

ICMI  LEARNING

Role of EMVCo and international payment networks

Role of EMVCo and international payment networks



Responsible for managing, maintaining, and improving the EMV specifications for chip-based payment cards and terminals



Operates independently of the international payment systems

EMVCo does not issue products, and has no mandate to enforce EMV compliance

Role of EMVCo and international payment networks

International payments network



Issuing payment cards and processing transactions made with those cards

Implementing the EMV specifications into their payment cards and terminals, ensure transactions made secure and reliable

Publish EMV chip payment application for chip card

Role of EMVCo and international payment networks



International payments network

To ensure that EMV chip technology is implemented consistently and effectively around the world

Sets the standards for chip-based payment cards

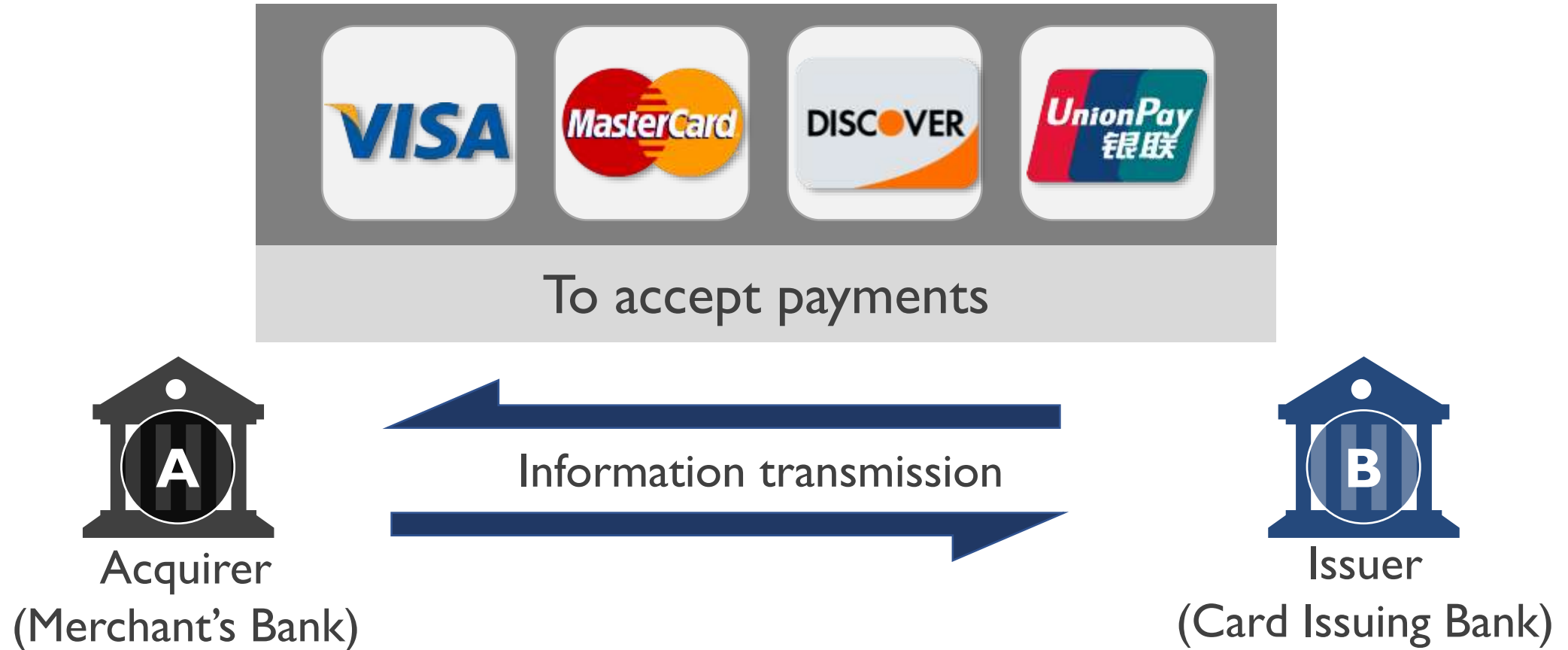
Implement these standards in their payment cards and processing system

EMV chip technology provides a high level of security and interoperability for payment card transactions

The background is a collage of various currency notes and symbols, including the Euro (€), Dollar (\$), and Pound (£). Large, semi-transparent numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, 0) are scattered across the image. Orange arrows point from these numbers towards the central text box. For example, an arrow points from '1' at the top left, another from '2' at the bottom left, and others from '3', '4', '5', '6', '7', '8', '9', and '0' on the right side.

Functions of payment networks in transaction processing

Functions of payment networks in transaction processing



They are responsible for facilitating transaction
Clearing and Settlement while routing transactions

Functions of payment networks in transaction processing

Management of financial risks

Settlement risk management

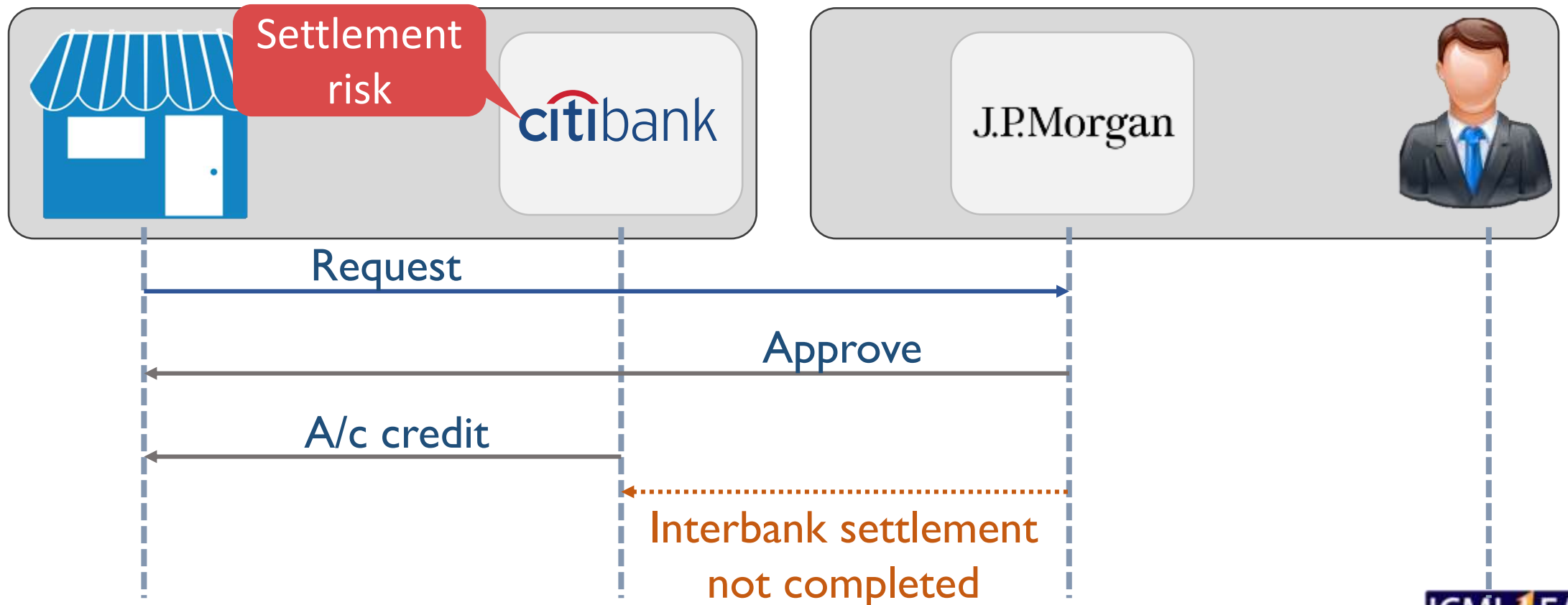
Fraud risk management



Functions of payment networks in transaction processing

Settlement risk management

Refers to the risk that one party will fail to fulfill their obligation to settle a transaction, resulting in financial losses for the other party



Functions of payment networks in transaction processing

Fraud risk management

The process of mitigating the risk of fraudulent transactions

It can be accomplished through a combination of measures such as:

Dynamic authentication

Cardholder verification
methods

Transaction monitoring

Fraud scores

Functions of payment networks in transaction processing

Dynamic authentication

Involves the use of a unique digital signature for each transaction

Signature the cardholder's personal identification number (PIN) and the transaction data



Functions of payment networks in transaction processing

Cardholder verification methods

CVMs are used to verify the identity of the cardholder during a transaction

These methods can include

- PIN entry
- Signature verification
- Biometric authentication



Functions of payment networks in transaction processing

Transaction monitoring

The use of advanced algorithms to detect and prevent fraudulent transactions

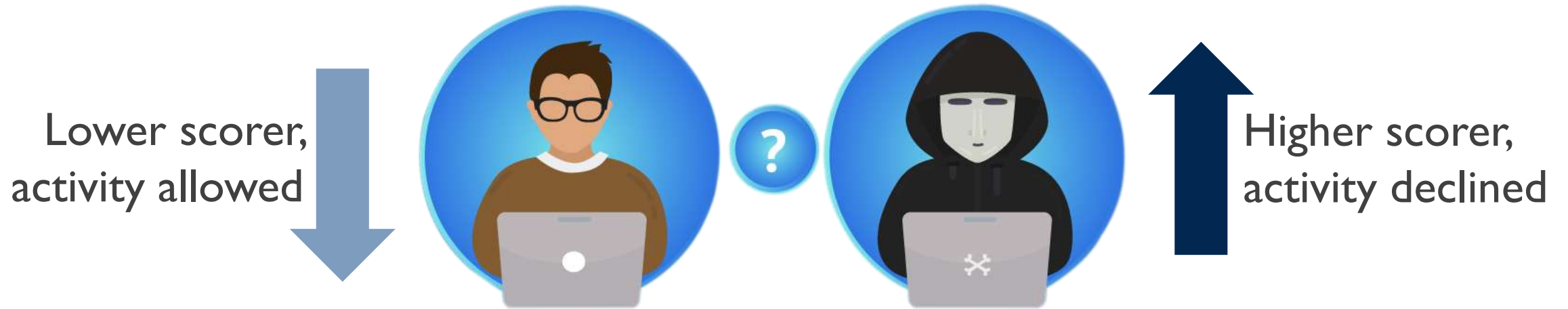
This method can include

- Monitoring for unusual transaction patterns
- Transactions that exceed predefined limits



Functions of payment networks in transaction processing

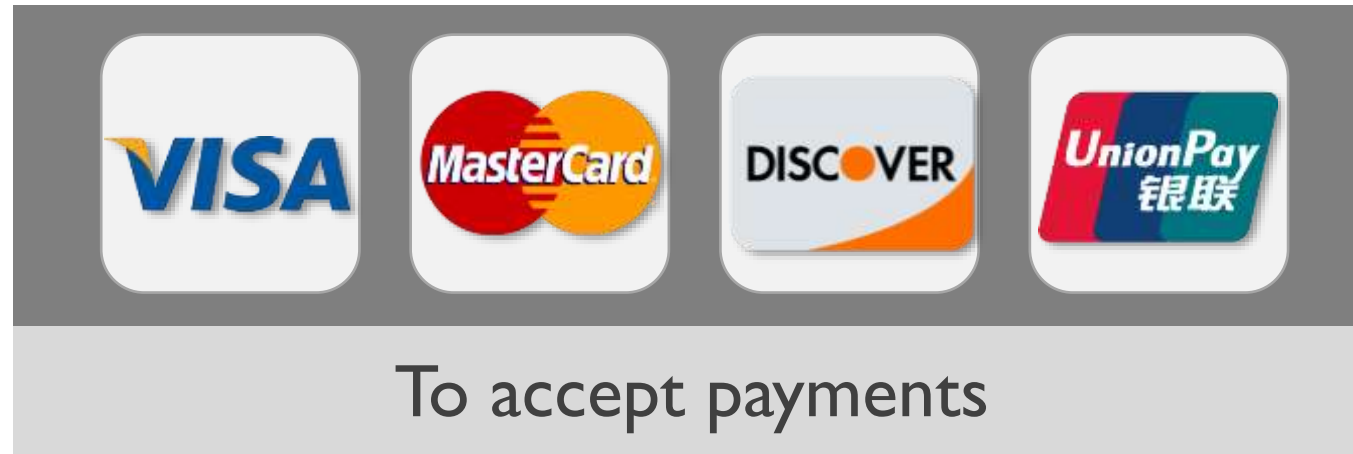
Fraud scores



This refer to scores assigned by the risk and fraud management system to customers

This value is used by card issuers before approving a transaction

Functions of payment networks in transaction processing



STIP
(Stand-In-Processing)

Gateway services

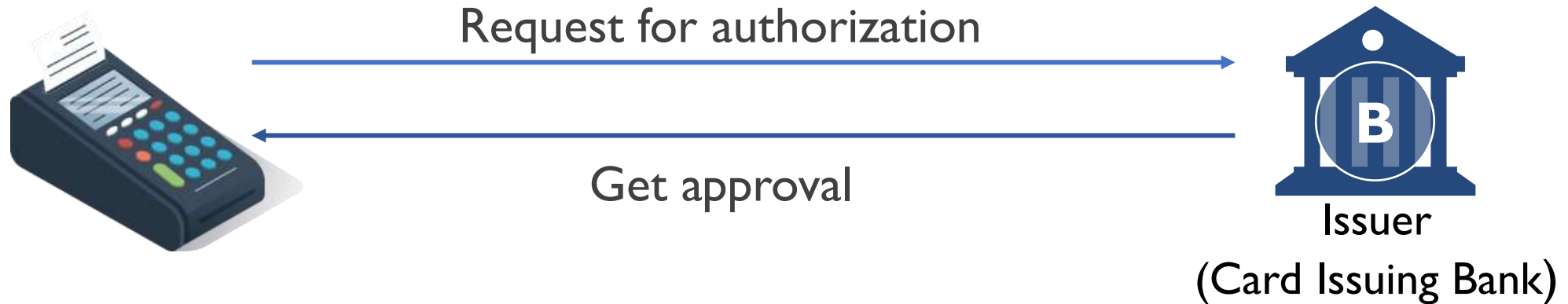
Payment controls

Functions of payment networks in transaction processing

STIP (Stand-In-Processing)

Authorization process

When the issuer's authorization system is not available at the time of the transaction

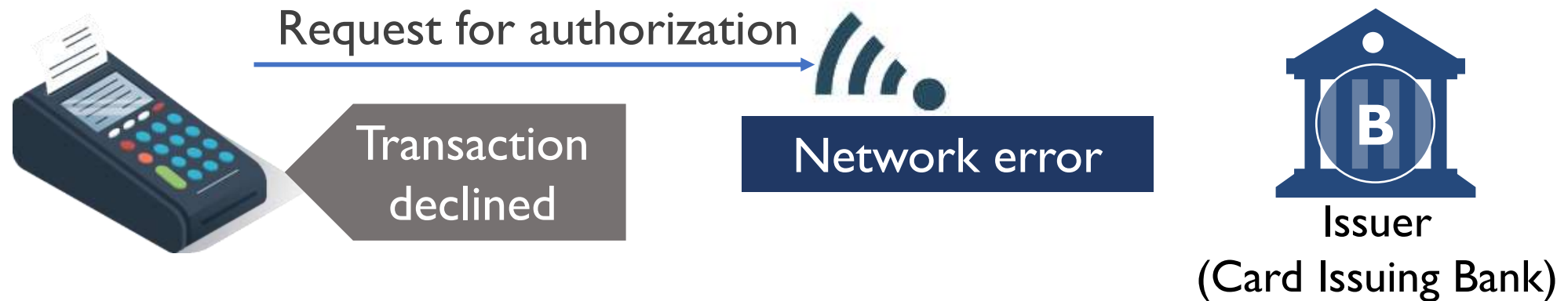


Functions of payment networks in transaction processing

STIP (Stand-In-Processing)

Authorization process

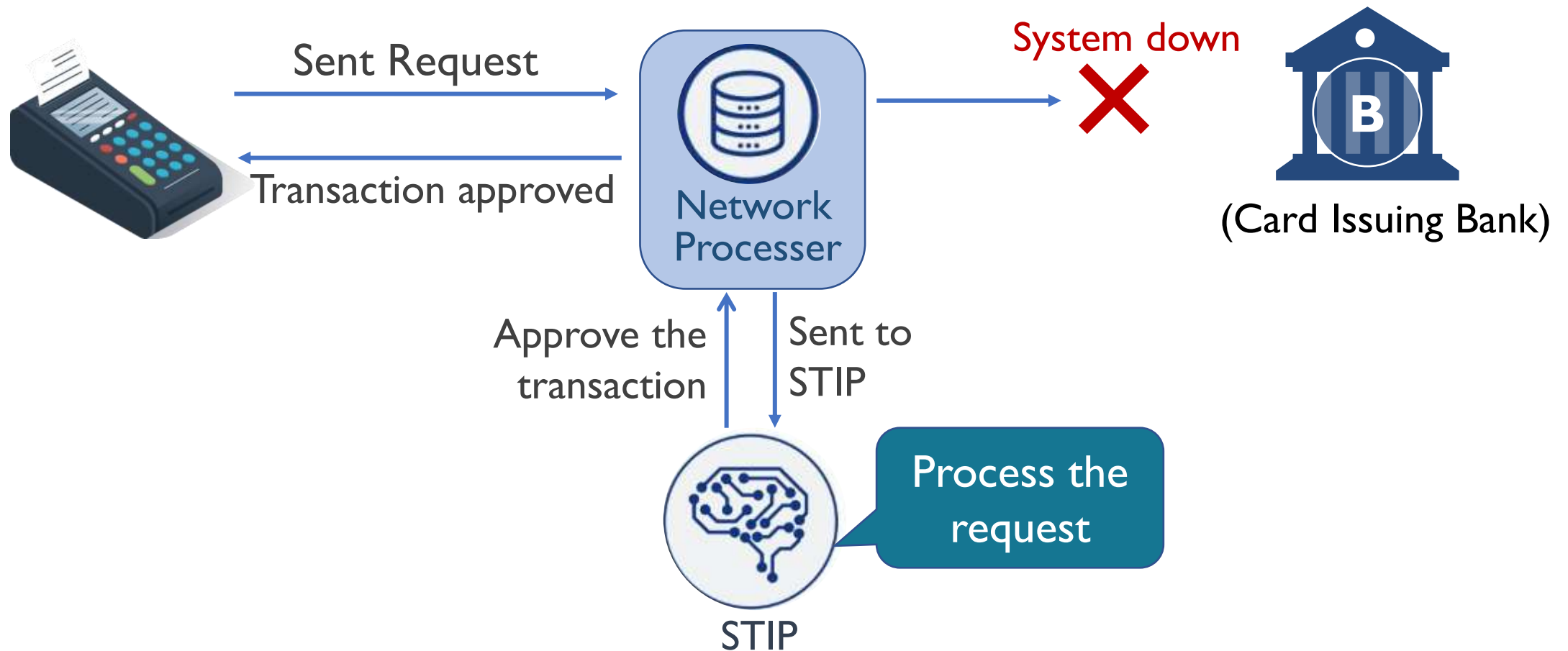
When the issuer's authorization system is not available at the time of the transaction



STIP enables the acquirer to use a backup authorization system in the event that the issuer's system is unavailable

Functions of payment networks in transaction processing

STIP (Stand-In-Processing)



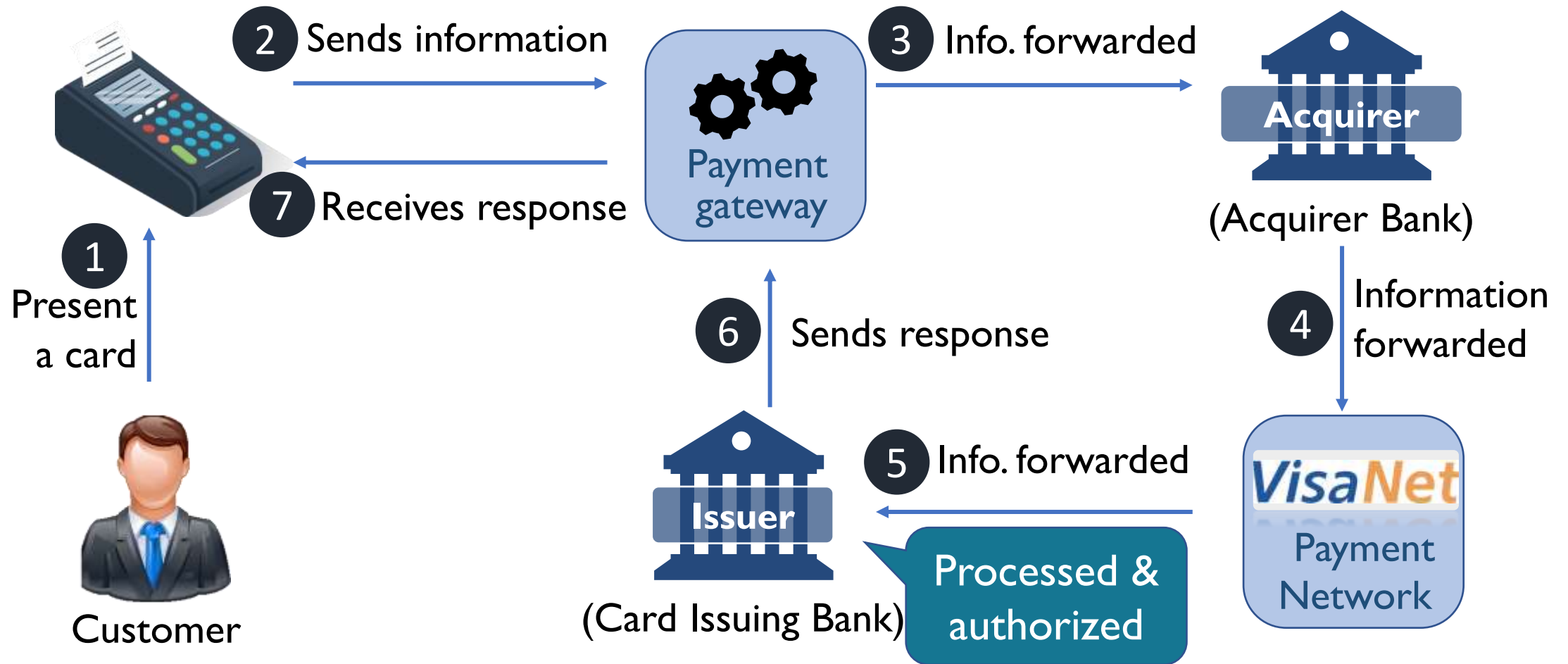
Functions of payment networks in transaction processing

Gateway services

It provides merchants with a secure and reliable way to process payment card transactions online

Functions of payment networks in transaction processing

Gateway services



Functions of payment networks in transaction processing

Payment controls

Provides merchants with the ability to set rules and restrictions on payment card transactions in order to reduce the risk of fraud and chargebacks

Restricting transactions to certain **geographic regions**

Setting transaction **amount limits**

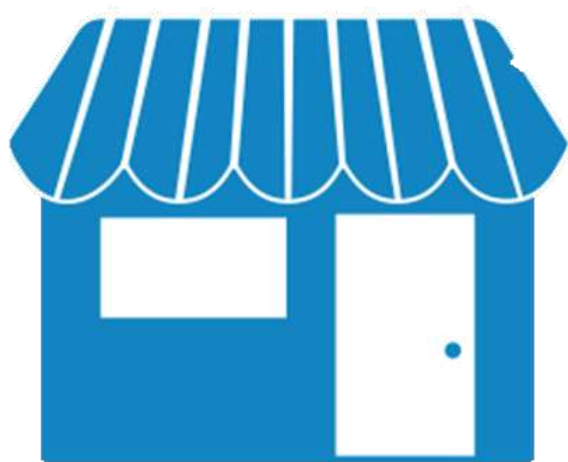
Limiting the number of transactions per day

Requiring additional authentication for certain types of transactions

Functions of payment networks in transaction processing

Payment controls

Provides merchants with the ability to set rules and restrictions on payment card transactions in order to reduce the risk of fraud and chargebacks



- Maximum transaction limit of \$1,000 per day

- Require additional authentication for any transaction over \$500

Functions of payment networks in transaction processing

Functions related to EMV performed by payment networks

Defining required card products and payment applications



Functions of payment networks in transaction processing

Functions related to EMV performed by payment networks

Establishing the business rules like:

- How EMV cards should be issued?
- How they should be accepted by the acquirer?
- How transactions should be processed?



Functions of payment networks in transaction processing

Functions related to EMV performed by payment networks

Payment networks are also involved in providing **type approval** for cards and card applications



Tested and certified to ensure that they meet the technical specifications and security requirements

Functions of payment networks in transaction processing

Functions related to EMV performed by payment networks



Certifies/approves issuer-personalized cards



They also provide smaller banks with personalized bureaus that handle the printing and personalization of payment cards



They also provide certification of card terminals that are required for processing transactions

Functions of payment networks in transaction processing

Functions related to EMV performed by payment networks



**CERTIFICATE
AUTHORITY**

Public keys refer to the cryptographic keys used to encrypt and decrypt data during the transaction process

Payment networks are required to validate the public keys used in a transaction



Each card is equipped with a unique public key, used to authenticate the card and verify the validity of the transaction

Functions of payment networks in transaction processing



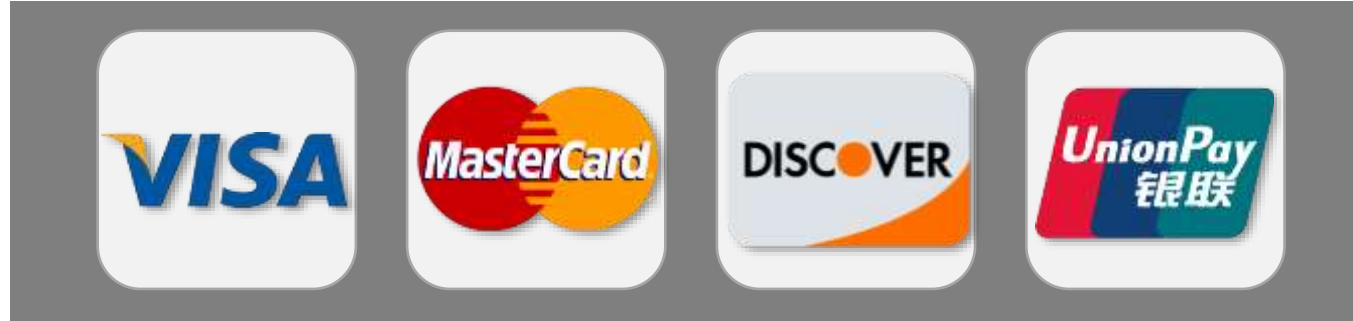
Public key exchange with card



This helps to ensure that the communication between the two devices is secure and cannot be intercepted

Functions of payment networks in transaction processing

Functions related to EMV performed by payment networks



To test network interfaces for the acquirer and issuer processors

Test end-to-end transactions from initiation to completion