card to its customers and manage customer card accounts, and provide other services within the capabilities of EthSwitch, as well as do inter-bank retail payment transactions with other member Banks.
Indirect Participant	Participant which settles its obligations due through the account of a Direct Participant at the National Bank of Ethiopia.
Interbank Payment	Electronic Retail Payment services between different member Banks, passing through EthSwitch.
International Card Scheme (ICS)	Visa, MasterCard, American Express, Discover, JCB, UnionPay International, Diners Club, etc.
Intra-bank Payment	Electronic Retail Payment services for member Bank own customer on the member Bank's acquiring device through a switch which drives it. For Hosted Members intra-bank transaction shall be processed through EthSwitch while for Switched Members it shall not, except in case of Stand-In Authorization.

Term	Meaning
Issuer	Participant financial institution issuing payment cards to its customers.
Large Value Payment	Payments, generally of very large amounts, which are mainly exchanged between banks or between participants in the financial markets and usually require urgent and timely settlement.
Management	The Management of EthSwitch S.C.
Marks	The names, logos, trade names, trademarks, and other designations that EthSwitch owns, manages, licenses, or otherwise controls and makes available for use by participants and other authorized entities in accordance with a Participant Agreement.
Member	Member of EthSwitch. Also called Participant.
Member-On-Member	Transaction between two Switched members whereby one is Issuer and the other is Acquirer.
Member-On-Us	Transaction whereby the Issuer is a Switched Member and the Acquirer is a Hosted Member.
Multilateral Netting	A type of netting computed from the total value of payment instructions exchanged among participants with a result of a net amount for each participant that represents the difference between what is owed by that participant to all other participants and what others owe that participant.
National e-Payment Switch	The National e-Payment Switch and Related Systems and corresponding Data Center and Network Infrastructure and processes operational by EthSwitch S.C.
Net settlement	The act of discharging obligations by transferring funds between two or more parties on a net basis.
Netting	The determination of the net settlement obligations of participants by setting off or adjusting the payment obligations between two or more participants.
Not-On-Us	Type of Us-on-Us transaction whereby one member is issuer and another member is acquirer.
On-Us	Type of Us-on-Us transaction whereby the same Hosted Member is Issuer and Acquirer.
Operator	National Bank of Ethiopia or other entity authorized by the National Bank of Ethiopia to operate a payment, clearing, and/or settlement systems.
PAN	Primary Account Number
Participant	A financial institution or other entity that has been granted the right for Participation in the National E-Payment Switch enabled operations, Activity or Activities, as approved by the Board and the National Bank of Ethiopia. Participant can be "Direct Participant" or "Indirect Participant". "Participation" also means "Membership".
Participant Agreement	The contract between EthSwitch and a Participant granting the

Term	Meaning
	Participant the right to use the National E-Payment Switch for defined purpose(s) and Activity or Activities with defined conditions.
Participation	The right to participate in Activity granted to a participant by EthSwitch. Participation is an alternative term for Membership.
Payment Service Provider (PSP)	A Switching Company or a Third Party Payment Service Provider.
PCI	Payment Card Industry
PCI DSS	Payment Card Industry Data Security Standard
PIN	Personal Identification Number
Retail Payment	All payments which are not included in the definition of large-value payments. Retail payments are mainly consumer payments of relatively low value and urgency.
Representment	A financial transaction originated by an acquirer to partially or wholly recover funds charged back to the acquirer by an issuer. Also called a second presentment.
Request for Copy	The request for either an original or legible copy of the POS transaction information document or other supporting documents as identified in the electronic record.
RTGS	The Real Time Gross Settlement (RTGS) system operated by the National Bank of Ethiopia.
Rules	Operating rules and regulations applicable to Cards issued by EthSwitch and approved by the National Bank of Ethiopia, pursuant to Proclamation No. 718/2011, the National Payment System Proclamation.
Settlement	The act of discharging obligations by transferring funds through the RTGS between two or more Participants.
Settlement Account	Settlement Account that a Direct Participant shall open in the National Bank of Ethiopia.
Settlement Bank	A Bank that maintains accounts in order to settle payment obligations arising from interbank payments, both on its own behalf and for indirect participants that it sponsors.
Settlement Obligation	A financial obligation of a participant to another participant arising from a Transaction.
Suspension	Blocking a member from participation in the National e-Payment Switch enabled operations, Activity or Activities.
Standards	Standards applicable to Cards, issued by the National Bank of Ethiopia, Proclamation No. 718/2011, the National Payment System Proclamation.
Switched Member	EthSwitch member Bank which operates its own or shared switch and which uses EthSwitch for interbank retail payment with other member Banks or member Banks outside its shared switch.
Switching Company	A company licensed as Operator by the National Bank of Ethiopia and which provides transaction switching and

Term	Meaning
	authorization services on behalf of member financial institutions.
Terminal ID	In the case of ATM or POS terminal the ID which uniquely identifies the terminal.
Termination	Casting out a member from participation.
Them-On-Member	Transaction whereby a transaction from an International Card Scheme is processed by a Switched Member.
Them-On-Us	Transaction whereby a transaction from an International Card Scheme is processed by a Hosted Member.
Third Party Payment Service Provider	Non-Bank, or third-party, Payment Service Provider is a business entity licensed as Operator by the National Bank of Ethiopia to provide payment-processing services to member financial institutions, merchants and other business entities.
Transaction	A financial transaction arising from the proper acceptance of a Card or Account at a Card acceptance location and identified in messages with the ISO 8583:1993 standard.
Us-On-Us	Transactions between member Banks whereby both the Issuer and Acquirer are Hosted Members.
Us-On-Member	Transaction whereby the Issuer is Hosted Member and the Acquirer is Switched member.
Working Day	Monday to Saturday, except public holidays.

## 2. Background

EthSwitch S.C., owner and operator of the national electronic retail payments switch of Ethiopia (in short “the National Switch”), is legally established with the main purpose of providing electronic retail payment switching and clearing, card issuance and management, and related infrastructure services for a wider implementation and use of electronic retail payment services in the financial sector and the country at large. The national switch is one of the four major components of the National Payment Systems (NPS) strategy being implemented by the National Bank of Ethiopia (NBE) in which modernization of the NPS is the core.

The NPS modernization has adopted cooperation as one of its key guiding principles for the development of the NPS infrastructure, where:

- a) the commitment and active participation of all stakeholders are required to be ensured;
- b) key role is expected to be played by Banks due to their central role as payment services providers;
- c) a right balance is expected to be established between cooperation and competition, and
- d) The National Bank of Ethiopia (NBE) is expected to take the lead in the modernization process.

In line with the above, in the year 2009 NBE issued instruction to all Banks advising them to cooperate in the establishment of a central switch system. Accordingly, the Banks through the Ethiopian Bankers Association cooperated and established EthSwitch S.C. in 2011.

The objectives of EthSwitch listed in its Memorandum of Association are:

1. To establish a national central financial switch system and infrastructure,
2. To provide card and retail payment switch and clearing service,
3. To provide card production and personalization services,
4. To establish the system and infrastructure for card payment and its management,
5. To provide gateway service for international card payments,
6. To provide call center service and maintain service level agreement with financial institutions,
7. To provide research, technical support and advisory services for member financial institutions in areas related to card and retail payment systems business development, risk management, security, dispute resolutions, and standardization, and

8. To undertake other services related to the above stated objectives subject to the approval of the National Bank of Ethiopia and other pertinent authorities.

EthSwitch Vision and Mission statements approved by its Board of Directors are the following:

**Vision:**

**To become the unifying e-Payment platform for Ethiopian Financial Institutions, anywhere anytime!**

**Mission:**

**To provide simple, affordable, secured, and efficient e-Payment Infrastructure Services, to payment service providers in Ethiopia, by deploying state-of-the-art technology along with highly skilled and motivated professionals.**

In line with the above objectives, EthSwitch has established the National Interbank Electronic Retail Payment Infrastructure which includes:

- a) The National EFT (Electronic Funds Transfer) Switch and Clearing System for interbank transactions conducted through Card, Mobile, and Internet, as well as other interbank payment transfers,
- b) ATM/POS monitoring and management systems,
- c) Card Issuance and Card Management Systems.
- d) Dispute Management System, and
- e) Fraud Monitoring System.

The infrastructure and systems are meant to serve financial institutions and other payment service providers, also called “Operators” in the National Payment System Proclamation 718/2011. These operators are going to be participants in the National Switch (e-Payment Switch) that EthSwitch will operate.

As an operator of a payment system, EthSwitch is required to put in place the system rules to govern its operations and the enrollment and activities of its participants, which includes:

- a) The criteria established for participation (direct and indirect),
- b) The principle of operation of the system,

- c) The service levels to be provided to system participants,
- d) The detailed roles and responsibilities of parties,
- e) The schedule of time or operational hours of the system,
- f) The policies and procedures for handling of illiquidity and insolvency of participants,
- g) The management of liquidity, credit, and settlement risks,
- h) The finality of payment,
- i) The measures employed to safeguard technical operations including any contingency arrangement,
- j) The measures taken to secure the protection of electronic processing and the storage of data relating to the system against disclosure, misuse, damage, destruction, loss or theft,
- k) The dispute management, and
- l) The system's fees structure.

The rules provided in this document, i.e., the “System Rules of the National e-Payment Switch of Ethiopia” cover the guiding framework to be used by all Participants. The rules shall be operational starting from the date of its approval by the National Bank of Ethiopia. The rules shall apply to all Participants of EthSwitch without any exceptions, and all Participants shall be legally bound by the rules.

The rules may be amended from time to time by the Board of Directors of EthSwitch S.C. in consultation with Participants and getting approval of the National Bank of Ethiopia. Any proposals and suggestions from Members, to amend the Rules should be forwarded to EthSwitch. EthSwitch shall formally communicate any changes to all the members in writing within three working days of from the date receipt of written approval of the changes by the National Bank of Ethiopia.

### **3. Scope**

The primary focus of this document namely “System Rules of the National e-Payment Switch of Ethiopia” is on laying out the System Rules applicable for processing of interbank electronic retail payment transactions and their corresponding clearing and settlement arrangements.

The System Rules covered herein cover the following EthSwitch services to participants:

- Processing of interbank and intra-bank payments<sup>1</sup>,
- Clearing based on multilateral netting among all participant financial institutions,
- Card Issuance,
- Card management,
- Dispute Management,
- Fraud Monitoring,
- Support for various types of Card Products, and
- Other interoperability services.

Whenever there is conflict between the System Rules provided herein and merchant agreement or any other contractual engagement between participant and their merchants, the System Rules included herein override the merchant agreement or the contractual engagement.

The following are out the scope covered in this document:

- Transactions on cards issued by International Card Schemes and their corresponding dispute handling processes,
- Transactions through Contactless cards and E-Commerce

## **4. Roles and Responsibilities**

### **4.1. EthSwitch**

EthSwitch roles and responsibilities are the following:

- 4.1.1. Operating and maintaining the National e-Payment Switch and its related systems, and infrastructure,
- 4.1.2. Provision of the Services listed in Annex 6,
- 4.1.3. Provision of secure connectivity to National e-Payment Switch based on the specifications provided in the EthSwitch Interface Specification document,
- 4.1.4. Routing and switching of transactions amongst Participants,

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<sup>1</sup> Intra-bank payment processing and card management services are to be provided for Hosted Members only.

- 4.1.5. ATM Monitoring and Management,
- 4.1.6. POS and merchant management,
- 4.1.7. Card Issuance and Card Management services,
- 4.1.8. Processing of clearing files, calculation of the daily net settlement position of each participant, and sending net settlement instruction to the Real Time Gross Settlement System (RTGS) in the National Bank of Ethiopia for settlement,
- 4.1.9. Handling and arbitration of disputes arising from transactions among Participants,
- 4.1.10. Fraud monitoring and control,
- 4.1.11. Gateway services to process international card payments,
- 4.1.12. Maintenance of transaction integrity and security for all transactions passing through the National e-Payment Switch.
- 4.1.13. Generation and secure distribution of reports to Participants and the National Bank of Ethiopia,
- 4.1.14. Maintenance and distribution of statistics relating to availability and service performance of the National e-Payment Switch and Participants to member Banks and the National Bank of Ethiopia,
- 4.1.15. Enforcement and execution of the System Rules, Standards, Fees and Charges provided herein,
- 4.1.16. Investigating, reviewing, auditing, and inspecting a Participant, or its settlement bank or Merchants to ensure that it is complying with the System Rules and Standards provided herein,
- 4.1.17. Ensuring its respective Service Level provided under Section 8 herein.
- 4.1.18. Any other roles and responsibilities provided to EthSwitch by the National Bank of Ethiopia.

## **4.2. Participants**

The roles and responsibilities of each Participant shall be:

- 4.2.1. Ensuring continued compliance with the eligibility criteria and conditions outlined herein,
- 4.2.2. Implementing interface connectivity to EthSwitch,
- 4.2.3. Transaction processing, as acquirer or issuer,
- 4.2.4. Exchanging clearing files daily through EthSwitch,

- 4.2.5. Ensuring availability of secure connectivity to EthSwitch and timely notifying any service failure to EthSwitch,
- 4.2.6. Maintaining a record of all service failure times in a log report, which shall include date, time and period of service failure;
- 4.2.7. Ensuring the formats of the messages exchanged with EthSwitch conform to the ISO 8583:1993 standard;
- 4.2.8. Continuously monitoring and maintaining the balance of its settlement account in the National Bank of Ethiopia so that there will always be enough balance for immediate settlement of its settlement obligations due, including the operations of indirect participants sponsored by the Participant,
- 4.2.9. Maintaining and providing audit trails of transactions flowing through its systems and EthSwitch for a minimum period of ten years;
- 4.2.10. Ensuring that all its transaction acquiring channels (ATM, POS, Web, etc.) accept payment transactions of all EthSwitch Participants, subject to the user of the channel/device paying transaction fees stipulated herein;
- 4.2.11. Providing transaction logs and traces when requested, to aid resolution of disputes arising from financial transactions;
- 4.2.12. Providing transaction log promptly to any requesting Participant concerning any EthSwitch routed transaction, to aid resolution of card transaction complaints and disputes.
- 4.2.13. Ensuring its respective Service Level provided under Section 8 herein.
- 4.2.14. Using the National e-Payment Switch Brand on its acquiring devices and domestic proprietary cards, as per the terms, conditions, and restrictions set in the Participant agreement;
- 4.2.15. On application to join EthSwitch and every three months after acceptance, Participants shall accurately declare information on their number of customers categorized by account type, number of cards, number of ATMs and their locations, Number of POS terminals and their locations, and any other such pertinent information determined by EthSwitch. All of the above will be subject to verification by EthSwitch during certification and afterwards.

## **5. Participants**

### **5.1. Eligibility**

- 5.1.1. Legal entities engaged in payment systems and related services are eligible to become Participants.
- 5.1.2. The following are eligible to be Participants:
  - 5.1.2.1. Financial Institutions,
  - 5.1.2.2. Switching Companies,
  - 5.1.2.3. Third Party Payment Service Providers,
  - 5.1.2.4. Other institutions licensed as operator by the National Bank of Ethiopia and engaged in the provision of e-Payment services.
- 5.1.3. Financial Institutions are categorized as Direct or Indirect participant.
- 5.1.4. Direct Participants are Banks which are categorized into two types of membership, i.e., Switched and Hosted.

### **5.2. Application Procedures and Eligibility Criteria to become Participant**

- 5.2.1. Banks and Micro-Finance Institutions licensed by the National Bank of Ethiopia may become Participants, subject to fulfillment of the procedures and criteria set herein.

#### **5.2.2. Procedures**

- 5.2.2.1. Entities interested to become Participant shall submit their application for membership in the format provided in Annex 1 together with the required documents listed in Annex 2.
- 5.2.2.2. EthSwitch management organ, designated by the Board, shall review the application and documents and present the same, together with its recommendation, for the decision of EthSwitch Board of Directors, within 30 calendar days from the date the completed application and documents are received by EthSwitch.
- 5.2.2.3. The Board shall review the application and pass decision to accept or reject the Participant within 30 calendar days from the date it receives the management recommendation on the application. When application is rejected proper explanation shall be provided to the applicant by EthSwitch.

5.2.2.4. To be admitted an entity whose application to become Participant is accepted by the Board shall sign with EthSwitch the Participant Agreement provided in Annex 3.

### **5.2.3. Eligibility Criteria**

Notwithstanding the other related provisions herein, for an entity to be become Participant, it shall fulfill the following eligibility criteria:

5.2.3.1. The necessary organizational setup, financial resources, human resources, business processes, and technological systems, to be determined by the Board. Entities licensed as operators by the National Bank of Ethiopia shall be required to fulfill business processes and technological systems only.

5.2.3.2. The minimum required number of acquiring terminals applicable to it, to be determined by the Board,

5.2.3.3. The minimum required Products and Services to be supported by the participant, to be determined by the Board,

5.2.3.4. It has to pass the applicable certification process to be conducted by EthSwitch, to check compliance with the necessary technical and operational conditions to be a Participant as provided in Annex 5.

5.2.3.5. It has to pay the applicable fees.

5.2.3.6. When a new entity is accepted as Participant EthSwitch shall inform all existing Participants in writing, within 10 days from the date of acceptance and before admission of the new Participant to the National e-Payment Switch.

### **5.3. Blocking a Participant Terminal or Card**

5.3.1. EthSwitch can decide to technically block a particular Hosted Member terminal or card when it has a reason to suspect that the Hosted Member activities or Transactions originating from a particular terminal or card of the Hosted Member are dangerous to the safety, security and efficiency of the National e-Payment Switch, Participants, or Customers of Participants.

- 5.3.2. Switched members shall be responsible to block a particular terminal belonging to them or a card when they have reason to suspect that the activities or Transactions originating from that particular terminal or card are dangerous to the safety, security and efficiency of the National e-Payment Switch, Participants, or Customers of Participants. Whenever switched members block a card issued by other participant they shall give notice to the participant which issued the card after blocking the card.
- 5.3.3. EthSwitch shall execute all the necessary technical procedures to block a Participant from participation on any Transaction, whenever the Participant fails to settle its net settlement obligations and the National Bank of Ethiopia instructs EthSwitch accordingly.
- 5.3.4. Within three hours from the time the blocking is technically executed EthSwitch shall communicate the blocked status of a Participant in writing (by email, SMS, memo, or letter) to the blocked Participant.
- 5.3.5. If a blocked Participant does not solve the problems causing the blockage, within three working days from the date of it is blocked, it shall be suspended.

#### **5.4. Suspension from Participation**

- 5.4.1. The Management may suspend a participant, when:
  - 5.4.1.1. It proves that a Participant is admitted on the basis of false or wrong information submitted by the Participant,
  - 5.4.1.2. It has reason to conclude that the Participant is in serious breach of the System Rules provided herein,
  - 5.4.1.3. It has reason to suspect that the Participant activities or Transactions originating from the Participant are dangerous to the safety, security and efficiency of the National e-Payment Switch, Participants, or Customers of Participants,
  - 5.4.1.4. A participant fails to repeatedly settle its net settlement obligations, including fees and charges, and the National Bank of Ethiopia instructs EthSwitch to suspend the Participant,

- 5.4.1.5. A participant fails to cooperate for procedural audits and inspections by EthSwitch,
  - 5.4.1.6. A Participant fails to comply with risk management provisions provided herein,
  - 5.4.1.7. There is an order by the National Bank of Ethiopia or an Ethiopian Court with instruction to suspend the Participant.
- 5.4.2. A suspended Participant system shall be technically disconnected from the National e-Payment Switch within 24 hours from the time the decision of its suspension is passed by the Management.
- 5.4.3. EthSwitch shall communicate in writing (by email, memo, and/or letter) the suspension of a Participant to all Participants and the Board, within three hours from the time the suspension is technically executed.
- 5.4.4. A suspended participant should resolve the reasons which were the basis for its suspension within a maximum of three months from the date its suspension is executed.
- 5.4.5. If a suspended participant fails to resolve the reasons which were the basis for its suspension within 5 working days from the date of its suspension, EthSwitch shall disclose the suspension decision to Bank customers through appropriate media channel.
- 5.4.6. A suspended Participant shall pay all its net settlement obligation and applicable penalty fee payments prescribed in the Fee Guide.

## **5.5. Appeal after Suspension**

- 5.5.1. A suspended Participant may appeal to the Board to reverse the suspension decision passed on it.
- 5.5.2. Through the appeal process the Board may uphold or reverse the suspension decision passed by the Management.

## **5.6. Resumption after Suspension**

- 5.6.1. The Management shall permit resumption of participation of a suspended Participant, when:

- 5.6.1.1. The suspended Participant proves to the Management that the reasons which were the basis for its suspension are resolved,
- 5.6.1.2. The Management has reason to conclude that the evidences provided by the suspended Participant have become true and the reasons for suspension of the Participant cease to exist,
- 5.6.1.3. The instruction to suspend a Participant under 5.4.1.7 is waived by the respective government agency or another authority having vested power to waive the instruction,
- 5.6.1.4. The Board reverses the decision passed by the Management to suspend the Participant,
- 5.6.2. To resume participation, after suspension, a Participant shall pay the applicable resumption fee prescribed in the Fee Guide.
- 5.6.3. EthSwitch shall communicate in writing (by email, memo, and/or letter) the resumption of a suspended Participant to all Participants and the Board, within three hours from the time the resumption is technically executed.
- 5.6.4. If the suspension of a Participant has been disclosed to Bank customers as provided in 5.4.5 above EthSwitch shall also disclose the resumption of the Participant through the appropriate media.

## **5.7. Termination**

- 5.7.1. The Board may terminate a participant, when:
  - 5.7.1.1. A Participant fails to resolve the reasons which were the basis for its suspension within three months from the date its suspension is communicated to the Participants.
  - 5.7.1.2. A Participant is placed under liquidation, or is dissolved or declared insolvent,
  - 5.7.1.3. There is an order by the National Bank of Ethiopia or an Ethiopian Court with instruction to terminate the Participant.

- 5.7.2. EthSwitch shall communicate the termination of a Participant, through its official letter, to all Participants, within three working days from the date the termination decision is passed by the Board.
- 5.7.3. EthSwitch shall disclose the termination decision to Bank customers, through appropriate media channel, within five working days from the date the termination decision is passed.
- 5.7.4. A terminated Participant shall pay all its net settlement obligations and applicable penalty fees due prescribed in the Fee Guide.

## **5.8. Appeal after Termination**

- 5.8.1. A terminated Participant may appeal to the National Bank of Ethiopia to reverse the termination decision passed on it.
- 5.8.2. Through the appeal process the National Bank of Ethiopia may uphold or reverse the suspension decision passed by the Board.

## **5.9. Readmission after Termination**

- 5.9.1. The Board shall permit readmission of a terminated Participant, when:
  - 5.9.1.1. The terminated Participant proves to the Board that the reasons which were the basis for its termination are resolved,
  - 5.9.1.2. The instruction to terminate a Participant under 5.7.1.3 is waived by the respective government agency or another authority having vested power to waive the instruction,
  - 5.9.1.3. The National Bank of Ethiopia or an Ethiopian Court having the jurisdiction reverses the decision passed by the Board to terminate the Participant,
- 5.9.2. To be readmitted, a terminated Participant shall fulfill all admission procedures and payment of fees applicable for a new applicant provided herein.

## **6. Operations**

- 6.1. Products and Services listed in Annex 6 are supported by the National e-Payment Switch and are generally available as services for members through EthSwitch operations. The list can be updated in the future with addition of more products and changes and deletions on existing products.
- 6.2. EthSwitch shall provide services to all participants, based on their membership type and the products and services they support.
- 6.3. The minimum Products and Services required to be supported and provided by each Participant category.
- 6.4. Acquiring devices deployed by Participants shall accept properly presented payment cards issued by Participants.
- 6.5. Notwithstanding the provisions of 6.1 and 6.2 EthSwitch provides the following services to Participants:
  - 6.5.1. For Hosted Members processing of On-Us, Not-On-Us, Member-On-Us, Us-On-Member, and Them-On-Us transactions, and
  - 6.5.2. For Switched Members processing of Member-On-US, Us-On-Member, Member-On-Member, and Them-On-Member transactions.
- 6.6. EthSwitch shall provide its Brand Mark that will be used as a mark of interoperability and which shall be fixed in a visible manner on acquiring terminals, cards, and other payment channels operated by Participants.

## **7. Operational Hours**

- 7.1. Payment transaction processing services by EthSwitch and Participants shall be provided 24 hours a day, 7 days a week, all round a year.
- 7.2. A Business Day for EthSwitch shall be a 24-hour period. A typical business day extends from 12.00.00 am (midnight) to 11.59.59 pm, GMT + 3:00 (i.e., local time).

- 7.3. End-of-Day procedures by EthSwitch shall be conducted starting 12.00.00 am (midnight) at the close of each Business Day.
- 7.4. EthSwitch and Participants shall exchange their clearing file for their last Working Day on the next Working Day before 9:00 AM, Monday – Saturday. The procedures for exchanging such clearing files are provided in Annex 4.
- 7.5. EthSwitch shall do netting of settlement claims by Participants. EthSwitch shall complete netting until 11:00 AM and shall send the Net Settlement Instruction (NSI) to the EATS (Ethiopian Automated Transfer System) operated by the National Bank of Ethiopia (NBE) at 12:00 PM (noon) every Monday to Friday.
- 7.6. Settlement shall be done by the National Bank of Ethiopia every Monday to Friday, except holidays, after the Net Settlement Instruction (NSI) is received by the EATS.

## 8. Service Levels

- 8.1. The architecture of systems established and operated by EthSwitch and Participants shall follow **the design goals of: Availability, Data Integrity, Performance, Scalability, and Open Interfaces.**
- 8.2. Activities and interactions of EthSwitch and Participants shall be governed by Service Level Agreement (SLA).
- 8.3. The National e-Payment Switch shall be available for transactions 24 hours a day and 7 days a week all round a year.
- 8.4. Participants shall monitor the availability of their communication links to EthSwitch 24 hours a day, 7 days a week, all round a year. When communication failure occurs on the part of the connection under Participants control, the respective Participant shall initiate particular action to solve the problem and restore the connection as soon as possible. Participants shall notify EthSwitch when such incidents occur and provide it with an incident and action report.
- 8.5. EthSwitch shall monitor the communication links with Participants 24 hours a day, 7 days a week, all round a year. When communication failure occurs on EthSwitch part of the connection, EthSwitch shall initiate particular action to solve the problem and restore the connection as soon

as possible. EthSwitch shall notify Participants when such incidents occur and provide them with incident and action report.

- 8.6. National e-Payment Switch performance shall be measured in terms of Up-Time and Response Time, and customers' satisfaction annual survey.
- 8.7. The performance of Participant systems shall be measured by:
  - 8.7.1. Success Rates – successful transactions as a percentage of all transactions switched to Participants for authorization, and
  - 8.7.2. Response Times.
- 8.8. EthSwitch's Up-Time and Response-Time and Participant's Success Rates and Response Times shall be governed by the Service Level Agreement (SLA) which will be signed by all Participants.
- 8.9. EthSwitch shall maintain and quarterly distribute statistical information on transactions that has passed through the National e-Payment Switch and other e-Payment related information.
- 8.10. EthSwitch and Participants shall conform to the Up-Time, Response-Time, Success Rates and other performance standards which may be agreed from time to time.
- 8.11. All Participants will maintain and provide audit trails for all transactions, which pass between their systems and EthSwitch for a minimum of ten years.
- 8.12. EthSwitch in consultation with Participants shall set the minimum required uptime stated in the SLA for acquiring devices and the corresponding rules to regulate performance below the minimum threshold. The agreed minimum uptime and performance levels shall be signed between Participants and EthSwitch and shall be annexed to this System Rules document.
- 8.13. Participants shall report the monthly average uptime of each of their acquiring devices, and corresponding reason for failure, monthly to EthSwitch, using the format provided in Annex 7.
- 8.14. EthSwitch shall establish and operate a disaster recovery data center in a location separate from its primary datacenter site.

- 8.15. EthSwitch and Participants shall establish and maintain at least two adequate lines of data communication with automatic failover, i.e., a primary link and redundant link for redundancy and failover purpose.
- 8.16. EthSwitch and Participants shall conduct random checks to ensure that both their primary and redundant links are operational.
- 8.17. Participants shall provide to EthSwitch the name and contact addresses of their respective offices in charge of the operating and maintaining their respective systems processing e-Payment transactions with the National e-Payment Switch and communicate the updated contact name and addresses when change occurs.
- 8.18. EthSwitch shall provide to Participants the name and contact addresses of its office in charge of the operating and maintaining the National e-Payment Switch and communicate the updated contact name and addresses when change occurs.
- 8.19. Any planned unavailability of Participant systems for processing transactions shall be communicated to EthSwitch, using the format provided in Annex 8, at least three days ahead of the planned unavailability takes place.

## **9. Technical Requirements**

- 9.1. EthSwitch and Participants shall use TCP/IP as their network communication protocol.
- 9.2. EthSwitch and Participants shall use ISO 8583: 1993 as their message format.
- 9.3. Participants shall customize or develop their software interface to the National Switch based on the interface specification provided by EthSwitch, which from time to time, shall be updated and communicated to Participants by EthSwitch.
- 9.4. Before connecting Participant systems to National e-Payment Switch live environment, EthSwitch shall conduct certification testing to ensure that the interface developed by the Participant can interface to the National e-Payment Switch as per the interface specification provided it. The certification process shall include System Integration Testing (SIT) and User Acceptance Testing

(UAT) and shall follow the procedures described under Annex 5 EthSwitch shall provide a set of test cases and testing schedule for SIT and UAT.

- 9.5. Upon successful completion of the certification testing EthSwitch shall certify the Participant to connect its e-Payment system to the live National e-Payment Switch. Where the participant doesn't successfully pass the certification, the testing process shall continue until the participant gets certified.
- 9.6. Participants shall go-through additional certification processes with EthSwitch whenever:
  - 9.6.1. there is major systems change on Participant system or the National e-Payment Switch and the systems can no longer process transactions through the existing interfaces,
  - 9.6.2. new products or services are added on the National e-Payment Switch or on the Participant's system whereby the new product/service needs certification before production use through the National e-Payment Switch,
  - 9.6.3. divergence of a Participant system from the interface specification is detected, and
  - 9.6.4. problems on the interface frequently occur and due to which the Participant runs below the required availability level for a continuous period of two weeks.
- 9.7. EthSwitch and Participants shall continuously monitor their respective interfaces for 24/7 services, immediately maintain problems when they occur, and communicate with each other.

## **10. Netting**

- 10.1. EthSwitch shall do multilateral netting of settlement obligations of each Business Day on the next Business Day, for transactions done through direct Participants.
- 10.2. When providing authorization for POS transactions the issuer shall block the value of the transaction authorized from the account of the cardholder for payment to the acquirer.
- 10.3. Participants shall exchange of POS clearing files on the next working day from the date of the Transaction.
- 10.4. Netting of transactions done on public holidays shall be done on the next working day.

10.5. A settlement report file consisting of the net settlement position of each direct participant shall be generated by EthSwitch and sent to the respective Participants in a secure electronic format each Working Day until 12:00 PM (noon), except public holidays. The settlement report file of a holiday shall be sent to participants on the next working day until 12:00 PM (noon).

## **11. Settlement**

### **11.1. Settlement Procedures**

11.1.1. National Bank of Ethiopia (NBE) shall be the settlement system operator for interbank transactions among direct participants.

11.1.2. Each direct participant shall have settlement account with NBE across which final and irrevocable payments can be made in respect of each participant's settlement obligations.

11.1.3. The discharge of settlement obligations between participants shall be done by means of entries passed through EATS System on settlement accounts of direct participants.

11.1.4. Entry into the EATS shall be done using the Net Settlement Instruction (NSI) that EthSwitch sends online to the EATS, Monday to Friday at 12:00 PM (noon), except holidays. Whenever the NSI cannot be sent online due to technical reasons, EthSwitch shall send the NSI file to NBE offline through a channel to be specified by NBE or other means including using the operation facility available at NBE.

11.1.5. Settlement shall be done for transactions completed between direct participants (i.e., acquirer and issuer financial institutions) each business day, for which clearing files are generated and exchanged and netting is completed.

11.1.6. Every indirect participant shall appoint a direct participant as its settlement bank to settle all its obligations due.

11.1.7. For an indirect participant to be enrolled in the National e-Payment Switch the agreement between the indirect participant and its settlement bank, should be submitted by the settlement bank to EthSwitch.

- 11.1.8. EthSwitch shall assess an indirect participant and its engagement with the direct participant before accepting an indirect participant. To this effect EthSwitch shall apply the eligibility criteria for enrolling indirect participants defined in Annex 9.
- 11.1.9. A Participant which intends to terminate its appointment as settlement bank of an indirect participant shall notify EthSwitch in its official letter no later than three working days before the date of termination of such appointment. The liability due to this termination shall remain with the settlement bank.
- 11.1.10. Settlement obligation of each indirect participant shall be calculated by its respective settlement bank.
- 11.1.11. Settlement shall occur on the working day next to the day the transaction is performed, i.e., T+1 basis.
- 11.1.12. EthSwitch shall avail online access for member Banks to get their respective daily clearing file, which includes both the Net Settlement Instruction (NSI) amount and details of the transactions making up the NSI amount.
- 11.1.13. EthSwitch shall open settlement account in the National Bank of Ethiopia, for collection of its fees.

## **11.2. Finality of Payment**

- 11.2.1. A settlement shall be final and can no longer be revoked when it is done on the settlement accounts of Participants through EATS system as per the EATS system rule article 86.
- 11.2.2. If a settlement done through EATS has a mistake proven by the Participants involved, it can be corrected only through a second payment of equal value from the former payee back to the former payer, provided that the Participants agree to do the second payment. The finality of the second payment shall be determined independently of the first one.
- 11.2.3. Other issues related to finality of payment shall be determined by the EATS system rule and other related directives to be issued by the National Bank of Ethiopia.

## **12. Risk Management**

12.1. EthSwitch and Participants shall strictly follow the risk management rules provided herein. Failure to comply with the risk management rules may result in suspension of a participant.

### **12.2. Operation Related Risks**

12.2.1. To minimize security risks related to performing transactions, the minimum security requirements and standards specified under the sections for Security and Standards herein, and any updates or enhancements to be issued by EthSwitch in the future, shall be strictly followed by all participants.

12.2.2. To minimize service level related risks EthSwitch and Participants shall put in place redundant computing, datacenter and network connectivity infrastructure, and regularly check their proper performance.

12.2.3. EthSwitch and Participants shall enter into Service Level Agreement (SLA) with telecommunication and electric power providers, defining minimum Up-time and Performance Level expected from the service providers.

12.2.4. EthSwitch and Participants shall put in place policies and procedures for identifying, monitoring, and controlling any risks associated to the processing of Transactions.

12.2.5. Participants shall report any fraudulent transaction or other criminal risk activity to EthSwitch within 24 hours from identification of the incident. The report shall include detailed information about the transaction or activity, as per the reporting format in Annex 10.

12.2.6. Participants shall fully cooperate with EthSwitch in investigation of transactions suspected for fraud or illegal activities, including provision of information necessary for the investigation and reporting to the concerned organs.

12.2.7. EthSwitch from time to time shall set standards and rules to minimize risks related to interbank payments passing through the National e-Payment Switch.

12.2.8. Participants shall regularly cooperate with EthSwitch Security and Fraud Control Staff in providing Cardholder and Merchant activity information. In addition, upon request of

EthSwitch, Participants shall provide basic Cardholder identity information and any other relevant information, reported or suspected fraudulent account activity, and details about any Card loss or theft. EthSwitch shall keep the information and data received under strict confidentiality and use solely for security control and fraud prevention purposes.

### **12.3. Liquidity, Credit, and Settlement Risks**

- 12.3.1. Every direct participant shall maintain EthSwitch Reserve in its Settlement Account on the books of the National Bank of Ethiopia (NBE). The terms and conditions of maintaining the EthSwitch Reserve shall be determined by the National Bank of Ethiopia.
- 12.3.2. Participants shall maintain EthSwitch Reserve as the minimum threshold amount that should be in their Settlement Account every day at all times.
- 12.3.3. Parameters for determination of EthSwitch Reserve shall be as determined by the National Bank of Ethiopia.
- 12.3.4. Monitoring of liquidity funding in settlement account reflecting actual position is the responsibility of each direct participant;
- 12.3.5. Whenever a Participant's settlement account balance becomes below the required threshold (i.e., EthSwitch Reserve) the Participant shall replenish the balance in the first two hours after a settlement which brought its balance below the threshold.
- 12.3.6. Failure of settlement due to lack of enough balance in the settlement account at NBE shall result in suspension of the Participant from interbank card transactions starting from the day of the settlement until the Participant replenishes the settlement account to the required level.
- 12.3.7. Settlement collateral can be provided between Participants in the form of Interbank Loan.

## **12.4. Risk of Loss**

- 12.4.1. Each Participant shall bear all risk or loss and EthSwitch bears no risk or loss with respect to all amounts owed by the Participant under the System Rules herein except to the extent any such amount is received by EthSwitch, free and clear.
- 12.4.2. Each Participant shall remain fully responsible for fulfillment of, and must take all actions necessary to fulfill, all of its obligations under the System Rules herein, regardless of whether the Participant designates a third party to perform all or any part of such obligations on the Participant behalf. The fact that the Participant has paid any portion of the amounts owed to such third party designee does not discharge the Participant's obligations to EthSwitch.
- 12.4.3. EthSwitch may draw on the Participant's funds to fulfill any of the Participant's obligations under the System Rules herein, regardless of whether those funds are held or controlled by the Participant or by any third party designee, to the same extent EthSwitch is entitled to draw on funds from any settlement account or funds of the Participant under the System Rules herein, and regardless of whether those funds are mixed with any other funds. If EthSwitch draws on the Participant's funds, EthSwitch is not required to reimburse the Participant or any third party (whether a third party designee of the Participant or another Participant) for funds drawn which are owned by any of them or otherwise subject to any of their rights. The Participant and any third party (whether a third party designee of the Participant or another Participant) bear all risk and liability related to the funds drawn and must jointly and severally indemnify and hold EthSwitch harmless from all liability and claims arising from any such draw of funds.
- 12.4.4. Each Participant shall bear all risk of loss, and EthSwitch bears no risk of loss with respect to all amounts owed by EthSwitch to the Participant under the System Rules herein once the payment is received by the Participant or a third party designee of the Participant, and regardless of whether or how such Transactions are cleared and settled.
- 12.4.5. Each Participant shall notify EthSwitch promptly in writing if any third party designee mixes funds received for or from the Participant in connection with the Participant's Transactions with any other funds. Each Participant shall notify EthSwitch promptly in writing of the details of any failure of the Participant or any third party designee of the Participant to meet any of their obligations with respect to payment of funds owed under the System Rules herein.

12.4.6. If a Participant's third party designee advances funds on behalf of the Participant to pay EthSwitch or any other party entitled to receive those funds under the System Rules herein, then such payment is deemed to be a payment by the Participant, and the Participant, and the third party designee of the Participant, jointly and severally bear all risks of loss and must jointly and severally indemnify and hold EthSwitch harmless from any and all liability and claims arising from any such payment.

12.4.7. Any loss that EthSwitch incurs, or for which EthSwitch may otherwise be responsible due to the failure of a Participant, whether or not intentional, to perform any of its Participation obligations, shall be covered by the failing participant.

### **12.5. Anti-Money Laundering**

12.5.1. Each Participant shall comply with the rules, regulations, and other guidance issued by the Financial Intelligence Agency to protect against the money laundering and terrorist financing.

## **13. Business Continuity**

13.1. EthSwitch and Participants shall put in place Business Continuity Plan (BCP) for their respective part of the interbank payment system.

13.2. At least once a year EthSwitch and Participants shall conduct risk assessment on their respective part of the interbank payment system to identify the likelihood of threats and exposed vulnerabilities and its impact on their business.

13.3. Based on the result of the periodic risk assessment EthSwitch and Participants shall take risk mitigation measures and review, test, and update their respective BCP for the interbank payment system at least once a year.

13.4. Participants shall provide in writing to EthSwitch contact addresses (including mobile numbers) through which to contact and rectify problems on the availability of their systems to process Transactions. When Participants change the address (es) they shall notify in writing to EthSwitch in no more than three days from the date of the change.

## **14. Security**

- 14.1. EthSwitch and Participants shall implement and operate systems, standards, policies, and procedures which protect cardholder data, transaction information, and system security.
- 14.2. All payment cards and acquiring devices shall be compliant with the standards provided in the section for Standards herein.
- 14.3. Participants shall put in place continuous customer and merchant education and awareness programs to protect the security of cardholders and transaction information.

## **15. Card Issuance**

- 15.1. EthSwitch shall provide card issuance services to Participants as per the issuing contract attached in Annex 11, under which Participants will be Issuers.
- 15.2. Each Participant shall ensure that a card it issues only provides access to an eligible Bank account, displays the appropriate EthSwitch Brand Marks pursuant to Card Design Specification in Annex 12, and complies with the Card Standards set forth herein.
- 15.3. Each Participant shall put in place secure Payment Card Industry practices in its card issuance and delivery processes.
- 15.4. Each Participant shall disclose, clearly and conspicuously, in all new and existing Cardholder Communications, including Cardholder agreements and Account agreements, any amounts that the Participant charges, or will charge, to the Cardholder.

## **16. Dispute Management**

- 16.1. All Participants shall fully cooperate to resolve disputes on domestic Transactions through rules provided herein and the dispute handling procedures established by EthSwitch. Disputes on international Transactions shall be handled through dispute handling processes by the respective International payment scheme.
- 16.2. To be able to minimize dispute cases Participants shall enable automated reversal of transactions authorized by issuers but are not successfully completed on their acquiring systems.

- 16.3. In case of discrepancies discovered during daily terminal reconciliation process, where there is an error in Transaction, a Good Faith approach shall be adopted whereby the Acquirer bank shall refund the amount to the Issuer bank without waiting for the Issuer bank to raise a claim.
- 16.4. If there is any error/duplicate file processing, the Acquirer shall proactively rectify with immediate effect.
- 16.5. The Issuer shall not raise a Claim for cases proactively rectified by the Acquirer on Good Faith basis.
- 16.6. The Good Faith approach may be adopted by the Acquirer for discrepancies to which claim is filed by the Issuer.
- 16.7. An Issuer Bank which accepted a claim by its cardholder after doing investigation on its part can initiate a dispute process with the Acquiring Bank through EthSwitch, within the period specified herein, by submitting its claim for the dispute together with appropriate supporting documents.
- 16.8. EthSwitch and Participants involved in a disputed transaction shall handle disputes starting from receiving copy request or chargeback from Issuer Bank until the dispute gets its final settlement. EthSwitch shall be responsible for monitoring dispute timeframes, fulfillments, fee collections and arbitration requests.
- 16.9. The disputes handling workflow and corresponding timeline shall be as provided below:

Step	Dispute Action	Duration (Calendar Days)		Timed From	Notes
		ATM	POS		
1	Cardholder initiates claim with its Issuer Bank	90	90	From the date EthSwitch processed the transaction	
2	For POS transactions the Issuer sends Request for Copy (RFC) to the Acquirer; For ATM transaction the Issuer sends ATM Journal Request (ATM-JR) to the Acquirer	5	5	From the date of Claim by cardholder	
3	Acquirer sends fulfillment to Issuer	8	24	From the date of RFC by Issuer	POS requires more days as it involves merchants
4	Reject Claim or file Chargeback	5	5	From the date of fulfillment by Acquirer	Based on review of the copy documents the Issuer may reject the claim or proceed accept it and file to Chargeback
5	Representment by Acquirer	5	10	From the date of Chargeback	If the Acquirer accepts the Chargeback the dispute will be settled

Step	Dispute Action	Duration (Calendar Days)		Timed From	Notes
		ATM	POS		
6	Pre-Arbitration by Issuer	5	5	From the date of Representment by Acquirer	If the Acquirer accepts the Chargeback the dispute will be settled
7	Arbitration case filing to EthSwitch by Issuer	5	5	From the date of Representment by Acquirer	If the dispute is not resolved through pre-arbitration the Issuer can proceed to Arbitration
8	Arbitration Case Settlement by EthSwitch	24	24	From the date of Arbitration Case Filing	The losing party pays the arbitration fee to EthSwitch

- 16.10. Chargeback claims, Copy Request, Representment, and Arbitration submitted or responded to after the dates shown in the tables under 16.9 and 16.10 above may be subjected to fees as set out in the Fee Guide or rejected.
- 16.11. Each Participant shall designate the organizational unit which shall act as the primary point of contact for handling disputes and communicate the same to EthSwitch in writing.
- 16.12. EthSwitch shall act as Arbitrator when disputed cases cannot be settled between the disputing parties.
- 16.13. Arbitration process shall start whenever both parties (Issuer & Acquirer) fail to resolve their dispute and the case is filed to EthSwitch for judgment. EthSwitch has the full authority to request any needed documents or evidences to be able to fairly judge the case. The party that loses in the judgment shall bear the arbitration charges, as per the corresponding fee provided in the Fee Guide.
- 16.14. The Arbitration body in EthSwitch and the procedures which shall govern the Arbitration process shall be established by the Board.
- 16.15. A case filed to EthSwitch for arbitration can be withdrawn within five calendar days from the date of filing.

## **17. Standards**

### **17.1. Payment Card Standards**

- 17.1.1. Domestic proprietary cards issued by Participants shall follow the domestic payment card standards set in the Memorandum of Understanding signed by EthSwitch member Banks, attached in Annex 14.
- 17.1.2. A bank issuing Magnetic Stripe only domestic proprietary cards at the time of signature of this Systems Rules, if it wishes to issues and/or operate these cards until it replaces them with cards compliant with the domestic payment cards standard, the Issuer Bank shall assume liability for any Transactions done using their Magnetic Stripe only card that are found to be fraudulent.

### **17.2. Interchange Message Standard**

- 17.2.1. The interface between Participants which are Switched Members and EthSwitch shall follow the SmartVista Front-End Host-to-Host External Interface Specification provided to the Participant by EthSwitch and updated from time to time.
- 17.2.2. All Clearing and Settlement for Participants which are Switched Members shall follow the SmartVista BackOffice IPM Clearing File Format, provided to the Participant by EthSwitch and updated from time to time.
- 17.2.3. The Interface between the Core Banking System of Participants which are Hosted Members and EthSwitch shall follow the SmartVista Front-End External Interface Specification for Core Banking System based on ISO 8583-2:1993, provided to the Participant by EthSwitch and updated from time to time.

### **17.3. Acquiring Device Standards**

- 17.3.1. Any acquiring terminal deployed by a Participant and used for Transactions shall be EMV compliant.
- 17.3.2. A Participant which deploys ATM and POS terminals which does not support EMV shall assume liability for any counterfeit card Transactions on its terminal.

17.3.3. EthSwitch shall provide standards for acquiring devices to be deployed and operated by Participants.

#### **17.4. Other Standards**

17.4.1. The National e-Payment Switch and related systems shall be PA-DSS compliant.

17.4.2. The Datacenter and Network infrastructure on which the National e-Payment Switch and related systems are deployed shall be PCI-DSS compliant.

17.4.3. All online and offline payment card Transaction processing by Participants shall follow the PCI PIN Security Requirements.

17.4.4. Switches, Core Banking Systems, and other systems processing cardholder's data deployed by Participants shall be PA-DSS compliant.

### **18. Fees and Charges**

18.1. All EthSwitch and participant fees and charges related to participation in the operations of the National e-Payment Switch shall be determined by EthSwitch Board of Directors. If the Board fails to agree, the National Bank of Ethiopia shall determine the fees and charges.

18.2. The amounts of all such fees and charges shall be provided in a separate document called "EthSwitch Fees Guide"

### **19. Reporting Requirements**

19.1. Each Participant shall provide report to EthSwitch on its Acquiring, and Issuing operations and systems in such form and manner as EthSwitch may require.

19.2. Each Participant shall ensure that the data it provides is correct and complete.

19.3. Each Participant shall be responsible for the quality of the data that it provides in its report and takes the liability for any problem or damage that may occur on other Participants or third parties, EthSwitch, or the national payment system, due to problem on the quality of the data it provides.

19.4. EthSwitch may audit Participant systems and operations to check the correctness of the information included in their report.

## **20. Change to this document**

20.1. Any request for change to this document, with details of the justifications and supporting documents, shall be prepared by EthSwitch management and presented to the Board.

20.2. The Board shall review the request, accept, or reject.

20.3. Changes accepted by the Board, together with their justifications and supporting documents shall be presented to the National Bank of Ethiopia for approval.

20.4. The changes shall be effective from the date of their approval by the National Bank of Ethiopia.

## **21. Confidentiality**

21.1. EthSwitch and each Participant shall ensure that any confidential and private information which comes into its possession in the course of its dealings shall continue to be confidential and private and shall not be disclosed without the consent of the party to whom such information is classified confidential and private, except to such Participants, employees, settlement bank or independent contractors who require such information in order to perform their obligations.

## **22. Prohibitions**

22.1. No Participant shall indulge in practice or practices resulting in denial of performing Transactions by cardholders of other Participants on its acquiring terminals, except under conditions provided herein.

22.2. No Participant shall limit or restrict the provision of switching services or market thereof or technical development relating to Switching Services to the prejudice of cardholders.

22.3. No Participants shall directly or indirectly impose unfair or discriminatory condition in the provision of its services to cardholders of other Participants.

22.4. No Party shall charge the cardholder above the fees and charges provided in the Fee Guide.

22.5. No Participant shall indulge in practice or practices resulting in denial of market access to other Participants.

## **23. Governing Law**

23.1. The provisions of this System Rule shall be governed by the applicable laws of Ethiopia.

## **24. Effective Date**

This System Rule shall be effective from the date of its approval by the National Bank of Ethiopia.

## Annex 1: Application to become Participant

1. Name of the Applicant (Institution Name): \_\_\_\_\_
2. Head Office Address:  
City: \_\_\_\_\_ Kifle Ketema: \_\_\_\_\_ Woreda: \_\_\_\_\_ House No. \_\_\_\_\_  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_ P. O. Box: \_\_\_\_\_ Email: \_\_\_\_\_  
Website: \_\_\_\_\_
3. Name of the General Manager/CEO/President: \_\_\_\_\_
4. Addresses of the General Manager/CEO/President:  
Tel (Office): \_\_\_\_\_ Mobile: \_\_\_\_\_ Fax: \_\_\_\_\_  
P. O. Box: \_\_\_\_\_ Email: \_\_\_\_\_
5. Trade Registration Name: \_\_\_\_\_
6. Trade Registration No.: \_\_\_\_\_
7. License No. issued by the National Bank of Ethiopia (NBE): \_\_\_\_\_
8. Subscribed Capital in Birr: \_\_\_\_\_
9. Paid up Capital in Birr: \_\_\_\_\_
10. Type of Business (indicated in NBE License): \_\_\_\_\_
11. Place of Business (indicated in NBE License): \_\_\_\_\_
12. Brief Description of Products and Services that the Applicant Plans to Provide by becoming Participant:  
\_\_\_\_\_
13. Brief Description of the target Customers (market segments and industries) to be served:  
\_\_\_\_\_
14. Brief Description of Intended use of EthSwitch network in providing the Products and Services:  
\_\_\_\_\_
15. Brief Description of the Systems and Infrastructure that the Applicant has established to become Participant:  
\_\_\_\_\_  
\_\_\_\_\_
16. Name of the Sponsoring Financial Institution (If the applicant is not a Direct Member Financial Institution):  
\_\_\_\_\_

## **Annex 2: List of Required Documents to be submitted together with Application for Membership**

1. Current Trade Registration Certificate
2. Current License issued by the National Bank of Ethiopia
3. Company establishment documents (Memorandum of Association and Articles of Association)
4. Letter from the Sponsoring Financial Institution (if the applicant is not a Direct Member Financial Institution)
5. Agreement with the Sponsoring Financial Institution (if the applicant is not a Direct Member Financial Institution)
6. Power of Attorney of the Agreement signatory
7. Financials for the most recent two years (key elements include), if it is not a new company
  - a. Balance sheets
  - b. Revenue and expenses
  - c. Audit opinion
8. Business Overview (key elements include)
  - a. Ownership and executive biographies
  - b. Operations Overview (e.g. description and architecture of system/infrastructure, customer service, BCP)
9. Statement of Objectives and Business Plan (key elements include)
  - a. Intended use of the EthSwitch network
  - b. Products and services to be supported
  - c. Transaction projections
  - d. Market segments and industries to be served
10. Risk Requirements
  - a. PCI DSS validation (full ROC and AOC) for Payment Service Providers (PSP)
  - b. A signed EthSwitch Attestation of Compliance (EAOC) based on operational review or Operations Overview documents

## **Annex 3: Participant Agreements**

### **Participant Agreement Type 1**

#### **Direct Participant Agreement with EthSwitch S.C.**

Whereas ..... Bank (hereinafter called “Direct Participant”) desires to furnish transaction Authorization, Payment, Clearing, and/or other related payment processing services to its customers and the customers of other EthSwitch S.C. (hereinafter called “EthSwitch”) member financial institutions listed in Annex - A (hereinafter called “other Member” or “other Members”), in connection with its electronic retail payment services listed in Annex – B (hereinafter called “Services”),

Whereas Direct Participant desires to use, in connection with providing such services, one or more of the data processing and communication systems (hereinafter called “Systems”) that have been implemented by EthSwitch,

Whereas Direct Participant has fulfilled the requirements set by EthSwitch to connect to the Systems pursuant to the System Rules of the National e-Payment Switch of Ethiopia (hereinafter called “System Rules”),

Now therefore, EthSwitch and the Direct Participant have agreed as follows.

1. The Direct Participant and EthSwitch have agreed to fully comply with the System Rules,
2. The Direct Participant agrees to supply EthSwitch with Annex C - List of its merchants, agents, indirect participants sponsored by it, and Payment Service Providers (PSP) using the System and the corresponding agreement it signed with each of them.
3. The Direct Participant agrees to inform EthSwitch in writing when adding new, or terminating existing, merchants, agents, indirect participants, PSP, and/or Services. In addition the Direct Participant agrees to update the list its merchants, agents, indirect participants, PSP, and Services quarterly, delivered to EthSwitch within thirty (30) days from the end of each quarter.
4. The Direct Participant agrees to provide settlement services on behalf of its customers, merchants, agents, indirect participants, and PSP, for their obligations due in connection with using the System.
5. EthSwitch consent to the Direct Participant use of the Systems to provide Services to its customers is subject to the Direct Participant continued compliance with the applicable laws and regulations issued by the National Bank of Ethiopia and other concerned government authorities, the System Rules, or other written documentation as amended from time to time, and the terms of this Agreement.
6. The Direct Participant hereby acknowledges receipt of a copy of the System Rules and acknowledges that its responsibility to read and understand the documents. The Direct Participant also agrees to monitor and comply with all amendments to the same.

7. The Direct Participant acknowledges that EthSwitch has the right to conduct system and procedural audits and inspections at the premises of the Direct Participant at any time and to deny any access to the Systems if EthSwitch deems that the Direct Participant is acting in an unsound or unsafe manner or in a manner which threatens to damage the operation, safety, integrity, and security of the System or other Members.
8. The Direct Participant shall not use the Systems to provide authorization, payment, clearing, or other payment processing services in connection with payment cards of a third-party issuer without obtaining a written consent of such issuer and authorization from EthSwitch,
9. In its dealings with third parties on behalf of other Members, the Direct Participant shall at all times conform to the System Rules as well as sound and ethical business practices,
10. The Direct Participant shall be responsible for the accuracy of all information required by EthSwitch documentation to be provided regarding merchants, agents, indirect participants, PSP, services, customers, transactions, or other matters.
11. EthSwitch and the Direct Participant shall comply with all response time and system availability requirements contained in the System Rules.
12. At EthSwitch request, the Direct Participant shall cooperate in any investigation, review or inquiry relating to the security, integrity, operation and/or use of or access to the System or its obligations to EthSwitch. The Direct Participant shall cooperate with and take any and all actions or corrective actions requested by EthSwitch to correct any errors in the System whether or not caused by the Direct Participant.
13. The Direct Participant shall pay applicable fees and other financial obligations owed to EthSwitch through a debit to its settlement account through the System initiated by EthSwitch or other applicable means.
14. The Direct Participant use of the Systems is subject to any provision of the System Rules, limiting EthSwitch responsibility for performance of services and EthSwitch liability for any personal injury, property damage, or other loss attributable to the Systems.
15. The Direct Participant agrees to maintain and hold confidential all information obtained by the Direct Participant regarding the Systems, other Member and their customers, or the business that EthSwitch has designated as confidential or proprietary information. The Direct Participant shall not copy, disclose to third parties, or use such confidential or proprietary information for itself or any other party, except with EthSwitch prior written consent or instruction by the National Bank of Ethiopia.

16. EthSwitch and the Direct Participant irrevocably submit to the jurisdiction of a court of law in Ethiopia for all claims brought against them and their affiliates. EthSwitch and the Direct Participant further agree that the venue will properly lie in such courts in all such claims brought against them (or their its affiliates); however, EthSwitch, the Direct Participant, or any other Member may enforce the System Rules, including without limitation their respective patent, copyright, trademark, and other intellectual property rights, at their option, in any court of competent jurisdiction in Ethiopia. The prevailing party shall be entitled to recover its costs and reasonable attorneys' fees in all court or other proceedings arising in connection with the provision of its Services.
  
17. All notices and process may be validly served by registered postal mail or in person with proof of delivery.
  
18. The Direct Participant understands that this Agreement, and the System Rules referenced herein, supersedes any prior agreement which may exist between the Direct Participant and EthSwitch relating to the use of the Systems, and that the two parties may amend this Agreement at any time upon thirty (30) days written notice given by one party to the other. No other change or modification of any of the terms of this Agreement shall be valid unless set forth in a written instrument, signed by EthSwitch and the Direct Participant.
  
19. The provisions of Article 12, 15, 16, and 17 shall survive the termination of this Agreement.

For PSP: ..... For EthSwitch: .....

Witnesses:

.....  
.....

**Participant Agreement Type 2**  
**Payment Service Provider (PSP) Agreement with EthSwitch S.C.**

Whereas ..... (hereinafter called “Payment Service Provider” or “PSP”) desires to furnish Switching, Authorization, Clearing, and/or other processing services to EthSwitch S.C. (hereinafter called “EthSwitch”) member financial institutions listed in Annex - A (hereinafter called “Member” or “Members”), in connection with their electronic retail payment services listed in Annex – A (hereinafter called “Services”),

Whereas PSP desires to use, in connection with providing such services, one or more of the data processing and communication systems (hereinafter called “Systems”) that have been implemented by EthSwitch,

Whereas PSP has fulfilled the requirements set by EthSwitch to connect to the Systems pursuant to the System Rules of the National e-Payment Switch of Ethiopia (hereinafter called “System Rules”),

Now therefore, EthSwitch and PSP have agreed as follows.

1. PSP confirms that it is the agent of each Member to which it provides Services under this agreement, based on contractual agreement with the member. PSP acknowledges and agrees that it has no right to use the Systems or to otherwise provide Services to a Member pursuant to this Agreement or otherwise unless the Member has registered the PSP with EthSwitch as the Member’s agent pursuant to System Rules.
2. PSP agrees to supply EthSwitch with a list of all of its Members and the corresponding Services it provides using the Systems. PSP agrees to inform EthSwitch in writing ahead of adding new member or new service or terminating its agreement with an existing member. In addition PSP agrees to update its members and services list quarterly, delivered to EthSwitch within thirty (30) days from the end of each quarter. PSP also agrees to include on this list any non-Members that are providing Services to Members utilizing its access to EthSwitch Systems; however, PSP acknowledge and agree that it may not sub-contract with such non-Members to provide Services to Members and Members must contract with and register such non-Members with EthSwitch.
3. PSP agrees to provide EthSwitch with a sponsoring Bank and which shall settle the PSP obligations due to EthSwitch.
4. EthSwitch consent to PSP use of the Systems to provide Services to Members is subject to PSP continued compliance with the applicable laws and regulations issued by the National Bank of Ethiopia and other concerned government authorities, its obligations to its member(s) set forth in its agreement with member(s), the System Rules, or other written documentation as amended from time to time, and the terms of this Agreement. PSP hereby acknowledges receipt of a copy of the System Rules and acknowledges that its responsibility to read and understand the documents. PSP also agrees to monitor and comply with all amendments to the same.

5. PSP acknowledges that EthSwitch has the right to conduct system and procedural audits and inspections at the premises of PSP at any time and to deny any access to the Systems if EthSwitch deems that the PSP is acting in an unsound or unsafe manner or in a manner which threatens to damage the operation, safety, integrity, and security of the System or Members.
6. PSP shall not use the Systems to provide authorization, clearing, or other processing services in connection with payment cards of a third-party issuer without obtaining a written consent of such issuer and authorization from EthSwitch,
7. In its dealings with third parties on behalf of Members, PSP shall at all times conform to the System Rules as well as sound and ethical business practices,
8. In performing Services for a Member, PSP shall clearly disclose to third parties that it is acting as agent for the Member.
9. PSP shall be responsible for the accuracy of all information required by EthSwitch documentation to be provided regarding merchants, transactions, or other matters.
10. PSP shall comply with all response time and system availability requirements contained in EthSwitch documentation or that are applicable to other agents of Members utilizing the Systems.
11. At EthSwitch request, PSP shall cooperate in any investigation, review or inquiry relating to the security, integrity, operation and/or use of or access to the System or its obligations to EthSwitch. PSP shall cooperate with and take any and all actions or corrective actions requested by EthSwitch to correct any errors in the System whether or not caused by PSP.
12. PSP shall pay applicable fees and other financial obligations owed to EthSwitch through a debit to the PSP sponsor bank settlement account at the National Bank of Ethiopia through the System initiated by EthSwitch or other applicable means.
13. PSP use of the Systems is subject to any provision of the System Rules, limiting EthSwitch responsibility for performance of services and EthSwitch liability for any personal injury, property damage, or other loss attributable to the Systems.
14. PSP hereby indemnifies EthSwitch Members and EthSwitch from and against any and all claims, liabilities, losses, damages, penalties, suits, costs, and expenses (including reasonable outside legal fees) arising out of any action at any time taken or omitted to be taken by PSP in connection with the Services performed by PSP on behalf of its Members, or in connection with any unauthorized use of the Systems, including, but not limited to, claims, liabilities, losses, damages, penalties, suits, costs, and expenses (including reasonable outside legal fees) for infringement of trade secrets or property rights of Members or other third parties, as well as for property damage, bodily injury, or both, incurred at PSP or its Member's premises.
15. PSP agrees to maintain and hold confidential all information obtained by PSP regarding the Systems or the business that EthSwitch has designated as confidential or proprietary information. PSP shall not copy, disclose to third parties, or use such confidential or proprietary information for itself or any other party, except with EthSwitch prior written consent or instruction by the National Bank of Ethiopia.
16. This Agreement shall become effective only upon its acceptance and signature by EthSwitch, in its sole discretion. EthSwitch consent to PSP use of the Systems shall terminate at EthSwitch option:

- a. ten (10) days after written notice is delivered to PSP describing a failure to duly observe or perform any of the agreements undertaken by PSP hereunder and the System Rules, if such failure is not corrected within that ten (10) day period, or
- b. at such time as PSP no longer is designated in writing as an agent by a Member for the purpose of utilization of the Systems.

Upon termination, PSP shall immediately deliver to EthSwitch all documents, materials, and equipment furnished by EthSwitch to PSP, including any copies thereof. PSP also agrees that notwithstanding such termination it shall continue to observe the confidential and proprietary nature of the information regarding the Systems and the business pursuant to the requirements of Article 15 of this agreement.

- 17. PSP irrevocably submits to the jurisdiction of a court of law in Ethiopia for all claims brought against it and its affiliates by EthSwitch or any Member. PSP further agree that the venue will properly lie in such courts in all such claims brought against it (and its affiliates) by EthSwitch, or any Member; however, EthSwitch or any Member may enforce the System Rules, including without limitation their respective patent, copyright, trademark, and other intellectual property rights, at their option, in any court of competent jurisdiction in Ethiopia. The prevailing party shall be entitled to recover its costs and reasonable attorneys’ fees in all court or other proceedings arising in connection with PSP provision of Services.
- 18. All notices and process may be validly served by registered postal mail or in person with proof of delivery.
- 19. PSP understands that this Agreement, and the System Rules referenced herein, supersedes any prior agreement which may exist between PSP and EthSwitch relating to the use of the Systems, and that EthSwitch may amend this Agreement at any time upon thirty (30) days written notice. No other change or modification of any of the terms of this Agreement shall be valid unless set forth in a written instrument, signed by EthSwitch.
- 20. The provisions of Article 11, 15, 16, and 17 shall survive the termination of this Agreement.

For PSP: ..... For EthSwitch: .....

Witnesses:

.....  
 .....

**Annex – A: Members and corresponding list of Services agreed with PSP**

S/N	Member Name	PSP Services agreed with the member

## **Annex 4: Clearing Files Access Procedures**

1. EthSwitch shall avail a file transfer protocol (FTP) server and corresponding systems for exchanging files.
2. EthSwitch shall assign file folder on the FTP server for each direct participant, through which EthSwitch and the respective participant exchange clearing files.

## **Annex 5: Certification Procedures**

Prior to connecting any participant production system to EthSwitch production system the following mandatory certification processes has to be fulfilled, in stages, as follows.

### **Step 1: Interface Development**

1. If the participant is a switched member it has to develop or customize its switch interface to EthSwitch as per the SmartVista Front-End Host-to-Host Interface Specification based on ISO 8583:1993 provided herein, OR
2. If the participant is a hosted member it has to develop or customize its Core Banking System (CBS) interface to EthSwitch as per the SmartVista Front-End External Interface Specification for Core Banking System;

### **Step 2: System Integration Test (SIT)**

After completion of the Interface Development as per the requirements indicated in Step 1, each participant shall test technical integration of its Switch or Core Banking System (as the case applies) with EthSwitch following System Integration Testing (SIT) program and procedures provided by EthSwitch.

### Step 3: User Acceptance Test (UAT)

After successful completion of SIT, as per the program and procedures outlined in Step 1, each participant shall test proper interface and working of its Switch or Core Banking System (as the case applies) with EthSwitch following User Acceptance Testing program and procedures provided by EthSwitch.

### **Annex 6: Products and Services Supported by EthSwitch**

S/N	Products/Services to Supported
<b>1</b>	<b>ATM Products/Services:</b>
1.1	Cash Withdrawal
1.2	Balance Inquiry
1.3	Mini statement
1.4	Fund transfer between accounts linked to the same card
1.5	Fund transfer to an external account
1.6	Card-to-Card funds transfer (P2P)
1.7	PIN Change
1.8	Virtual Card
1.9	Stand-In Authorization
1.10	Checkbook Request
1.11	Cash In (BNA) Deposits on ATM
1.12	Check Deposit on ATM
1.13	Mobile Top-up
1.14	Utility Payment
1.15	Donation
<b>2</b>	<b>POS Products/Services:</b>
2.1	Purchase
2.2	Reversal
2.3	Balance Inquiry
2.4	Pre-Authorization
2.5	Pre-Authorization Completion
2.6	Refund
2.7	Batch Upload
2.8	Purchase with cash back
<b>3</b>	<b>Voice Products/Services:</b>
3.1	Purchase
3.2	Refund
3.3	Reversal

S/N	Products/Services to Supported
3.4	Block Card
3.5	Reset PIN Counter
<b>4</b>	<b>EPAY Products/Services:</b>
4.1	Purchase
4.2	Refund
4.3	Debit Card Account
4.4	Credit Card Account
4.5	Reversal
4.6	Block Card
4.7	Unblock (Validate) Card
4.8	Balance Inquiry
4.9	Mini Statement
5	Merchant Management Facilities
6	Integration with LDAP
7	Implementing Interoperability of Internet Banking and Mobile Banking Systems implemented by Banks
8	Integration with external USSD Gateway
9	Integration with Mobile Provider and implementation of SMS service
10	Non-Card Based Fund Transfers (Intra-bank and Interbank)
11	Central Card Issuance
12	Credit Cards
13	Gift Cards
14	Fleet/Fuel/Petroleum Cards
15	Transit Cards
16	Private Label Cards
17	Corporate purchasing cards
18	E-vouchers
19	Biometric Data Authentication
20	Dynamic Currency Conversion (DCC)
21	Credit Card Cash Advance
22	Multi-currency dispensing (for not less than 8 currencies, including ETB, USD, Euro and Pound Sterling)
23	Fee Payment
24	Loan Repayment
25	Decentralized issuance of cards (instant card issuance at branches)
26	PCI DSS Certification
27	Visa Certification
28	MasterCard Certification

**Annex 7: Participants Report on Uptime**

Participant Name: \_\_\_\_\_

Report Month: \_\_\_\_\_ Year: \_\_\_\_\_ Terminal Type (ATM or POS): \_\_\_\_\_

S/N	Terminal Identifier (Name, Location, or ID)	Monthly Average Uptime	Reasons for Failure (if uptime is less than 100%)

Prepared By: \_\_\_\_\_ Approved By: \_\_\_\_\_

**Annex 8: Planned unavailability**

Participant Name: \_\_\_\_\_ Report Date: \_\_\_\_\_

S/N	System (Switch, Core Banking System, ATM, POS) Identifier	Scheduled Unavailability Period	
		From Date	To Date

Prepared By: \_\_\_\_\_ Approved By: \_\_\_\_\_

**Annex 9: Eligibility Criteria for Enrolling Indirect Participants**

The following are the eligibility criteria for enrolling indirect participants:

1. Submitting filled application for membership using the format provided in Annex 1 together with the required documents listed in Annex 2,
2. Fulfillment of the eligibility criteria provided herein under Article 4.2.3.

3. A decision passed by the Board of Directors of EthSwitch S.C. accepting the indirect participant to be enrolled in the System.
4. Signature of the Participant Agreement Type 2 provided in Annex 3.

**Annex 10: Fraudulent Transaction or other criminal activity report**

Participant Name: \_\_\_\_\_ Report Date: \_\_\_\_\_

S/N	Detailed Description of the Fraudulent Transaction or other Criminal Activity	Transaction Reference	Location (Terminal identifier)	Date and Time

Prepared By: \_\_\_\_\_ Approved By: \_\_\_\_\_

## **Annex 11: Card Issuing Contract**

### **Debit Card Personalization and PIN Mailers Production Agreement**

This Debit Card Personalization and PIN Mailers Productions Agreement is made by and between EthSwitch S.C., hereinafter referred to as "EthSwitch" address Kirkos Sub-city, Woreda ....., House No.... and on the one hand .....Bank address ....., hereinafter referred to as "the Bank" on the other hand in reference to the main Agreement signed between the two parties on .....

EthSwitch agrees to give the card personalization and PIN Mailers production services for the Bank debit cards issued to its customer. The two parties hereby agree on the following terms and conditions.

#### **1. Definitions**

- **Card Personalization** means permanent storage of cardholder's data on card, so that a mass-manufactured card becomes personal and unique. Such card identifies unambiguously the cardholder, i.e., the person whose data was recorded on card during personalization process.
- **Pin Mailers Production** means enclosed postcards which carry the **PIN** (Personal Identification Number) issued by a bank or a financial institution.

#### **2. Deliver Plastic Cards and PIN mailers to EthSwitch**

- 2.1. The Bank shall supply EthSwitch with pre-printed cards ready for personalization.
- 2.2. If the Bank is issuing cards in compliance with the domestic payment cards standard it shall supply EthSwitch with cards complying with the domestic card scheme layout design specifications.
- 2.3. The Bank shall supply EthSwitch with pre-printed pin-mailers prepared as per the specification provided by EthSwitch.
- 2.4. The Bank shall deliver within ..... calendar days after it receives the request of replenishment of plastic card and/or PIN mailers from EthSwitch.

### **3. Personalization and Delivery of Cards and Printed PIN Mailers**

- 3.1. EthSwitch shall do personalization of cards and PIN generation and printing.
- 3.2. EthSwitch shall deliver personalized cards and printed PIN mailers to the Bank securely in separate shipments.
- 3.3. The Bank shall deliver personalized cards and printed PIN mailer to the respective cardholder securely in separate routes.
- 3.4. EthSwitch shall deliver the produced PIN Mailers on the same day of its printing or next working day to the respective Banks, at EthSwitch, through a staff officially assigned by the President/Vice President of the respective Banks, signature to be verified by the NBE.
- 3.5. Whenever there is a change of staff assigned to receive the PIN mailers the Bank shall promptly notify EthSwitch through its official letter.
- 3.6. The Bank staff assigned to receive the PIN mailers shall check that each PIN Mailer is sealed and the PIN is not readable before receipt and signature.
- 3.7. EthSwitch shall deliver the personalized cards to the respective Banks, on the same day or next working day after completion of the card personalization, at EthSwitch, through a staff officially assigned by the President/Vice President of the respective Banks, signature to be verified by the NBE.
- 3.8. Whenever there is a change of staff assigned to receive the personalized cards the Bank shall promptly formally notify EthSwitch.
- 3.9. The Bank staff assigned to receive the personalized cards shall check that the cards are of its bank and their quantity.

### **4. Processing Card Applications**

- 4.1. A request for debit card, PIN reissue, linking account to card, closing card account, or other customer requests shall be entertained by the Bank.
- 4.2. The E-Payment Manager or other designated official of the Bank puts his/her approval on the application form after making sure that applicants signature shall be verified by the concerned staff.
- 4.3. Photocopy of applicant's ID (Passport, Driving License or National ID) card shall be attached together with the application.

- 4.4. Completeness of information on the application form shall be checked and ensured by the E-Payment Manager or other designated official of the Bank before submission to EthSwitch. Any KYC (Know Your Customer), Fraud, AML (Anti-Money Laundering) related liabilities and responsibilities remain with the Bank.
- 4.5. List having all information necessary for cards to be personalized based on the approved applications shall be sent by the Bank to EthSwitch, in signed & stamped hardcopies and electronically.
- 4.6. EthSwitch shall check the completeness and correctness of the list submitted by the Bank. All incomplete or erroneous information shall be returned back to the Bank immediately.

## **5. Processing Card Replacement Requests**

### **5.1. Damaged Cards**

- 5.1.1. Whenever the Bank receives card replacement request for damaged cards it shall fill the Card Replacement Form and send to EthSwitch together with the damaged card.
- 5.1.2. Upon collecting a replacement request for damaged cards, in the presence of the Bank representative and EthSwitch auditor, EthSwitch shall destroy the damaged cards following the EthSwitch card destruction procedure before issuing the replacement card.
- 5.1.3. Replacement for damaged card shall be processed against payment of card replacement fee by the Bank.

### **5.2. Lost and Stolen Cards**

- 5.2.1. Banks having card replacement request for stolen/lost cards shall fill the Card Replacement form and send to EthSwitch.
- 5.2.2. Upon collecting a replacement request from Banks for stolen/lost cards, EthSwitch shall produce the replacement card.
- 5.2.3. Replacement for stolen/lost card shall be processed against payment of card replacement fee by the Bank.

**5.3. Expired Cards**

- 5.3.1. Within the first five calendar days of every month the Bank shall list out those cards which will be expired during that specific month (excluding those which are not active or blocked, or those cards that are decided not to have a replacement) and send the list together with its letter to EthSwitch.
- 5.3.2. Within the next five days of the month EthSwitch shall produce the replacement cards and forward to the Bank for delivery, which should be finalized within the subsequent five days.

**6. Forgotten PINs**

- 6.1. Whenever the customer reports to the Bank that he/she has forgotten the PIN, the Bank shall make the customer fill the PIN re-issue form.
- 6.2. The PIN re-issue form filled and duly signed by the customer, after obtaining approval by the e-Payment Systems Manager or other designated official of the Bank, shall be forwarded to EthSwitch for new PIN mailer production.
- 6.3. Upon receiving the PIN re-issue form officially approved by the Bank, EthSwitch shall produce the new PIN mailer.
- 6.4. Production and distribution of the re-issued PINs shall be done following the PIN production and distribution procedure provided herein.
  - 6.4.1. Reissuance of PINs shall be processed against payment of PIN re-issuance fee by the Bank.

**7. Fees**

EthSwitch shall charge fees as per the following:

- a) Issuance of New Card.....ETB ..... per card
- b) Issuance of Replacement for Damaged/Lost/Stolen/Expired Card.....ETB..... per card
- c) Issuance of new PIN mailer.....ETB .... per PIN mailer
- d) Issuance of new PIN for forgotten PINs.....ETB.....per PIN mailer

**8. Termination**

A party may terminate this contract for any reason by giving the other party 30 days prior notice.

**9. Applicable Law**

The terms and conditions of this contract shall be interpreted and governed in accordance with applicable Ethiopian Law.

**10. Effective date**

This agreement shall be effective from \_\_\_\_\_

**For The Bank**

\_\_\_\_\_  
Name of the Bank

\_\_\_\_\_  
Full Name

\_\_\_\_\_  
Authorized Signature

**For EthSwitch S.C**

\_\_\_\_\_  
Full Name

\_\_\_\_\_  
Authorized Signature

**Witnesses**

Name	Title	Signature
1. _____	_____	_____
2. _____	_____	_____

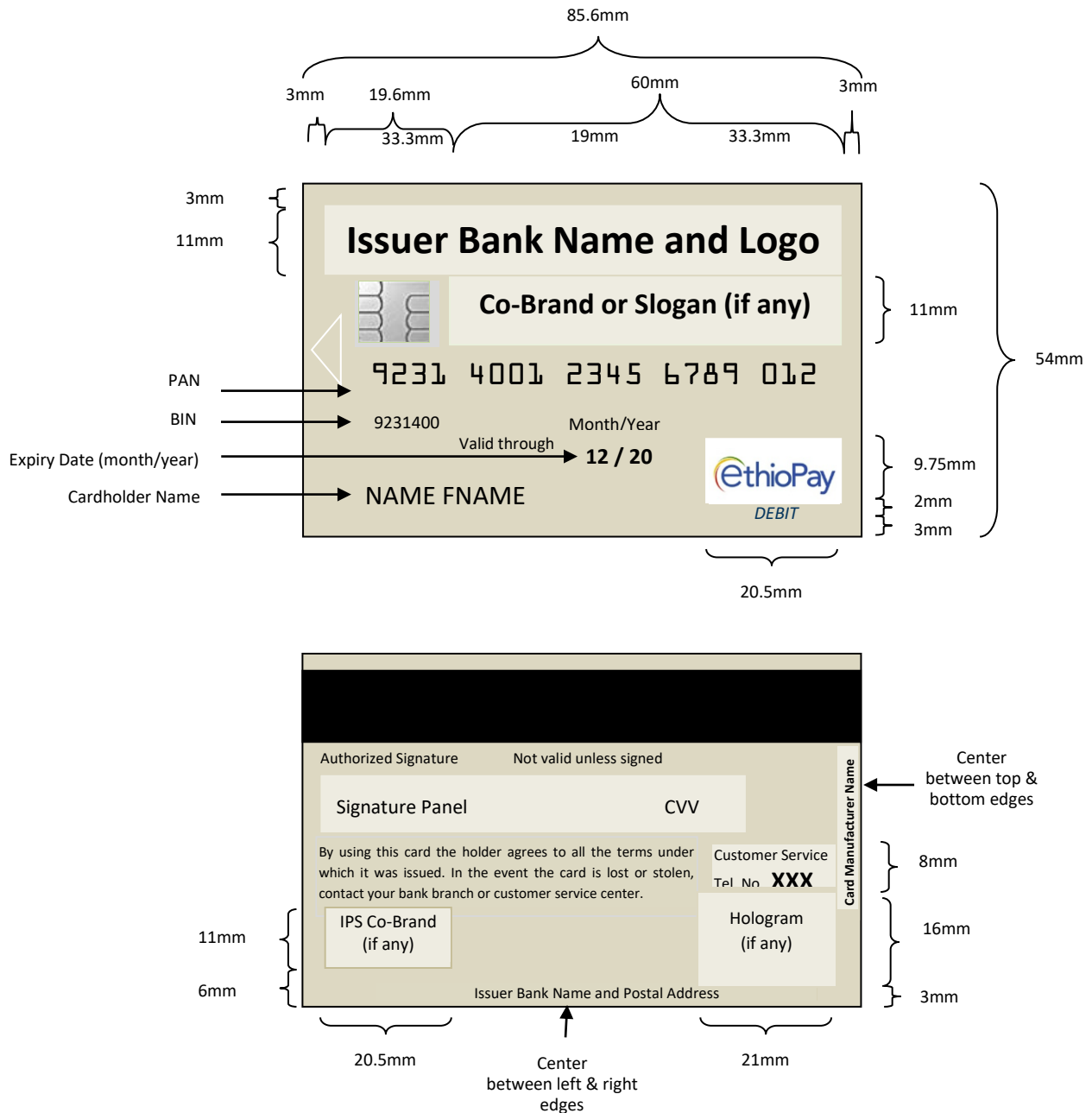
# Annex 12: Card Design Specification

## Domestic Payment Card Layout Design & Specification

### 1. General

1.1. This “Domestic Payment Card Layout Design Specification” is applicable to domestic payment cards issued by participants following the “Common Standard for Domestic Payment Cards”.

1.2. The following figure depicts the common layout design of domestic payment cards.



## **2. Dimensions**

### **2.1. Card Dimension**

- 2.1.1. The card dimension should be 85.6mm from its top to bottom edges and 54mm from its left to right edges.

### **2.2. Front Side Dimensions**

- 2.2.1. The issuer bank name and logo should be printed on the maximum space of 11mm length and 79.6mm width, at the bottom space adjacent to “Valid only in Ethiopia”.
- 2.2.2. On both the left and right sides of the issuer bank name and logo a minimum of 3mm spaces should be left empty.
- 2.2.3. The issuer bank may print the co-brand name and/or logo or the bank’s slogan on the maximum space of 11mm length and 60mm width, at the bottom right side space of the issuer name and logo. On the right side of the co-brand name/logo or slogan a minimum of 3mm space should be left empty.
- 2.2.4. On the left edge, at the center of the card from top to bottom, the triangular shape showing direction of insertion of the card into ATM/POS should be printed.
- 2.2.5. “Month/Year” should be printed at the center between the left and right edges of the card right after 15mm from the bottom edge of the card.
- 2.2.6. “Valid through” should be printed starting from 24mm from left edge, right after 12mm from bottom edge of the card.
- 2.2.7. The “ethioPay” logo should be printed in 20.5mm width and 9.75mm length border lined box at the right bottom corner side of the card 5mm above the bottom edge and 3mm from the right edge of the card.
- 2.2.8. The sub-brand “DEBIT” should be printed on the space adjacent to the bottom center of the “ethioPay” logo, 3mm above the bottom edge of the card.

### **2.3. Back Side Dimensions**

- 2.3.1. At the center of the 3mm space from top edge of the card the phrase “Valid only in Ethiopia” should be printed.
- 2.3.2. The phrase “Authorized Signature” should be printed after 16mm from top edge and 3mm from left edge of the card.
- 2.3.3. The phrase “Not valid unless signed” should be printed at the center of the card after 16mm from top edge.
- 2.3.4. The sentences “*By using this card the holder agrees to all the terms under which it was issued. In the event the card is lost or stolen, contact your branch or customer service center.*” should be printed on 56mm width and 8mm length space located next to 32mm from top edge and 3mm from left edge of the card.

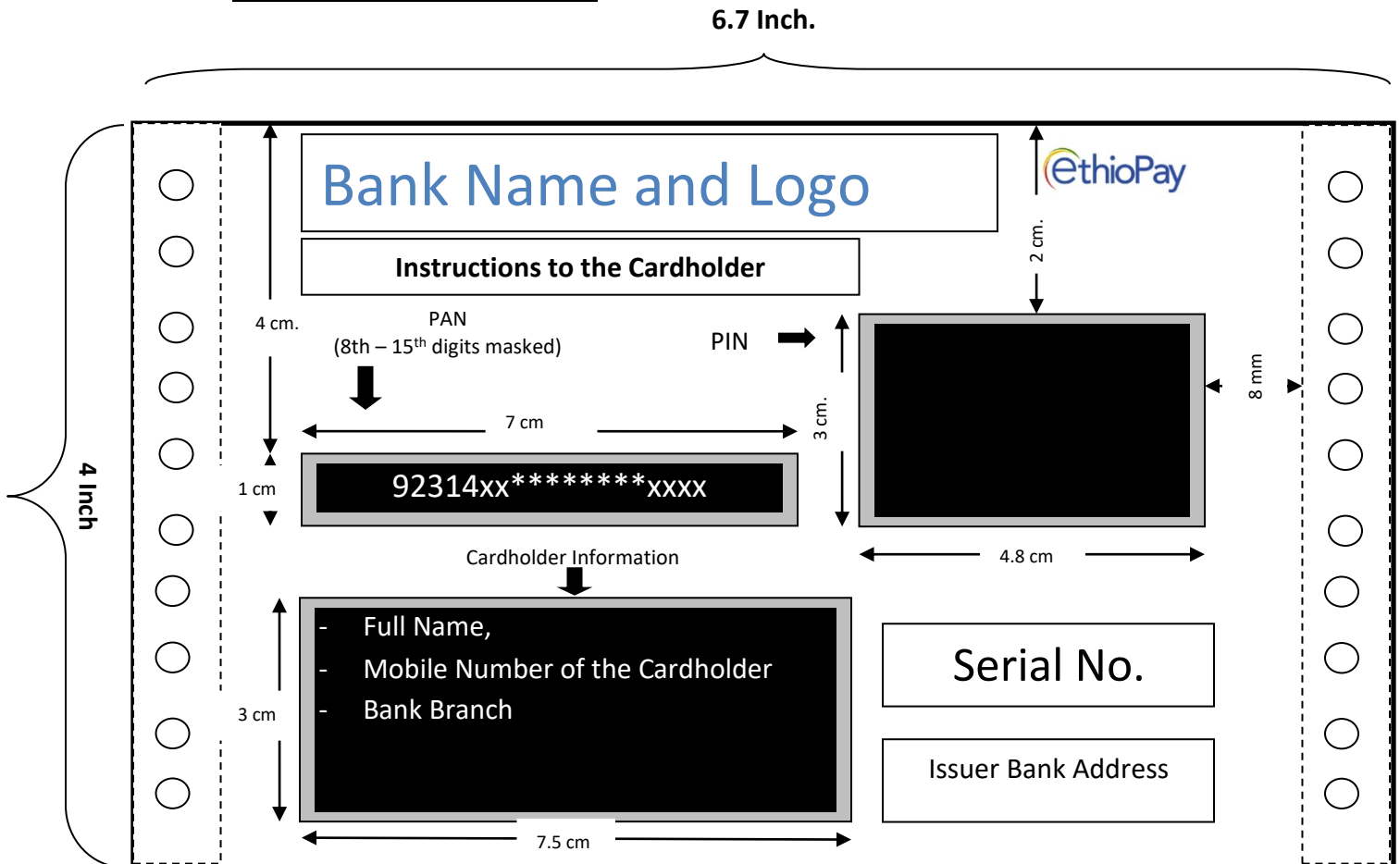
- 2.3.5. The phrase "Customer Service Tel. No." and "XXX" where XXX is the customer service telephone number of the bank shall be printed on 18mm width and 8mm length space located next to 32mm from top edge and 3mm from right edge of the card.
- 2.3.6. The card manufacturer name should be printed on 3mm space from right edge and the center from top to bottom edges of the card.
- 2.3.7. If the card also works with an International Card Scheme (ICS) the ICS logo should be printed on 20.5mm width and 11mm length space located on the bottom left side of the card, 3mm from left edge and 6mm from bottom edge of the card. If the ICS logo is printed the phrase "Valid only in Ethiopia" on the front top of the card should not be printed.
- 2.3.8. If hologram is added to the card it should be located on the 21mm width and 16mm length space on the bottom right side of the card, 3mm from the right edge and 3mm from bottom edge of the card.
- 2.3.9. The issuer bank name and postal address should be printed at the center of the 3mm space from bottom edge of the card.

## Annex 13: PIN Mailer Specification

Banks getting card issuance service in EthSwitch shall follow the following PIN mailer specification when preparing their PIN mailer formats.

Size: Depth 4" x Width 6.7"  
 Parts: Three ply  
 Paper weight: Ply 1) 55GSM  
                   Ply 2) 55GSM  
                   Ply 3) 80GSM

### PIN Mailer Layout Design:



## **Annex 14: MOU among Banks in Ethiopia on Common Standard for Domestic Payment Cards**

### **MEMORANDUM OF UNDERSTANDING AMONG ALL BANKS IN ETHIOPIA ON COMMON STANDARD FOR DOMESTIC PAYMENT CARDS**

Whereas, the development of low cost and suitable payment products for the local market is key to broaden access to financial services,

Whereas, ensuring interoperability and card acceptance on all acquiring devices and prevention of payment card related security risk and crimes in an integrated manner is crucial for the development of payment systems at national level;

Whereas, the development of common card standard sets one of the important building blocks for ensuring interoperability and security, as well as establishment of domestic card scheme which is necessary for the development of low cost and suitable payment card products for the local market;

Now therefore, this memorandum of understanding is made and entered into force as of the day ....., 2015 among all banks (Except the National Bank of Ethiopia), for setting common standard for domestic payment cards.

#### **Article I: Purpose**

The purpose of this Memorandum of Understanding (MOU) is to set common standard for all banks operating in Ethiopia for issuing domestic payment cards.

#### **Article II: Standards**

##### **2.1. Numbering System**

###### **2.1.1. Primary Account Number**

The Primary Account Number (PAN) of all domestic payment cards to be issued by Banks shall follow ES ISO/IEC 7812 - 1:2014, *Identification cards – Identification of issuers – Part 1: Numbering System*, with the following format:

- Length: 19 digits.
- First Digit: 9 which is for national assignment as per ES ISO/IEC 7812 -1:2014.

- Second to Fourth Digits: 231 which is the code of Ethiopia as per ES ISO 3166-1:2015: *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes numeric.*
- Fifth Digit: 4 is assigned for Banks (*Banking/Financial Major Industry Identifier (MII) as per ES ISO/IEC 7812 -1:2014*)
- Sixth and Seven Digits: Identify Banks.
- Eighth and Nine Digits: Identify Card Products by the respective Banks.
- Tenth to Eighteenth Digits: Identify Account Numbers by the respective Banks.
- Nineteenth Digit: Check digit

### 2.1.2. Bank Identification Number (BIN)

2.1.2.1. The first up to seven digits of a PAN is Bank Identification Number (BIN).

2.1.2.2. BIN assignment for Banks shall be from 9231401 up to 9231499.

2.1.2.3. BIN assignment for Banks follow chronological order of the date of establishment of Banks starting from the earliest established Bank to the latest one. Accordingly, BIN of Banks shall be as follows:

S/N	Name of the Bank	Assigned BIN
1	Development Bank of Ethiopia	9231401
2	Commercial Bank of Ethiopia	9231402
3	Construction and Business Bank	9231403
4	Awash International Bank	9231404
5	Dashen Bank	9231405
6	Bank of Abyssinia	9231406
7	Wegagen Bank	9231407
8	United Bank	9231408
9	Nib International Bank	9231409
10	Cooperative Bank of Oromia	9231410
11	Lion International Bank	9231411

S/N	Name of the Bank	Assigned BIN
12	Zemen Bank	9231412
13	Oromia International Bank	9231413
14	Bunna International Bank	9231414
15	Berhan International Bank	9231415
16	Abay Bank	9231416
17	Addis International Bank	9231417
18	Dehub Global Bank	9231418
19	Enat Bank	9231419

## 2.2. Track Data Structure

Track 1 and track 2 data structure of domestic payment cards to be issued by Banks in Ethiopia shall follow ES ISO/ IEC 7813: 2014: Information technology – Identification cards – Financial transaction cards.

## 2.3. Card Application

- 2.3.1. The data structure of all Integrated Circuit (IC) chips on contact cards issued by Banks shall follow the EMV (Europay, MasterCard, and Visa) standard.
- 2.3.2. The common standard application for local propriety contact cards shall be EMV Common Payment Application (CPA) which is based on the EMV Common Core Definitions (CCD) for payment application in IC chips.

## 2.4. Card Personalization Process

- 2.4.1. For personalization of domestic payment cards, Banks shall use the Card Personalization Specification (CPS) by EMVCo.
- 2.4.2. Banks shall implement EMV CPS compliant chip card products.

## 2.5. Card Type

- 2.5.1. For Bank account payment cards, like debit cards, Banks shall implement cards having IC chips with fallback to Magnetic stripe, as Magnetic stripe only cards are susceptible to fraud and not EMV compliant.
- 2.5.2. For stored value cards (like gift cards) with value less than ETB ..... Magnetic stripe cards can be issued by banks.

**Article III: Amendments**

This MOU may only be amended by the agreement of all the Banks with the consent of the National Bank of Ethiopia.

**Article IV: Entire Understanding**

This MOU contains the entire understanding of the parties with respect to the subject matter hereof and supersedes all prior agreements and understanding among the parties with respect to such subject matter.

**Article V: Authority of the National Bank of Ethiopia**

The National Bank of Ethiopia, if it wishes, may monitor and enforce this MOU on signatory Banks.

**Article VI: Effective Date**

This MOU shall be valid and have full effect from the date the parties have affixed their signature.

Name of the Bank \_\_\_\_\_

Title of the representative \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_