PAYMENT AND SETTLEMENT POLICY

Meghalaya Rural Bank

DEPARTMENT: Accounts Department

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1. INTRODUCTION

An efficient payment system promotes market efficiency and reduces the cost of exchanging goods and services. By the same token, its failure can result in loss of confidence in the financial system and in the very use of money. Further, technological developments in payment systems such as IMPS, UPI, AEPS, Cheque Truncation System, etc., have brought in more speed and efficiency in the payment and clearing processes.

Therefore, a comprehensive Payment and Settlement Policy needs to be made available for the benefit of the customer and also to appropriately sensitize the dealing officials of the Bank. Meghalaya Rural Bank acknowledges that the customer is the core constituent of the Bank and every action of the Bank should be aimed at Customer Delight. Towards this end, the Bank has formulated a Payment and Settlement Policy that also gives the rights and responsibilities of the Customer and Bank, in relating matters.

1. SCOPE OF POLICY

Meghalaya Rural Bank provides a variety of payments system (paper based and non-paper based) to its customers. This Policy will be applicable across all those payment systems so that the interactions with the Customers are uniform across geography and all types of customers.

The Policy is based on principles of transparency and fairness in the treatment of customers. It is designed to cover deficiency in service in areas relating to banking payment systems. The policy is further based upon the following principles:

a. To lay down a Policy framework for abiding by RBI guidelines on "*Payment and Settlement Act 2007"* and "*Payment and Settlement System Regulations, 2008"*.
b. To enable the customer to know before or during a relationship, his rights and responsibilities in matters relating to digital channel.
c. To reiterate Banks commitment for increased use of technology and provide quick alternate digital channels to its customers in a transparent manner so that the customer can take an informed decision in related matters.
d. To improve banking experience by providing reliable customer grievance and redressal mechanism

2. PAYMENT SYSTEMS - PAPER AND NON-PAPER BASED

A Payment System is a mechanism that facilitates the transfer of value between a payer and a beneficiary by which the payer discharges the payment obligations to the beneficiary. Payment Systems are the medium to transfer funds from one person to another that facilitate businesses and economies.

a. Paper based Payment System

Since paper based payments occupy an important place in the country, Reserve Bank had introduced Magnetic Ink Character Recognition (MICR) technology for speeding up and bringing in efficiency in processing of cheques. Further, with the introduction of Cheque Truncation Systemto restrict physical movement of cheques and enable use of images for payment processing, framing of the CTS-2010 Standards (for enhancing the security features on cheque forms) has brought in efficiency to the cheque clearing ecosystem.

i. Cheque Truncation System (CTS)

The Cheque Truncation System (CTS), also known as the Image-based Clearing System (ICS), is a project initiated by the Reserve Bank of India (RBI) in 2010 to speed up cheque clearing in India. It essentially eliminates the physical movement of cheques except in specific situations. CTS was initially implemented in phases across different regions in India and became mandatory for all banks nationwide in 2021 and only CTS-2010 standards-compliant instruments can be presented for clearing.

During July 2016, Meghalaya Rural Bank was admitted as a Sub-member (Type-II) of YES BankLtd. to the Bankers Clearing House at Chennai and was allowed to participate in CTS Clearing.Shillong Branch was the first Service Branch for CTS clearing operations. The Bank has since extended its CTS operations with Nongpoh, Nongstoin, Tura and Jowai being designated as additional Service Branches. Going ahead,

(i) the Bank would endeavour to further extend or rationalize the CTS operations based on requirement, staff movement & deployment, costs etc.

(ii) as the clearing processes exposes the Bank to substantial financial risks updated operational guidelines in line with latest RBI / NPCI notifications shall be issued from time to time,

(iii) and relevant training / handholding shall be given to staff handling the clearing operations.

1. CTS Process Flow

(i) The presenting bank (or its branch) captures data (from the MICR band) and images of a cheque using their internal Capture System (scanner or core banking application).

(ii) The data and captured images are transmitted to the central processing location (Clearing House) for onward transmission to the paying bank (destination or drawee bank).

(iii) End-to-end Public Key Infrastructure (PKI) ensures security, safety, and non-repudiation of data/images.

(iv) Participating banks use either the Clearing House Interface (CHI) or Data Exchange Module (DEM) to connect and transmit data/images securely to the Centralized Clearing House (CCH).

(v) The CCH processes data, arrives at settlement, and routes images and requisite data to the paying banks (presentation clearing).

(vi) Paying banks receive images and data for further processing (return clearing).

(vii) The entire essence of CTS lies in using images of cheques instead of physical cheques for payment processing.

3.1.1.2**. CTS Continuous Clearing Process Flow**

(i) Single presentation session with continuous delivery: There shall be a single continuous presentation session from 10 AM to 4 PM. Cheques received by the branches would be scanned and immediately pushed to the Centralised Clearing House (CCH) operated by NPCI during the presentation session. The CCH will in turn release the cheque images as soon as they are received, to the drawee banks on a continuous basis. There shall not be any settlement for the presentation session.

(ii) Continuous inward processing and confirmation by drawee banks: The return session shall be open from the start of presentation session (10 AM) and close 3 hours (tentatively) after

the closure of presentation session (7 PM). For every cheque presented, the drawee bank would provide a positive confirmation (for honoured cheques) or negative confirmation (for dishonoured cheques). Processing by drawee banks is to be done continuously throughout the day and on a near real time basis as soon as cheque images are received. Information of positive/negative confirmation would be pushed by the drawee banks to the CCH continuously, immediately after processing.

(iii) Time available for inward processing: Cheques presented on a drawee bank have to be confirmed (positive / negative) by them latest in T+3 clear hours (tentatively) otherwise they will be considered as deemed approved. For example, the cheques received by drawee banks between 10:00 AM and 11:00 AM will have to be confirmed positively or negatively by them by 2:00 PM (3 hours from 11:00 AM). Cheques for which confirmation is not provided by the drawee bank in the prescribed 3 hours shall be treated as deemed approved and included for settlement at 2:00 PM.

(iv) Settlement on realisation: No accounting entries (settlement) will be posted at the time of presentation. Settlement would be arrived at the end of hourly settlement cycles till the end of return session, based on the positive confirmations received from drawee banks as well as for cheques considered deemed approved. No accounting entries shall be passed for negative confirmed cheques. This would ensure that banks do not need to arrange funds for the cheques that may be returned.

(v) Payment to customers: After settlement is effected for a settlement cycle in the books of RBI, CCH shall provide cheque wise status of positive/negative confirmation and deemed approval to the presenting banks. The CCH shall also provide information on the cheques settled in the settlement cycle to the respective drawee and presenting banks. The presenting banks shall process the same to release the payment to the customers immediately.

ii. Risks in paper based payment system

Use of paper-based instruments (like cheques, drafts, and the like) still accounts for nearly 60% of the volume of total non-cash transactions in the country. In value terms, the share is presently around 11%. However, paper-based payment systems come with several inherent risks and the Bank shall endeavour to mitigate these risks.

i. **Fraud**:
   a. **Counterfeiting**: Cheques and DDs can be physically forged, making it difficult to identify and prevent fraudulent transactions.
   b. **Alteration**: Information on paper documents like amount or payee can be tampered with, facilitating unauthorized access to funds.
   c. **Phishing**: Scammers might trick individuals into sharing sensitive cheque or DD information (account numbers, etc.) through phishing emails or phone calls, leading to fraudulent use.

ii. **Loss or Theft:**
   a. Physical documents are prone to being lost or stolen. This can result in unauthorized access to funds if they fall into the wrong hands.
   b. Recovery is often difficult or impossible compared to some electronic transactions that can be reversed or stopped.

iii. **Delays**
   a. **Clearing process is slower**: Cheques and DDs require physical transportation and verification, leading to delays in accessing funds
   b. **Uncertainty**: Sender and receiver may not have real-time confirmation about the status of the transaction until the clearing process is complete.

iv. **Security Concerns**:
    i. **Paper documents are vulnerable to damage:** Damage due to fire, water, or wear and tear can render the document unusable or difficult to verify.
    ii. **Storage and maintenance:** Secure storage and proper record-keeping are crucial to prevent unauthorized access or loss of information.

v. **Inefficiency:**
    a. **Manual processing:** Cheque and DD processing involve manual verification and record-keeping, making them less efficient and more prone to errors compared to automated electronic systems.
    b. **Limited accessibility:** Paper-based systems can be inconvenient for individuals without easy access to physical branches or banking services.

iii. Managing Risksin paper based payment system

Paper-based payment systems like all other Banking systems require robust risk management strategies to protect individuals and institutions from various threats. Some of the key approaches to mitigating risks are as hereunder:

i. **Secure Document Handling**:
    a. **Physical Security**: Implement strong physical security measures for storage facilities like access controls, surveillance cameras, and tamper-evident seals.
    b. **Transportation Security**: Utilize secure transportation methods with proper tracking and insurance for valuable documents in transit.
    c. **Document Security**: Employ security features on paper documents like watermarks, security threads, and microprinting to deter counterfeiting.
    d. **Document Disposal**: Establish secure disposal procedures for expired or unused documents to prevent unauthorized access and misuse.

ii. **Internal Controls and Procedures**:
    a. **Segregation of Duties**: Implement a clear separation of duties in handling checks and other paper-based instruments. This prevents single points of failure and reduces opportunities for manipulation.
    b. **Authorization and Approval Processes**: Establish clear authorization and approval processes for issuing and processing paper-based payments. This ensures proper oversight and minimizes unauthorized activity.
    c. **Reconciliation and Auditing**: Conduct regular reconciliations between physical documents and their digital records to identify discrepancies and potential irregularities.
    d. **Employee Training**: Train employees handling paper-based payments on security protocols, fraud awareness, and proper handling procedures.

iii. **Risk Management Framework**:
    a. **Identify potential risks**: Regularly assess and identify potential risks associated with paper-based payments, such as theft, forgery, alteration, and loss.
    b. **Develop mitigation strategies**: Implement appropriate mitigation strategies such as those mentioned above based on the identified risks.
    c. **Monitor and review**: Continuously monitor the effectiveness of the implemented controls and procedures, and adapt them as needed based on evolving risks and new threats.

iv. **Technological Integration**:
    a. **Hybrid Systems**: Consider integrating paper-based systems with digital tools like document scanning and secure electronic document management systems. This can

enhance security and improve efficiency while maintaining some paper-based features.

b. **Fraud Detection Systems**: Utilize technology-based solutions like image recognition and anomaly detection to identify potential frauds in paper-based documents.

v. **Collaboration and Awareness**:

a. **Law Enforcement Cooperation**: Maintain open communication and collaboration with law enforcement agencies regarding fraudulent activities and potential criminal cases.

b. **Public Awareness Campaigns**: Conduct public awareness campaigns to educate individuals and businesses on how to identify and prevent common risks associated with paper-based payments.

Implementing a combination of these strategies can significantly mitigate risks in paper-based payment systems. However, it's important to note that complete elimination of risk is not always possible. By employing a comprehensive and adaptable approach, the Bank and its customers can minimize vulnerabilities and maintain a relatively secure environment for paper-based transactions.

b. Non-Paper based Payment System

The RBI had taken a number initiativesin the mid-eighties and early-nineties focused on technology-based solutions for the improvement of the payment and settlement systems infrastructure. This led to the introduction of new payment products by taking advantage of the technological advancements in banks. Non-paper based transactions also referred to as electronic transaction have become increasingly popular and play a dominant role in the financial landscape.

i. National Electronic Funds Transfer (NEFT)

NEFT is a mode of money transfer that enables one-to-one payments within India and is owned, operated, and developed by The Reserve Bank of India (RBI). Through this facility, money can betransferred from one account to another in a secure, convenient, and cost-effective way. NEFT transactions are processed in batches and settled in half-hourly intervals throughout the day. NEFT transactions can be initiated through internet banking, mobile banking, or by visiting the bank branch. NEFT also facilitates the Indo-Nepal Remittance Facility Scheme, which is a one-way cross-border transfer of funds from India to Nepal.

Meghalaya Rural Bank acts as sub-member in the NEFT and RTGS system and maintains a settlement account with SBI for settlement of payment obligations arising from the funds transfer executed under the NEFT system.

1. Transaction Flow for NEFT

The settlement process for NEFT for sub-member banks is similar to that for direct member banks, except that the sub-member banks have to route their transactions through their sponsor banks, in this case SBI. The sponsor bank acts as an intermediary between the sub-member banks and the RBI. The steps are as follows:

(i) **Initiation**: The sub-member bank initiates the NEFT transfer through its own internet banking or mobile app, or through its branch, providing the beneficiary's bank account details, IFS Code and contact number.

(ii) **Batch Processing**: The sub-member bank sends the transaction to its sponsor bank, which includes it in the next available batch based on the time of receipt.

(iii) **Batch Submission**: The sponsor bank submits the batch containing the sub-member bank's transaction to the RBI, along with other transactions from its own customers and other sub-member banks.

(iv) **RBI Processing**: RBI receives the batch from the sponsor bank and processes it after verifying the submitted details of each transaction, including the beneficiary's bank and account information.

(v) **Fund Transfer**: After RBI processes the batch, it sends the settlement files to the beneficiary's bank. The funds are then credited to the beneficiary's account after the settlement files are received by the beneficiary's bank, which happens either on the same day or next morning depending on the transaction time.

(vi) **Confirmation**: The sub-member bank, the sponsor bank, and the beneficiary bank receive a confirmation message or email from the RBI after the fund transfer is completed. The sub-member bank and the sponsor bank also receive a settlement advice from the RBI, which shows the net position of their accounts with the RBI. The sub-member bank and the beneficiary bank also send confirmation messages or emails to their respective customers.

2. Settlement Process for unsuccessful transactions (NEFT)

(i) In case of Outgoing Transactions (The bank is at remitter end)

Issue: The bank's customer account has been debited but fund is not credited to beneficiary account.

If the bank receives a "Return Code" from RBI, then the system will the reverse the fund to remitter account instantly. In case of system failure, after reconciliation the entries are refunded within T+3 days.

(ii) In case of Incoming Transactions (The bank is at beneficiary end)

Issue: Other bank customers perform NEFT transaction and remitter account is debited, but the amount is not credited at beneficiary account (Meghalaya Rural Bank).

For all incoming NEFT transaction, if the settlement is done at SBI but beneficiary account is not credited, then the bank responsibly credits the same to respective account after reconciliation. And if settlement is not done, then the responsibility lies with the remitter bank to reverse the amount to their remitter.

ii. Real-Time Gross Settlement (RTGS)

The Real-Time Gross Settlement (RTGS) system is a specialized electronic funds transfer system. RTGS transactions are processed individually the moment they are received, resulting in near-instantaneous transfers.This makes it ideal for:

- High-value transactions (typically exceeding ₹2 lakh)
- Time-sensitive transactions requiring immediate settlement, like urgent payments or investments.

Meghalaya Rural Bank acts as sub member in the RTGS system and maintains a settlement account with SBI for settlement of payment obligations arising under the funds transfer executed under the RTGS system.As the bank is only a sub member, R42 messages are not directly credited to respective accounts. For all R42 messages, the bank centrally processes it to the beneficiary accounts in same day.

1. Transaction Flowfor RTGS

The settlement process for RTGS involves several key players, including the Reserve Bank of India (RBI), member / sponsor Bank (SBI), and Meghalaya Rural Bank as asub-member bank.

(i) **Transaction Initiation**: A customer of Meghalaya Rural Bank initiates a high-value (typically exceeding ₹2 lakh) and time-sensitive fund transfer through their Bank's online portal, MRB Mobile Banking App, or by visiting a branch.

(ii) **Sub-member Bank to Member (Sponsor) Bank**: Meghalaya Rural Bank cannot directly participate in the RTGS system therefore, it forwards the transfer request along with the necessary details (beneficiary name, account number, IFSC code, amount, etc.) to its sponsor bank, State Bank of India (SBI) acts.

(iii) **Member Bank Processing**:The member bank (SBI) verifies the sub-member bank's authorization and the customer's account details.It then transmits the verified transfer request to the RTGS system operated by the RBI.

(iv) **RTGS System Processing**:The RTGS system validates the transaction against pre-defined parameters and checks for sufficient funds in the sender's account.If valid, the system immediately debits the sender's account held by the member bank and credits the beneficiary's account held by another member bank in real-time.

(v) **Settlement and Communication**:RBI settles the transaction by transferring the equivalent funds between the accounts of the member banks involved.The RTGS system sends confirmation messages to both the sub-member bank and the member bank, informing them of the successful or unsuccessful transaction.Finally, the sub-member bank and member bank notify their respective customers about the transaction status.

2. Settlement Process for unsuccessful transactions

(i) In case of Outgoing Transactions (The bank is at remitter end)

Issue: The bank's customer account has been debited in RTGS transaction but fund is not credited to beneficiary account.

a. If the settlement for the transaction is not done, it is the bank's responsibility to reverse the transaction and credit remitter account on the same day.
b. And if settlement for the transaction is done, responsibility lies with the beneficiary bank to credit the beneficiary or return the transaction to Meghalaya Rural Bank (remitter bank).

(ii) In case of Incoming Transactions: (The bank is at beneficiary end)

Issue: Other bank customers perform RTGS transaction and remitter account is debited, but the fund is not credited at beneficiary account

a. For all incoming RTGS transaction, if settlement is done at SBI but beneficiary account is not credited, then the bank responsibly credits the same to the respective account on the same day.
b. If settlement is not done, then responsibility lies with the remitter bank to reverse the amount to their remitter.

iii. Automated Teller Machine (ATM)

An ATM is a computerised machine that provides customers of banks the facility of accessing their accounts for dispensing cash and to carry out other financial & non-financial transactions without the need to visit the bank branch.

Meghalaya Rural Bank installed its first Desktop ATM at its Shillong Branch during August 2016. The installation was on OPEX model through C-Edge Technologies Pvt. Ltd, Mumbai, with the

equipment (GALAXY FA10 ATM) being supplied by M/S Leoprime Payments Solutions Pvt. Ltd., Chennai. In the recent years the Bank has explored the options of CAPEX Model and White Lable ATMs

The Bank isa sub-member through State Bank of India in the NPCI NFS ATM network and maintains a settlement account with SBI, Konkan Bhavan for settlement of payment obligations. Our customers can perform financial and non-financial transactions on all NPCI member bank ATMs as OFFUS and on SBI ATM network as ONUS transactions.

The types of ATM transactions available to our customers:

(i) Non-Financial Transaction
   a. PNC: Pin Change
   b. INQ: Balance Enquiry
   c. MSP: Mini Statement Request

(ii) Financial Transaction
   a. WDL: Withdrawal
   b. Deposit: (To be Implemented)
   c. Transfer: (To beImplemented)

1. Transaction Flow for ATMs (ON-US)

An on-us transaction takes place when a customer uses an Automated Teller Machine (ATM) of their own bank i.e., Meghalaya Rural Bank. Typical transaction flow is as hereunder:

(i) **Customer Initiates Transaction**: The customer visits an ATM operated by Meghalaya Rural Bank. They insert their ATM/debit card (issued by Meghalaya Rural Bank) and initiate the desired transaction (withdrawal, balance inquiry, etc.).

(ii) **Sub-Member Bank and Member Bank**: The systems (CBS, ATM Switch) of Meghalaya Rural Bank verifies the customer's details and available account balance (Authorization Check). Since the ATM belongs toMeghalaya Rural Bank or the sponsor bank, authorization can often be processed directly within the sponsoring bank's system without involving the National Financial Switch (NFS) – (Direct Approval)

(iii) **Approval and Dispense/Display:**The sub-member bank (MRB) validates that the customer's account has sufficient funds for the transaction. (Fund Validation).Since the transaction happens entirely within the sponsor bank's network, communication between different banks is not needed.After successful validation, a signal is sent back to the ATM to proceed, resulting in cash dispensing and/or displaying the appropriate information to the customer.

(iv) **Reporting and Settlement**:The sub-member bank (MRB) updates its internal records, reflecting the transaction within the bank's customer account.Because the transaction occurs within a single bank's network, data exchange between multiple banks and the NFS is minimized.

2. Transaction Flow for ATMs (OFF-US)

ATM transaction flow when a customer of another bank uses an ATM belonging to Meghalaya Rural Bankwhich is a sub-member of the National Payments Corporation of India's National Financial Switch (NPCI NFS):

(i) **Card Insertion and Selection:** A Customer of another Bank inserts their ATM/Debit card (issued by a different bank) into the ATM of MRB. The customer selects the desired transaction (e.g., withdrawal, balance inquiry).

(ii) **Sub-member Bank (MRB):** MRB's ATM system (Switch) reads the ATM card information and identifies that the card belongs to another bank. MRB forwards the transaction request, along with customer details, to its sponsor bank (SBI), which is part of the NFS network.

(iii) **Member Bankand NFS**: MRB's sponsor bank receives the transaction request and checks if the Bank issuing the Card to the customer is also a member of the NFS. Once verified that the other Bank is a member, the sponsor bank routes the transaction request to the NFS for processing.

(iv) **NFS Processing and Verification:** The NFS acts as the central hub, connecting banks and facilitating interbank transactions.The NFS identifies the customer's issuing bank and routes the transaction request. The issuing bank verifies the customer's credentials (PIN, etc.) and checks if they have sufficient funds for the transaction.

(v) **Approval or Decline:** If the verification is successful and the customer has sufficient funds, the issuer bank approves the transaction and sends the approval back to the NFS.If the card is invalid, there are insufficient funds, or the transaction violates limits, the issuer bank declines the request. The NFS relays this information MRB's sponsor bank.

(vi) **Cash Dispense or Updates:** The NFS relays the approval/decline decision back to MRB's sponsor bank and then to MRB's ATM.If approved: MRB's ATM dispenses the requested cash or displays the relevant information (e.g., balance).If declined: The ATM displays an error message.

(vii) **Settlement:** The Card issuing Bank (other bank) pays an interchange fee to MRB (indirectly via its sponsor bank) for using the ATM.The Reserve Bank of India (RBI) facilitates the settlement process by adjusting the balances between issuer (customer's bank), MRB (via its sponsor bank), and potentially the beneficiary bank.

3. Settlement Process for unsuccessful ATM transactions

(i) In case of Issuer Transactions

Issue: Customer Account has been debited but cash is not dispensed by the machine

a. If the transaction is failed at the bank's switch/CBS, it is the bank's responsibility to ensure that the transaction is reversed within T+1 timeline.
b. Sometimes an ATM transaction may be successful at our bank switch and also NPCI receives success response but the transaction might not have been successful at the Acquirer Bank end due to network or hardware fault.
c. In this case, if the Acquirer Bank Credit Adjusts the amount, our bank ensures the same is credited to our customer within T+1 timeline.
d. And if the Acquirer Bank does not adjust the amount, customers always have the option to raise dispute/complaint for the ATM transaction by visiting any of our branches. On receiving the complaint, our Bank processes the complaints as:
    - For non SBI ATM transactions – Chargeback is raised against Acquirer Bank in the NFS portal, which has to be responded by them within T+5 timeline. If the chargeback is accepted, the disputed amount is promptly credited to customer account and in case of re-presentment, the customer is accordingly
    - For SBI ATM transactions – Chargeback is raised against SBI for the transaction which if accepted by SBI, the disputed amount is promptly credited to customer account and in case of re- presentment, the customer is accordingly informed.

(ii) In case of Acquirer Transactions

Issue: Customers of other banks transacts at our ATM/Micro ATM machines. Their accounts get debited but cash could not be dispensed by the machine.

a. Bank ensures due diligence in daily reconciling the transactions done at the ATM/ Micro ATM machines. In case of excess cash at the bank's end, the bank pro-actively returns the amount as Credit Adjustments through NFS BCS portal (in case of non SBI card holders) or communicates about the excess cash to SBI (in case of SBI card holders) so that SBI can adjust the amount during settlement.
b. Apart from above case, if the bank (as an Acquirer Bank) receives any customer complaints for any ATM / Micro ATM transactions, the bank responds to it on regular basis within the prescribed timeline of T+5 days.

(iii) Non-Financial Disputes relating to ATM Debit Cards

Issue: Hot listing of Debit card / PIN Reset

a. In case customer has lost the debit card, customer has to responsibly raise the concern with bank through any of the modes – Toll free customer support, or visit any of the bank branches, to hotlist the card to prevent its misuse. Customer with MRB Mobile Banking facility may also hotlist the card through the App.On receiving the concern, the bank then immediately initiates the steps for hot listing the card, which could take upto 24 hours.
b. In case customer has forgot his PIN, new PIN can be generated by requesting new PIN by at the branch or through MRB Mobile Banking.

iv. Point of Sale (PoS) and Electronic Commerce (ECom)

Point of Sale (PoS)are electronic systems used by retail businesses to process customer payments at the checkout counter. Customers can use various methods like debit cards, credit cards, or contactless payments through PoS systems. While some PoS systems offer cash withdrawal options, it's not their primary function.

Electronic Commerce (ECom), also commonly known as online shopping refers to the process of buying and selling goods or services over the internet. Customers can use various payment methods on e-commerce platforms, including debit cards, credit cards, and online payment services.

Meghalaya Rural Bank was certified as an Issuer Bank on the RUPAY GLOBAL CLEARING & SETTLEMENT SYSTEM (RGCS) during January 2015. This enabled customers of Meghalaya Rural Bank issued with RuPay Debit Cards for making a financial transaction throughPoS (ATM Debit card-swipe) terminals and also for online ecommerce transaction (OTP based) which went live on 11.01.2017. The Bank is sub member on NPCI Rupay-PoS and NPCI Rupay-E-com network and maintains a settlement account with SBI for settlement of payment obligations.

1. Transaction Flow for Point of Sale (PoS)

(i) **Customer Initiates Transaction**: A customer of a sub-member bank (which is part of the RuPay network) initiates a PoS transaction by swiping their RuPay debit or credit card at a Point of Sale (PoS) terminal.

(ii) **Transaction Details Capture**: The PoS terminal captures the transaction details, including the purchase amount and card information. These details are sent to the acquiring bank, which manages the PoS terminal.

(iii) **Acquiring Bank Processing**: The acquiring bank processes the transaction request. It verifies the card details, checks for available funds, and ensures security compliance.

(iv) **NPCI Involvement**: The acquiring bank sends the transaction details to the National Payments Corporation of India (NPCI) for further processing. NPCI acts as an intermediary in the transaction flow.

(v) **Verification and Settlement**: NPCI verifies the transaction details: It identifies the issuing bank (the customer's bank) and the acquiring bank (the merchant's bank). It ensures that the transaction is valid and secure. Funds settlement occurs between the issuing bank and the acquiring bank: The acquiring bank credits the merchant's account with the transaction amount. Simultaneously, the issuing bank debits the customer's account for the same amount. Settlement happens within a predefined time frame.

(vi) **Settlement Reports and Dispute Resolution**: Settlement reports are available through the RuPay Business Correspondent Services (BCS) Portal. Banks can access these reports monthly, organized by date and cycle. In case of disputes or discrepancies, banks refer to the RuPay Dispute Manual available on the portal.

2. Transaction Flow for E-commerce (ECOM) Transaction

(i) **Customer Initiates E-commerce Transaction:**A customer of MRB (which is part of the RuPay network as sub-member) initiates an E-commerce transaction online. This could involve purchasing goods or services from an online merchant.

(ii) **Transaction Details and Authorization:**The customer selects RuPayDebit Card as the payment option during the online checkout process.The transaction details, including the purchase amount and card information, are securely transmitted to the merchant's payment gateway.

(iii) **Merchant's Payment Gateway Interaction:**The merchant's payment gateway communicates with the acquiring bank (the bank that manages the merchant's online transactions).The acquiring bank verifies the transaction details, performs risk checks, and ensures security compliance.

(iv) **OTP Generation and Delivery:**The acquiring bank requests an OTP from the issuing bank (the customer's bank - MRB).The issuing bank (MRB) generates a unique OTP and sends it to the customer's registered mobile number.

(v) **Customer Enters OTP:**The customer receives the OTP and enters it on the merchant's website or app.The OTP serves as an additional layer of security to authorize the transaction.

(vi) **NPCI Involvement**:The acquiring bank sends the transaction details, along with the OTP, to the National Payments Corporation of India (NPCI) for further processing.NPCI acts as an intermediary in the transaction flow.

(vii) **Verification and Settlement:**

a. **NPCI verifies the transaction details:**It identifies the issuing bank (the customer's bank - MRB) and the acquiring bank (the merchant's bank).It ensures that the transaction is valid and secure.

b. **Funds settlement occurs between the issuing bank and the acquiring bank**:The acquiring bank receives the transaction amount from NPCI.Simultaneously, the issuing bank debits the customer's account for the same amount.

(viii) **Confirmation and Completion**:The merchant's payment gateway receives confirmation from the acquiring bank.The E-commerce transaction is completed, and the customer receives an order confirmation.

(ix) **Settlement Reports and Dispute Resolution**:Settlement reports are available through the RuPay Business Correspondent Services (BCS) Portal.Bank can access these reports

monthly, organized by date and cycle.In case of disputes or discrepancies, bank refers to the RuPay Dispute Manual available on the portal.

3. Settlement Process for unsuccessful PoS&Ecomtransactions

(i) In case of Issuer Transactions:

Issue 1: Customer makes the payment and his account is debited but merchant / online portal does not acknowledge the payment.

a. If the transaction is failed at the bank's switch/CBS, it is the bank's responsibility to ensure that the transaction is reversed within T+1 timeline.
b. Sometimes a PoS/E-commerce transaction may be successful at our bank switch and also NPCI receives success response but the transaction might not have been successful at the Merchant end due to technical or network issues.
c. In this case, if the Acquirer Bank Credit Adjusts the amount, our bank ensures the same is credited to our customer within T+1 timeline.
d. And if the Acquirer Bank does not adjust the amount, customers always have the option to raise dispute/complaint for the transaction though modes like raising the issue in our online complaint portal or by visiting any of our branches. On receiving the complaint, the bank raises Chargeback against Acquirer Bank in the NPCI portal. If the chargeback is accepted, the disputed amount is promptly credited to customer account and in case of re-presentment, the customer is accordingly informed.

Issue 2: Dispute on Refund or Cash-backs on PoS and E-commerce Transactions

a. Certain PoS and Ecommerce Transactions offer various cash-back offers to customers. The bank responsibly credits the amount to customer account within T+1 timeline from the date it has been received by the bank.
b. In some cases, customer disputes for cash-backs even when the bank has not received any refunds/cash-backs. In such case customers can raise the concern by visiting any of our branches. The bank would accordingly raise Chargeback against the Acquirer Bank in the NPCI portal. As soon as the chargeback is accepted, the amount would be credited to customer account and in case of rejection, the same would be communicated to respective customer.

4. Fraud Transactions over PoS and E-commerce network

(i) The bank's E-commerce facility is OTP based and PoS facility is PIN based. Hence customers must strictly observe that their PIN or OTP (sent to their registered mobile) is never shared with anyone.

(ii) For fraud reporting, customer can reach the bank through modes including toll-free number or by visiting any of the branches. Upon receiving the incident, the bank immediately raises the Chargeback (for fraud transactions) in the NPCI portal. In case the Acquirer bank accepts the chargeback, the amount can be retrieved back to customer account; otherwise the customer is accordingly communicated.

v. NPCI - NATIONAL AUTOMATED CLEARING HOUSE (NPCI-NACH)

National Automated Clearing House (NACH) is an electronic mode of payment / receipt for transactions that are repetitive and periodic in nature and operated by National Payments Corporation of India (NPCI). It is used for making bulk payment of amounts towards distribution of dividend, interest, salary, pension, direct benefits transfer (DBT) of various government schemes etc., or for bulk collection of amounts towards loan installment repayments, periodic investments in mutual funds, insurance premium etc. Essentially, NACH facilitates bulk transfer of monies from one bank account tomany bank accounts or vice versa.

NACH Debit - Initiated by an organization (e.g., company, government) to debit funds from individual bank accounts, typically with their prior consent (e.g., for recurring payments like loans EMI).

NACH Credit: Initiated by an organization to credit funds into individual bank accounts (e.g., for salary, dividend payouts).

On 30-01-2015 NPCI gave confirmation for going live on the National Automated Clearing House (NACH) as a sub-member Bank and the Bank maintains a settlement account with SBI for settlement of payment obligations.

1. Settlement Process for NACH Inward mandates

The bank receives mandates from all NACH enabled participants in the NPCI ACH portal. The bank processes these inward mandates within the timeline as set by NPCI (which is T+5 days).

2. Settlement Process for NACH Outward mandates

The mandates are centrally processed and uploaded to NPCI portal for acceptance at Head Office.The response status of the mandates are then updated and viewed at Head Office on a regular basis to verify whether the mandates are Accepted / Rejected by Destination bank.

vi. Aadhaar Enabled Payment System (AePS)

AePS is a bank led model which allows online interoperable financial inclusion transaction at Micro ATMs and POS facilitated through the Bank's business correspondent or Merchant using Aadhaar authentication. The Banking services Offered by AePS are:

(i) Aadhaar to Aadhaar Fund Transfer
(ii) Cash Withdrawal
(iii) BHIM Aadhaar Pay Authentication
(iv) Cash Deposit
(v) Balance Enquiry
(vi) Mini Statement

The only inputs required for a customer to do a transaction under this scenario are Bank Name, Aadhaar Number and Fingerprint captured during enrollment.

Meghalaya Rural Bank went live on NPCI AEPS during April 2015 as a sub-member Bank and maintains a settlement account with SBI for settlement of payment obligations.Meghalaya Rural Bank acts as both Acquirer and Issuer Bank facilitating financial and non-financial based transaction through AEPS.

1. Transaction Flow for AePS:

(i) **User Initiation**:The user visits a banking correspondent with a micro ATM or merchant with a biometric enabled PoS device. They provide their bank details and Aadhaar number.

(ii) **Transaction Selection**:The user selects the type of transaction they want to perform (e.g., cash withdrawal, balance inquiry, etc.).

(iii) **Biometric Verification**:The user provides biometric verification through either their fingerprint or iris scan.This step ensures the authenticity of the transaction.

(iv) **Transaction Execution**:The transaction is executed at the micro ATM or point of sale (POS) terminal.The user receives a transaction receipt as proof of the completed transaction.

2. Settlement Process for AEPS unsuccessful transactions

(i) **In case of Issuer Transactions**

Issue 1:AEPS withdrawal transaction – The bank's customer Account has been debited but physical cash is not received by customer from the BC / CSP.

a. If the transaction is failed at our switch/CBS, it is the bank's responsibility to ensure that the transaction is reversed within T+1 timeline.
b. Sometimes an AEPS transaction may be successful at our bank switch and also NPCI receives success response but the transaction might not have been successful at the Acquirer Bank end due to network or other technical issue.
c. In this case, if the Acquirer Bank Credit Adjusts the amount, the bank ensures the same is credited to our customer within T+1 timeline.
d. And if the Acquirer Bank does not adjust the amount, customers always have the option to raise dispute by visiting any of our branches. On receiving the complaint, the bank raises Chargeback against Acquirer Bank in the NPCI portal, which has to be responded by them within T+5 timeline. If the chargeback is accepted, the disputed amount is promptly credited to customer account and in case of re-presentment, the customer is accordingly informed.

Issue 2: AEPS Fund Transfer transaction - Customer of other banks performs AEPS based Fund transfer transaction at their banks' BC / CSP to credit beneficiary account (in Meghalaya Rural Bank) but the beneficiary account is not credited.

a. In such case of unsuccessful AEPS Fund Transfer transactions, the Bank (In Meghalaya Rural Bank) raises "Debit Adjustment" within T+3 days timeline for all valid beneficiary accounts and also manually credits the beneficiary account.

(ii) **In case of Acquirer Transactions**

Issue 1: AEPS withdrawal transaction - Customers of other banks transacts at the bank's CSP centers. Their accounts get debited but physical cash is not provided by CSP due to network or technical issues.

a. The Bank ensures due diligence in daily reconciling the transactions done by AEPS mode. In case of excess cash at the bank's end, in situation as mentioned above, the bank pro-actively returns the amount as Credit Adjustments through NPCI portal.

b. Apart from above case, if the bank (as an Acquirer Bank) receives any customer complaints for any AEPS based withdrawal transactions, the bank responds to it on regular basis.

Issue 2: AEPS Fund Transfer transaction - Customer of the bank performs AEPS based Fund transfer transaction at the banks' CSP center but the beneficiary account is not credited.

a. In case of unsuccessful AEPS Fund Transfer transactions, as per NPCI guidelines, the Beneficiary Bank can raise "Debit Adjustment" within T+3 days timeline. Hence, the failed amount has to be parked in parking account as per the prescribed timeline. Provided the debit adjustment is not raised by beneficiary bank, the Acquirer bank (Meghalaya Rural Bank) pro- actively reverses the transaction to remitter account.

(iii) **Fraud AEPS transactions:**

Issue: Fraud AEPS transaction done on the bank's customer accounts

a. All fraudulent AEPS transactions has to be reported by customer to bank through modes including online complaint portal or by visiting any of the branches. Upon receiving the incident, the bank immediately raises the Chargeback (for fraud transactions) in the NPCI portal. In case the Beneficiary bank accepts the chargeback, the amount can be retrieved back to customer account; otherwise the customer is accordingly communicated.

vii. Immediate Payment Service (IMPS)

IMPS provides robust & real time fund transfer which offers an instant, 24X7, interbank electronic fund transfer service. Meghalaya Rural Bank facilitates IMPS through channels like Mobile Banking and CBS using Account number and IFSC code (P2A). This facility is provided by NPCI through its existing NFS switch.

The Bank went Live for Immediate Payment System (IMPS) on April 2016 as a sub-member and maintains a settlement account with SBI for settlement of payment obligations.

1. Process flow for IMPS transactions

(i) **Registration**

a. To use IMPS, a customer needs to register for mobile banking or internet banking services provided by their bank.
b. However, the customer may also approach their home branch to initiate an IMPS funds transfer through CBS
c. If customer is using Mobile Banking / Internet Bankingthey may generate a Mobile Money Identifier (MMID) and a mobile banking personal identification number (MPIN) are generated.

(ii) **Transaction Initiation:**

a. Customer can choose the desired channel (mobile app or internet banking) and log in with their credentials.
b. The following details of the beneficiary may be entered:
    - Bank account number
    - Indian Financial System Code (IFSC)
    - Aadhaar number (optional)
    - MMID and mobile number (if available)
    - Amount to be transferred.

(iii) **Transaction Authorization**:

a. The transaction details are sent to the IMPS switch (managed by NPCI).
b. The switch validates the user's identity and checks the available balance in the sender's account.
c. Both the sender and receiver receive confirmation of credit and debit, respectively.

(iv) **Settlement Process:**

a. The IMPS switch accumulates authorized transactions throughout the day.
b. During non-business hours, the switch initiates the settlement process.
c. Interbank coordination occurs to transfer the total transaction amount from the remitter bank to the user's bank.
d. The merchant's bank updates the merchant's account, and the user's bank debits the user's account.

2. Settlement Process for unsuccessful transactions

(i) **Transactions where the bank is at Remitter end**

Issue: The bank customers perform IMPS transaction and remitter account is debited, but the amount is not credited in the beneficiary account.

a. If the transaction is failed / Timed-Out at the bank's switch/CBS, it is the bank's responsibility to ensure that the transaction is reversed within T+1 timeline.
b. Sometimes an IMPS transaction may be successful at the bank's (Acquirer) end but Timed-Out at the Beneficiary end. In this case, the Beneficiary Bank could credit the beneficiary account manually or create Return Adjustment in the IMPS BCS portal in accordance with NPCI guidelines.
c. If the amount is Returned, the bank credits it to the remitter account within T+1 day timeline.
d. In case the beneficiary account is not credited, chargeback is raised for the same, which upon acceptance by beneficiary bank; the amount would be credited to remitter customer account.

(ii) **Transactions where the bank is at Beneficiary end**

Issue: Other bank customers perform IMPS transaction and remitter account is debited, but the amount is not credited at beneficiary account.

a. In accordance with the instructions provided by NPCI time-to-time, the bank daily processes the Time-Out reports provided by NPCI. Accordingly all the Timed out transactions which have not been credited to beneficiary accounts are credited manually wherever possible and the others are "Return adjusted" to remitter bank in the IMPS BCS portal with appropriate reasons. This task is completed within T+1 day in compliance with the regulations.

(iii) **Disputes in IMPS to wrong/unintended beneficiary customer accounts:**

Issue: Bank customers carry out an IMPS transaction to unintended/wrong beneficiary accounts:

a. In such cases, customers have to immediately inform the bank through modes like raising the issue in our online complaint portal or by visiting any of our branches. The bank would accordingly raise Chargeback against the Acquirer Bank in the IMPS BCS portal. As soon as the chargeback is accepted, the amount would be credited to customer account and in case of rejection, the same would be communicated to respective customer.

(iv) **Fraud IMPS transaction related disputes:**

Issue: Fraud IMPS transaction done on the bank's customer accounts

a. For IMPS transaction via the bank's mobile banking app, OTP and mPIN validation is mandatory. Also for other IMPS enabled apps, OTP validation is mandatory. Hence customers must strictly observe that their OTP (sent to their registered mobile) or mPIN is never shared with anyone.
b. For fraud reporting, customer can reach the bank through modes including online complaint portal or by visiting any of the branches. Upon receiving the incident, the bank immediately raises the Chargeback (for fraud transactions) in the IMPS BCS portal. In case the Beneficiary bank accepts the chargeback, the amount can be retrieved back to customer account; otherwise the customer is accordingly communicated.

viii. Unified Payments Interface (UPI)

UPI is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. The UPI Virtual address provides for incremental security with the customer not required to enter the details such as Card no, Account number, IFSC etc. It provides round the clock 24*7 and 365 days immediate money transfer, Utility Bill Payments, Over the Counter Payments, Barcode (Scan and Pay) based payments etc through mobile device.

The Bank went Live for Unified Payments Interface (UPI) on January 2018 as a sub-member bank for NPCI UPI and maintains a settlement account with SBI for settlement of payment obligations.

1. Process flow for UPI transactions

(i) Initiation:

a. The sender initiates the transaction on theirmobile UPI app. They can choose from various methods to identify the recipient:
   - UPI ID: The recipient's unique virtual payment address (VPA) is entered.
   - QR Code: The recipient's QR code displayed in their UPI app or at merchant locations can be scanned.
   - Mobile Number & Bank Account (limited use): In some cases, customer may be able to use the recipient's mobile number linked to their bank account (along with IFSC code if required).
b. The customer enter the transfer amount.
c. If the customer haslinked multiple accounts, the correct account needs to be selected.

(ii) Authentication & Processing:

a. A confirmation screen summarizing the transaction details (recipient's UPI ID/name, amount, debit account) will be displayed.
b. UPI PIN for authorization needs to be entered by the customer. This PIN is a unique 4 or 6 digit codecreated while setting up UPI.

(iii) Response:

a. The transaction request is sent to NPCI.
b. NPCI routes the request to the recipient's bank (receiver bank) based on the provided UPI ID or linked bank details.
c. The receiver bank verifies the recipient's account and available balance.

(iv) Settlement (for Send Money):

a. Approval/Rejection: If sufficient funds exist and the transaction is approved, the receiver bank credits the transferred amount to the recipient's account.
b. Notifications: Both sender and receiver receive notifications about the transaction status (success or failure).

(v) Settlement (for Request Money):

a. Request Money: If using the "Request Money" option, the sender receives a notification with the request details.
b. Approval/Rejection: The sender reviews the request and chooses to approve or reject it.
c. Similar Flow: Upon approval, the process follows a similar flow to sending money (verification, settlement, and notifications).

2. Settlement Process for unsuccessful transactions

(i) Transactions where the bank is at Remitter end

Issue: The bank customers perform UPI transaction and remitter account is debited, but the amount is not credited in the beneficiary account.

a. If the transaction is failed / Timed-Out at the bank's switch/CBS, it is the bank's responsibility to ensure that the transaction is reversed within T+1 timeline.
b. Sometimes an UPI transaction may be successful at the bank's (Acquirer) end but Timed-Out at the Beneficiary end. In this case, the Beneficiary Bank could credit the beneficiary account manually or create Return Adjustment in the UPI URCS portal in accordance with NPCI guidelines.
c. If the amount is Returned, the bank credits it to the remitter account within T+1 day timeline.
d. In case the beneficiary account is not credited, chargeback is raised for the same, which upon acceptance by beneficiary bank; the amount would be credited to remitter customer account.

(ii) Transactions where the bank is at Beneficiary end

Issue: Other bank customers perform UPI transaction and remitter account is debited, but the amount is not credited at beneficiary account.

a. In accordance with the instructions provided by NPCI time-to-time, the bank daily processes the Time-Out reports provided by NPCI. Accordingly all the Timed out transactions which have not been credited to beneficiary accounts are credited manually wherever possible and the others are "Return adjusted" to remitter bank in the UPI URCS portal with appropriate reasons. This task is completed within T+1 day in compliance with the regulations.

(iii) Transactions done to wrong/unintended beneficiary customer accounts:

Issue: Bank customers carry out an UPI transaction to unintended/wrong beneficiary accounts:

a. In such cases, customers have to immediately inform the bank by visiting any of our branches. The bank would accordingly raise Chargeback against the Acquirer Bank in the UPI URCS portal. As soon as the chargeback is accepted, the amount would be credited to customer account and in case of rejection, the same would be communicated to respective customer.

(iv) Fraud UPI transaction related disputes:

Issue: Fraud UPI transaction done on the bank's customer accounts

a. For UPI transaction, OTP validation is mandatory. Hence customers must strictly observe that their OTP (sent to their registered mobile) is never shared with anyone.

b. For fraud reporting, customer can reach the bank through modes including online complaint portal or by visiting any of the branches. Upon receiving the incident, the bank immediately raises the Chargeback (for fraud transactions) in the UPI URCS portal. In case the Beneficiary bank accepts the chargeback, the amount can be retrieved back to customer account; otherwise the customer is accordingly communicated.

ix. Managing Risks in non-paper based payments and settlement systems

A. **Threat Landscape**

Non-paper based payments and settlement systems or electronic payments while offering numerous advantages like convenience and speed, also come with inherent risks. The following are some key areas of concern:

i. **Cyber Security Threats**:

a. **Fraud**: Malicious actors can exploit vulnerabilities in systems to steal financial information, conduct unauthorized transactions, or create fake accounts.

b. **Malware**: Malware like viruses, phishing attacks, and ransomware can disrupt operations, compromise sensitive data, and cause financial losses.

c. **Data Breaches**: Unauthorized access to sensitive user and financial data can lead to identity theft, fraud, and reputational damage.

ii. **Operational Risks:**

a. **System Outages**: Technical glitches, power outages, or cyberattacks can cause system downtime, hindering transactions and impacting businesses and individuals.

b. **Human Error**: Accidental mistakes by system operators can lead to incorrect transactions, processing errors, and financial losses.

c. **Settlement Delays**: Technical issues or disruptions can delay or even halt the settlement process, impacting the timely transfer of funds.

iii. **Systemic Risks:**

a. **Interdependence**: The interconnected nature of these systems creates a domino effect, where a failure in one part can impact the entire system and even other financial institutions.

b. **Loss of Confidence**: Security breaches, system outages, or widespread fraud can erode user trust and confidence in the entire system, potentially destabilizing financial markets.

c. **Lack of Standardization**: Inconsistency in regulations and technical standards can create vulnerabilities and hinder effective risk management.

iv. **Regulatory and Legal Challenges:**

a. **Evolving regulations**: Keeping pace with the rapid evolution of technology and the emergence of new payment methods can be challenging both for regulators as well as Banks.

b. **Consumer protection**: Ensuring adequate consumer protection mechanisms in a rapidly changing landscape can be complex and require ongoing adaptation.

c. **Cross-border transactions**: Managing risks and adhering to regulations for cross-border payments can be complex due to varying legal and regulatory frameworks in different countries.

v. **Other Potential Risks**:

a. **Financial Crime:** Non-paper based systems can be used to facilitate money laundering, terrorist financing, and other illegal activities.
b. **Privacy Concerns:** Balancing the convenience of these systems with user privacy and data protection remains an ongoing challenge.
c. **Accessibility and Inclusion:** Not everyone has access to the technology or infrastructure required to participate in non-paper based systems, potentially exacerbating existing inequalities.

Meghalaya Rural Bank takes note of these risks and they are being constantly addressed. The Bank also ensures that its various stakeholders including technology providers are sensitised to these risks. Continuous efforts are being made to improve security measures, enhance operational resilience, and establish robust regulatory frameworks to mitigate these risks and promote the safe and efficient use of non-paper based payments and settlement systems.

B. **Mitigating Risks**

Managing risks associated with non-paper based payments and settlement systems is crucial for maintaining a stable and efficient financial ecosystem within the Bank. The Bank is constantly striving to build up its **operational resilience** in the payments and settlement systems ecosystem.

Operational resilience refers to the ability of the Bank to ensure its payment and settlement systems to withstand and recover from disruptions, ensuring continuity of critical services. As payment infrastructures become more digitalized, integrated, and interdependent, their resilience becomes even more critical.

i. **Cybersecurity Measures:**

a. **Robust security infrastructure**: Implementing strong firewalls, intrusion detection systems, and data encryption to protect against unauthorized access and cyberattacks.
b. **Regular security assessments**: Conducting vulnerability assessments and penetration testing to identify and address potential weaknesses in systems.
c. **User authentication and access control**: Implementing multi-factor authentication and enforcing least privilege access controls to minimize unauthorized access.
d. **Cybersecurity awareness training**: Educating employees and users on cyber threats and best practices for safe online financial transactions.

ii. **Operational Risk Management**:

a. **Business continuity planning and disaster recovery**: Developing and testing comprehensive plans to ensure system availability and recover quickly from disruptions.
b. **Data backup and redundancy**: Regularly backing up critical data and having redundant systems in place to minimize downtime in case of failures.
c. **Operational risk assessments**: Regularly identifying and evaluating potential operational risks and implementing appropriate controls to mitigate them.
d. **Incident management and response**: Establishing processes for identifying, reporting, and responding to security incidents effectively.

iii. **Regulatory Compliance:**

a. **Staying updated on regulations:** Closely following and adhering to evolving regulations related to data protection, anti-money laundering, and cybersecurity.

b. **Compliance audits and reporting:** Regularly conducting internal audits and reporting to regulatory bodies as required.
c. **Collaborating with regulators:** Maintaining open communication and collaborating with regulatory authorities to address emerging risks and develop effective risk management frameworks.

iv. **Systemic Risk Management:**
a. **Stress testing and scenario analysis**: Regularly conducting stress tests and scenario analysis to assess the system's resilience under various stress conditions.
b. **Interconnectedness management**: Establishing communication and coordination mechanisms with other financial institutions and system operators to manage interconnectedness risks effectively.
c. **Standardization and best practices**: Collaborating with industry stakeholders to promote consistent standards and best practices for risk management across the entire ecosystem.

v. **Other Risk Mitigation Strategies:**
a. **Fraud monitoring and detection:** Implementing fraud detection systems and analytics to identify and prevent suspicious activity.
b. **Consumer education and awareness:** Raising awareness among users about potential risks associated with non-paper based systems and educating them on safe practices.
c. **Enhanced privacy controls:** Implementing user-centric privacy controls that allow individuals to manage their data and access preferences.

Overall, the Bank is required to adopt a comprehensive and multi-layered approach which is crucial for effectively managing risks. By combining strong technical controls, robust operational processes, and collaborative efforts with different stakeholders, these systems can continue to provide a safe, secure, and efficient platform for financial transactions.

3. **REPORTING OF FAILED TRANSACTIONS AND FRAUDS**

Bank has made available the necessary process through all Branches to report failed and fraudulent transactions for all the digital and non-digital modes of payment. All these complaints/queries are routed to concerned departments of Head Office for resolution. Customers can also report such incidents through phone banking (for ATM debit card transactions) or by visiting any of the branches, and the same are addressed and acted upon immediately within specified TAT. Requested necessary information on resolution is updated to the customers.

A. Good Practices

Adopting a customer-centric approach to fraud and failed transaction reporting fosters trust and empowers customers to actively participate in protecting their accounts. This ultimately leads to a more secure banking environment for everyone. Bank can adopt good practices andput in placeprocesses that to make it easier and more effective for customers to report failed transactions and frauds:

i. **Timely Reporting**:Banks can encourage its customers to immediately report any failed transactions or suspected fraudulent activities. The sooner the Bank is notifiednecessary actions to protect the customer and prevent further losses can be taken.

ii. **24x7 Access Channels:** Bank should ensure that at least one channel (hotline or online portal) of the reporting system, is available 24/7 for immediate action, especially in fraud cases.Bank may provide multiple channels for reporting incidents:
    a. **Reporting to Home Branch:** Customers can visit their local branch.
    b. **Phone Banking:** A dedicated helpline ensures round-the-clock access.
    c. **IVR (Interactive Voice Response):** Customers can report via phone.
    d. **Website:** Customers can report incidents via the bank's website.
    e. **SMS Alerts:** Customers are mandatorily registered for SMS alerts for electronic banking transactions.
    f. **Email Alerts:** Wherever available, customers receive email alerts. **Reporting Channels:**

iii. **Simplified Reporting Channels:**
    a. **Unified Reporting System**: Offer a single, easy-to-locate reporting system accessible through various channels like the Bank's website, mobile app, phone hotline, and even secure messaging within the banking platform.
    b. **Clear Instructions**: Provide clear and concise instructions on each reporting channel, guiding customers through the process and highlighting the information needed for a swift resolution / investigation.
    c. **User-Friendly Interface:**While designing reporting interfaces on different channels – online or paper based, Bank can ensure that they are user-friendly and intuitive, minimizing confusion during the reporting process.
    d. **Multiple Evidence Submission Options:** Allow customers to submit evidence like screenshots or transaction receipts easily through various methods (upload, email, secure messaging etc).

iv. **Enhanced Communication and Transparency:**
    a. **Immediate Acknowledgement:** Upon receipt of an incident report, Bank can put in place processes to automatically send an acknowledgement email or SMS to the customer confirming receipt of the issue.
    b. **Regular Updates:** Customers can be kept informed throughout the resolution / investigation process with updates on the status and estimated resolution timeframe.
    c. **Multiple Communication Channels:** Offer customers the option to receive updates through their preferred channel (email, phone call, SMS) based on their preferences.

v. **Dispute Resolution Process:**
    a. **Clear Dispute Resolution Policy:**The Bank's dispute resolution policy should easily accessible and transparent, outlining the process, timelines, and customer rights regarding failed transactions and fraud claims.
    b. **Fair and Timely Resolution**: Strive for a fair and prompt resolution process, aiming to investigate and resolve disputes within a reasonable timeframe.

vi. **Educational Outreach:**Bank can continually advise customers on good practices in electronic banking and encourage protective measures against and payment-related frauds. Educational campaigns raise awareness about safe practices.

B. Regulatory Compliances on reporting of failed transactions and frauds

i. RBI vide circular DBR.No.Leg.BC.78/09.07.005/2017-18 dt. 06.07.2017 titled "***Customer Protection – Limiting Liability of Customers in Unauthorised Electronic Banking Transactions***" has issued guidelines aimed to protect customers and enhance the security of digital transactions. These guidelines emphasize prompt reporting, customer education, and shared responsibility between banks and customers to enhance security in electronic banking transactions.

ii. NABARD vide circular No. 156/DoS-15 / 2019-20 dt. 31.05.2019 titled "***Study on adherence to Fraud Monitoring & Reporting guidelines by banks***" has reiterated its guidelineson the importance of vigilance, adherence to procedures, and timely reporting to combat fraud effectively in RRBs. The guidelines further emphasize the importance of internal controls and a robust fraud risk management framework within RRBs. This includes conducting annual fraud reviews,analyzing cases to identify root causes and improve prevention strategies, and establishing staff accountability.

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