



Payments 101

Introduction to Payments

Presenter • Date

History of Money and the evolution of Payments



History of Money

What is Money?

- It's something that is generally accepted as a medium of exchange of value.

What is currency?

- It is a generally accepted form of money. It can be a shell, salt, stone, metal, paper, coin etc.
- It is a recognized form of value exchange.
- Usually issued by a government or a trusted body.
- Current form of currency is in banknotes and coins.

When did the current form of currency started?

- Coins were first developed in 6th Centuries BC in Lydia, now part of modern Turkey.
- Banknotes were first used in 11th Centuries China during the Song Dynasty.



Trivia Quiz

What was the first charge card?
When was it invented?

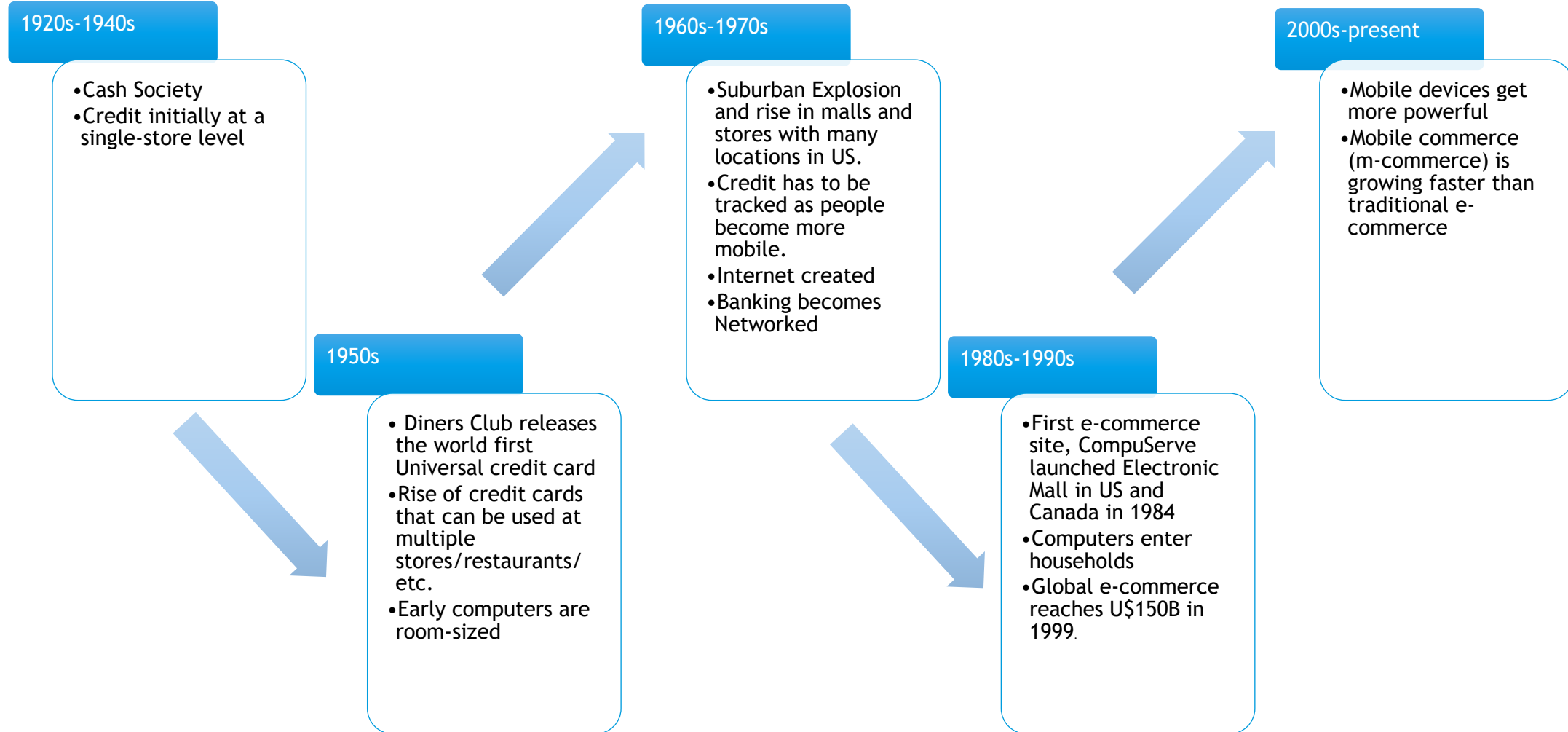
The Farrington Charga-Plate was invented around 1928 by the Charga-Plate Group, Inc. in New York City.

Why would a charge card be created right around the Great Depression?

It was the precursor to today's charge cards and was primarily a store bookkeeping system.



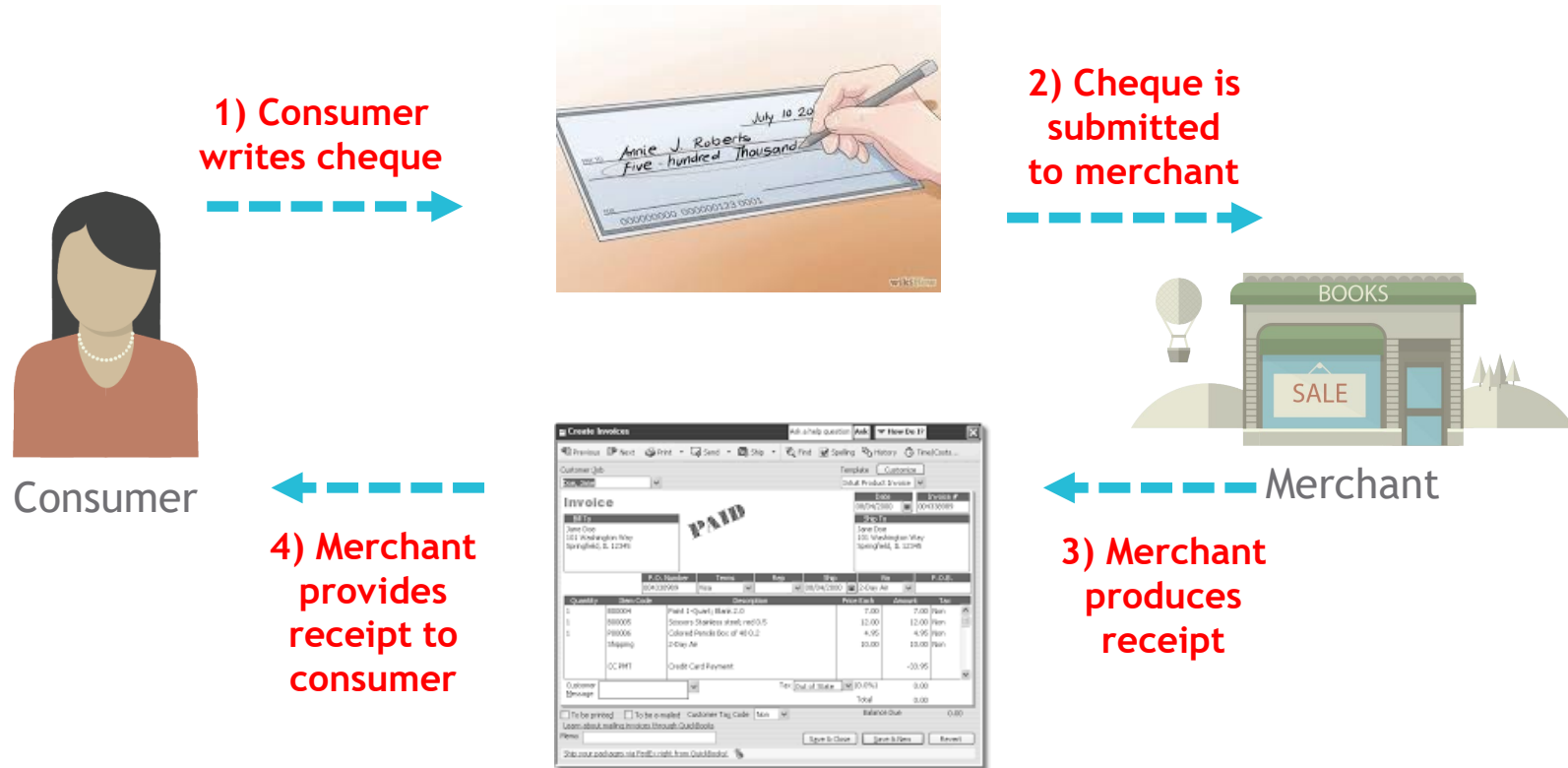
The Last 100 Years of Payment Systems



The card payment ecosystem

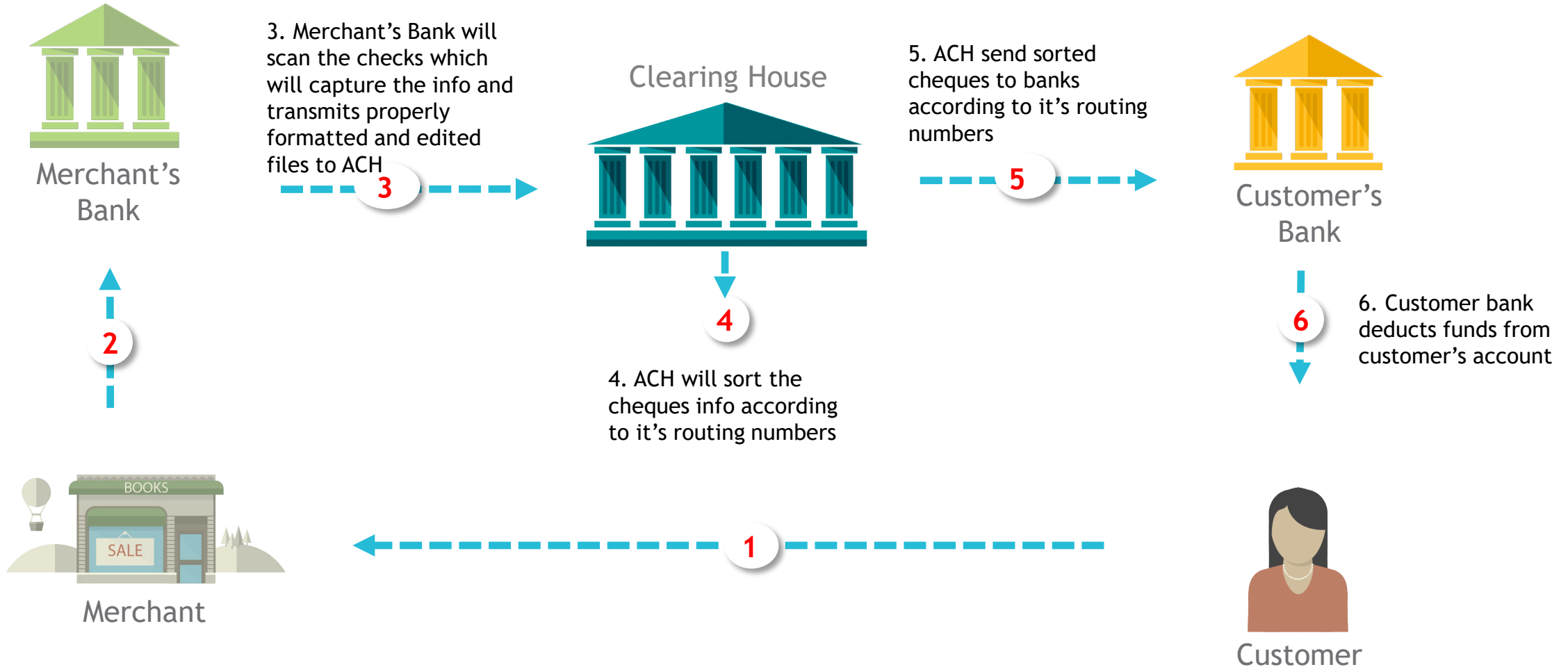


Paying By Cheque - Consumer view

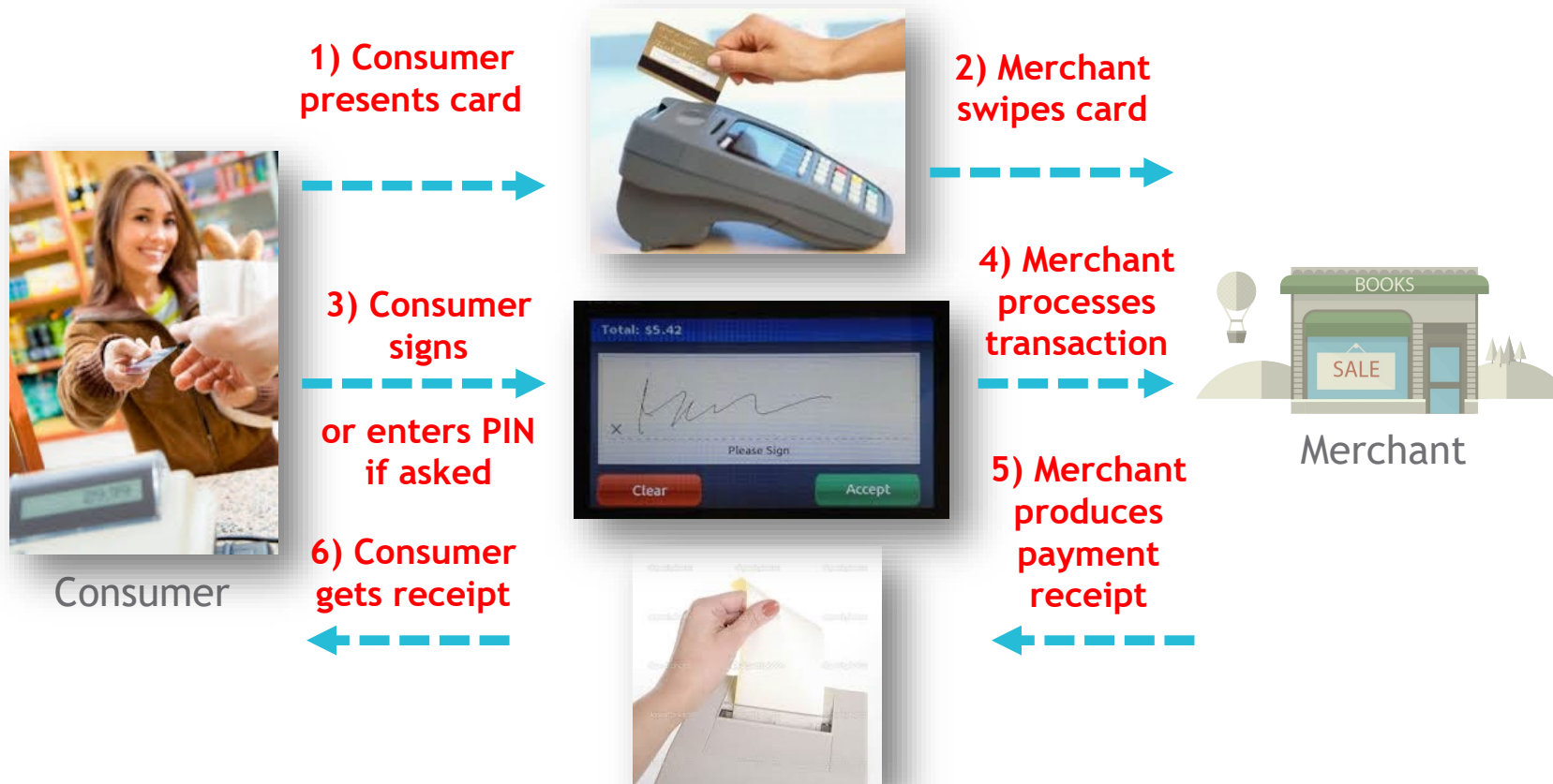


Behind the Scenes of the Cheque Payment

The Singapore Automated Clearing House system processes money through banks



Paying By Credit or Debit Card - Consumer View



The Card Payment Ecosystem

Two Common Models

Four Party (Open Loop) Model (Bankcards & EFT Networks)

- Member Banks act as “issuers” provide cards to consumers
- Member Banks act as “acquirers” & handle transaction processing for merchants
- Schemes set rules, provide processing switch, and manage brand promotion/image



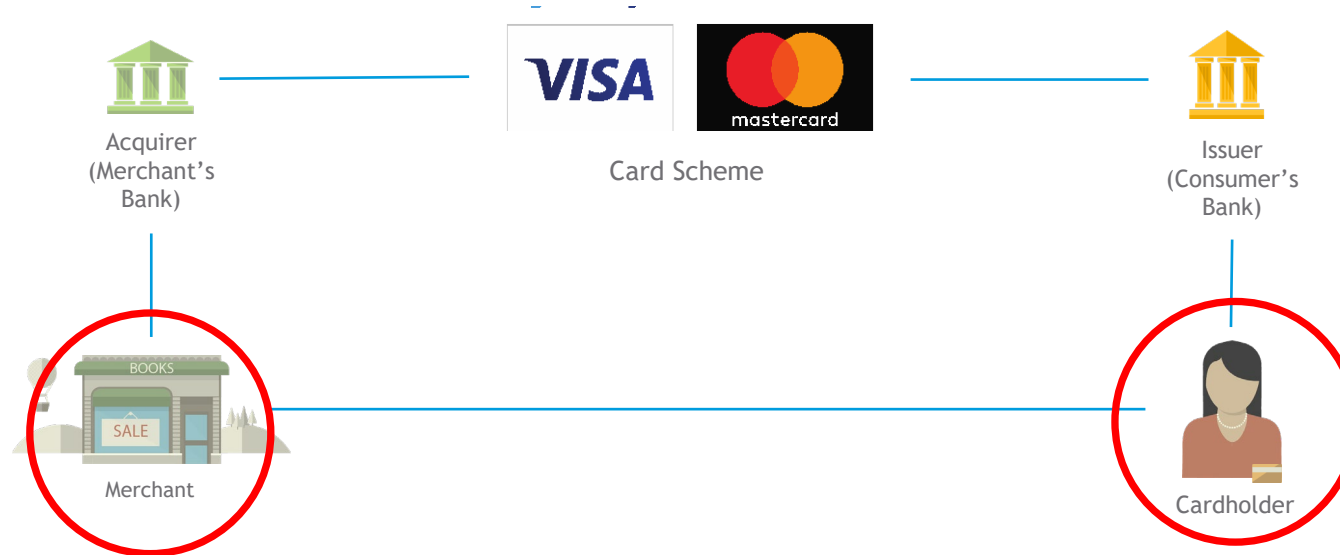
Three Party (Closed Loop) Model

- Single entity issues cards, handles merchants, sets rules, provides switch and manages brand
- Original American Express approach; Discover, JCB

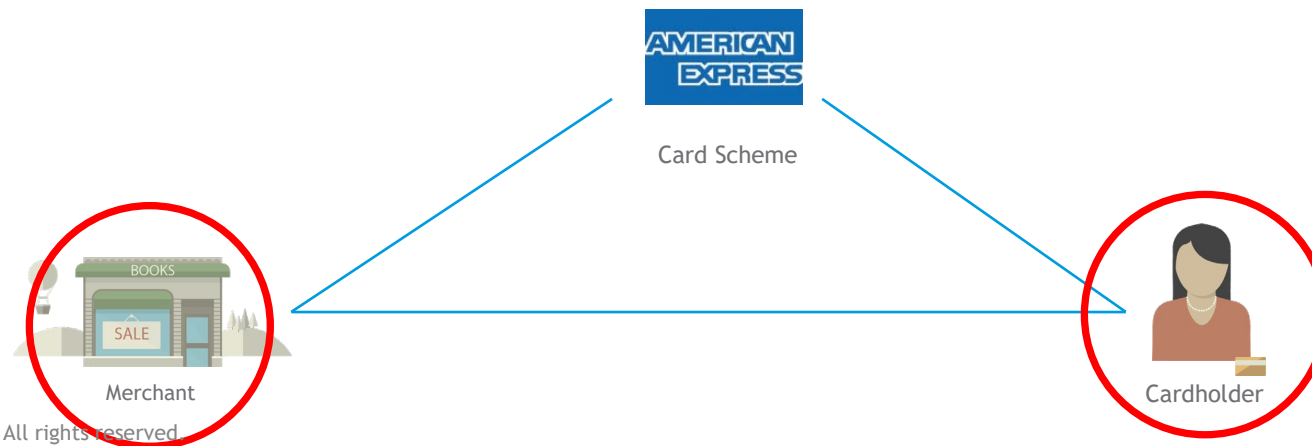


Processing Three Party and Four Party Transactions - In-store

VISA & MasterCard



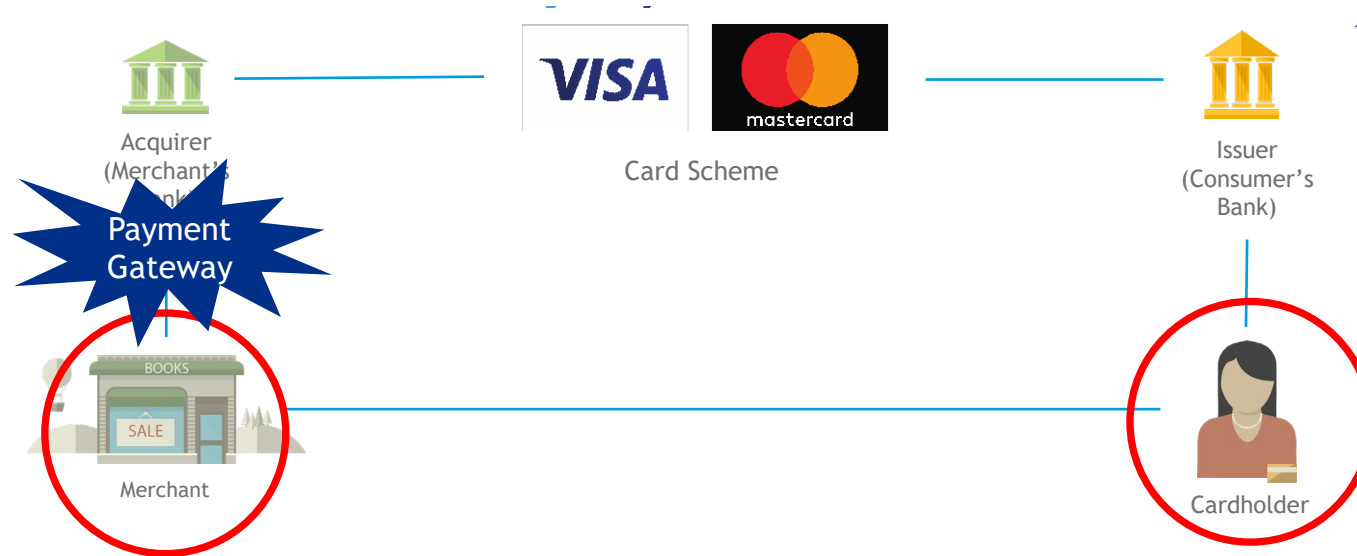
American Express



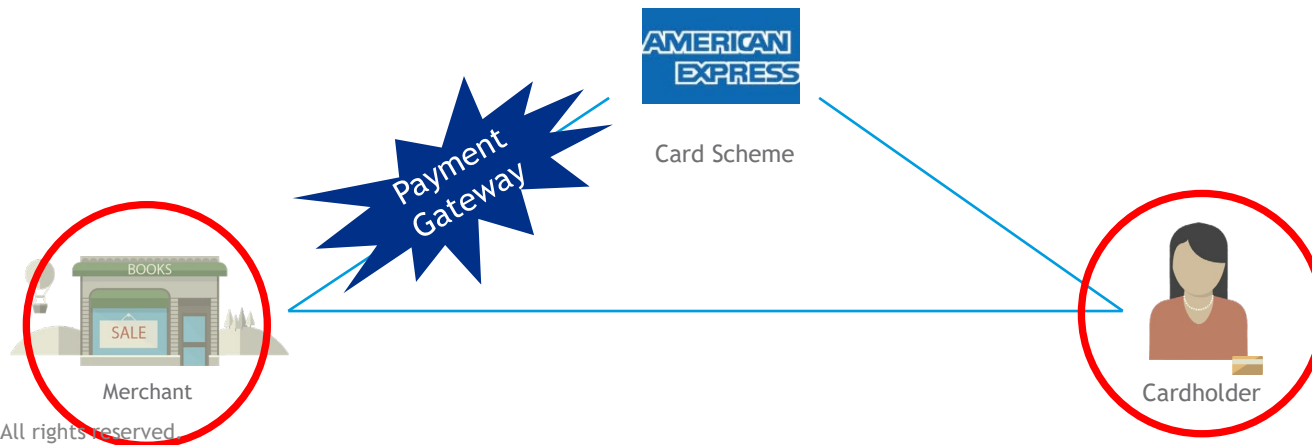
Processing Three Party and Four Party Transactions

e-Commerce

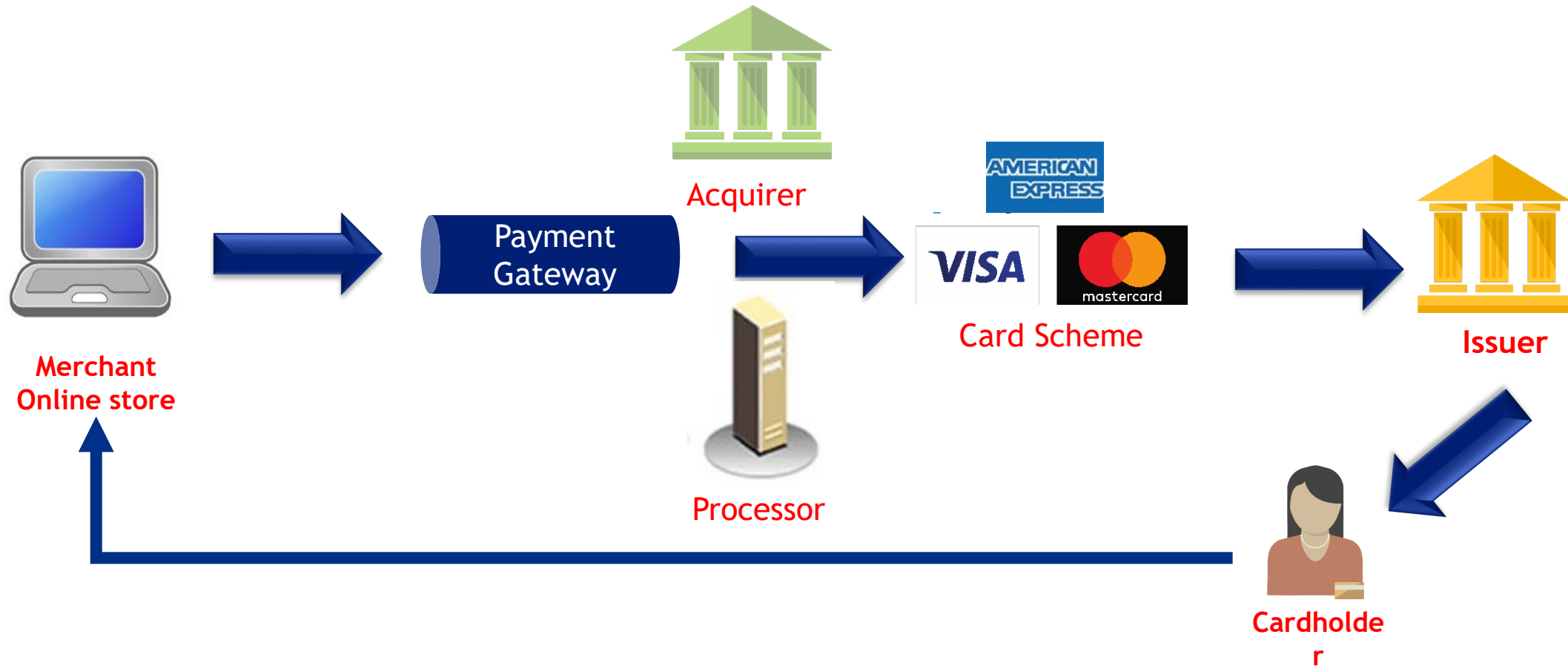
VISA & MasterCard



American Express



Payment ecosystem - online payment



Payment Gateway

What Is It?

- The payment gateway is the card-not-present version of the point-of-sale terminal.
- The gateway service provider relays information from the merchant to the processor
- The payment gateway is responsible for acquiring transaction authorization and data encryption.

What Does It Do?

- Securely authorizes your card payments.



Payment Processor



What Is It?

- A payment processor is a company (often a third party) appointed by a merchant to handle transactions from various channels such as credit cards and debit cards.

What Does It Do?

- The merchant processor handles the transaction authorization and routes the transaction from the point of sale to the card network.

Acquiring Bank (“Acquirer”)

What Is It?

- An acquiring bank (or “merchant bank” or “acquirer”) is a bank or financial institution that processes credit or debit card payments on behalf of a merchant. The term acquirer indicates that the bank accepts or acquires credit or debit card payments from the card-issuing banks. The merchant’s account is held at the acquiring bank.
- The merchant acquirer takes on the risk of the card transaction

What Does It Do?

- The merchant acquirer signs up merchants to take payment cards for the card network. Acquirers also arrange processing services for merchants.



Card Schemes/Network

What Is It?

- An organization of financial institutions that licenses bank credit and debit card programs.

What Does It Do?

- The network performs operational functions for its members, including transaction processing and authorizations, interchange settlements and fee processing.

Who Are the Players?

- Differs depending on region but globally includes Visa, MasterCard, Discover, American Express, JCB.



Issuer

What Is It?

- A bank or other financial institution that issues credit or debit cards.

What Does It Do?

- They provide a credit line and limit to cardholders. They send payments to merchants for purchases made with their credit cards.

Who Are the Players?

- Most banks, credit unions, and financial institutions.



The card payment transaction cycle



Card Transactions

What goes on behinds the scenes?

1. Authorization

- Purpose - to validate funds availability.

2. Settlement

- Purpose - to move cardholder funds to merchant.

Authorization: The Entities Involved



Acquirer
(Merchant's Bank)



Card Schemes



Issuer
(Consumer's Bank)

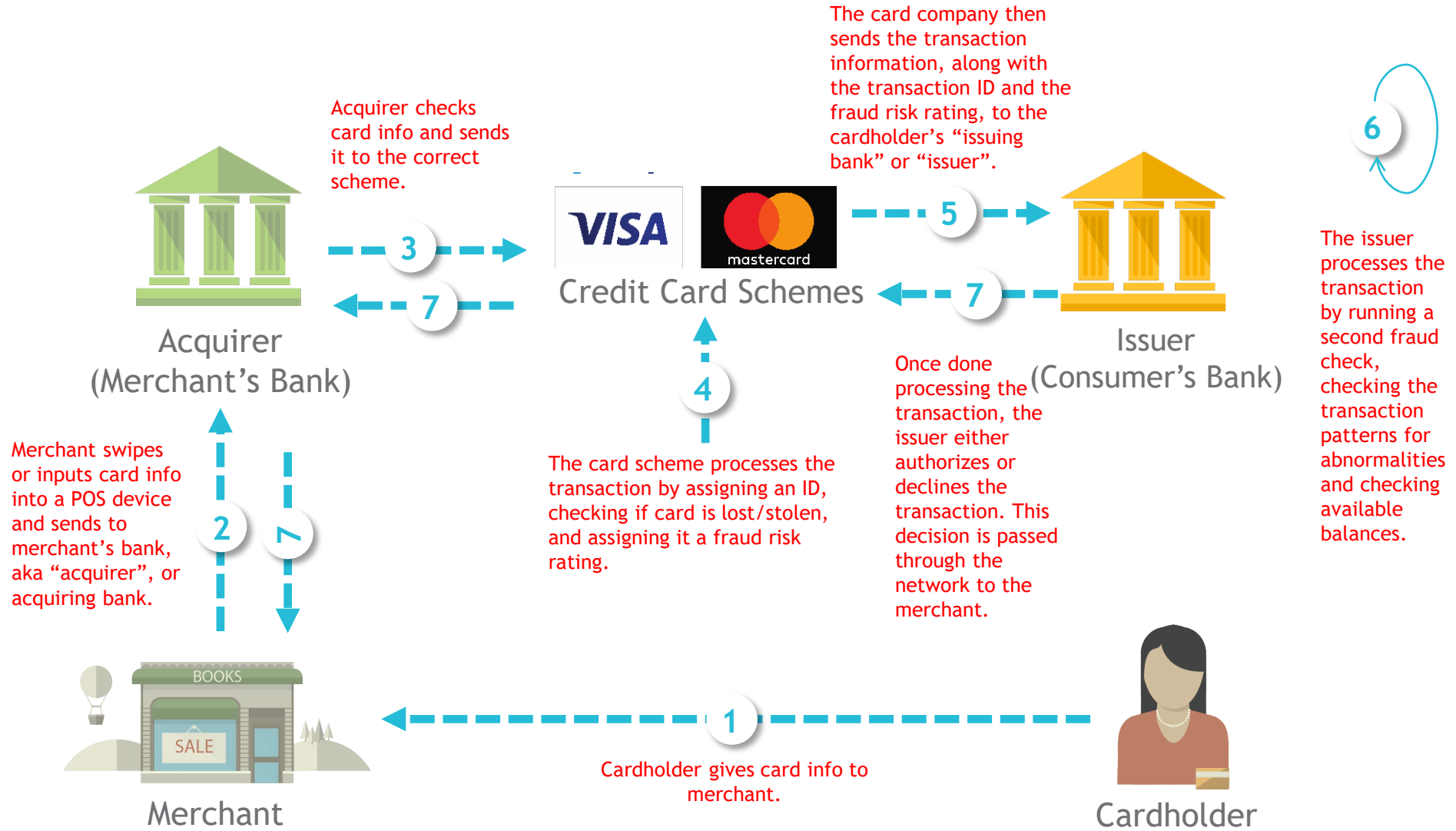


Merchant



Cardholder

Authorizing a Transaction



Authorizing a Transaction

How long is a card authorization hold valid?

- Up to 7 days, but it depends on the processor
- Some processors may take 30 days for the hold to expire.



Settlement: Same Entities Involved



Acquirer
(Merchant's Bank)



Card Schemes



Issuer
(Consumer's Bank)

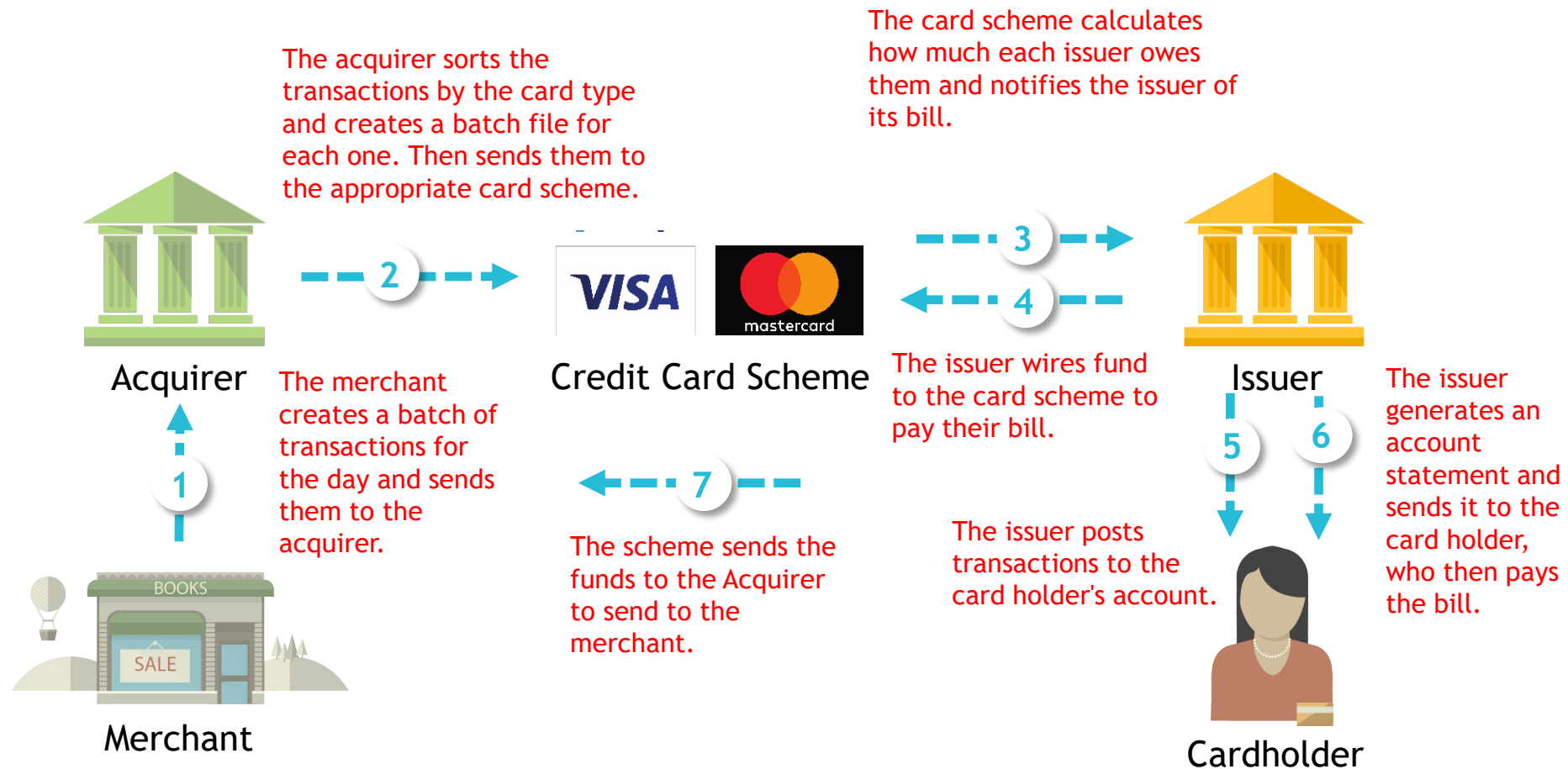


Merchant



Cardholder

Settling a Transaction



Settling a Transaction

When does settlement occur?

- Merchants typically settle a batch of authorized transactions at the close of each business day



Cost of Payment



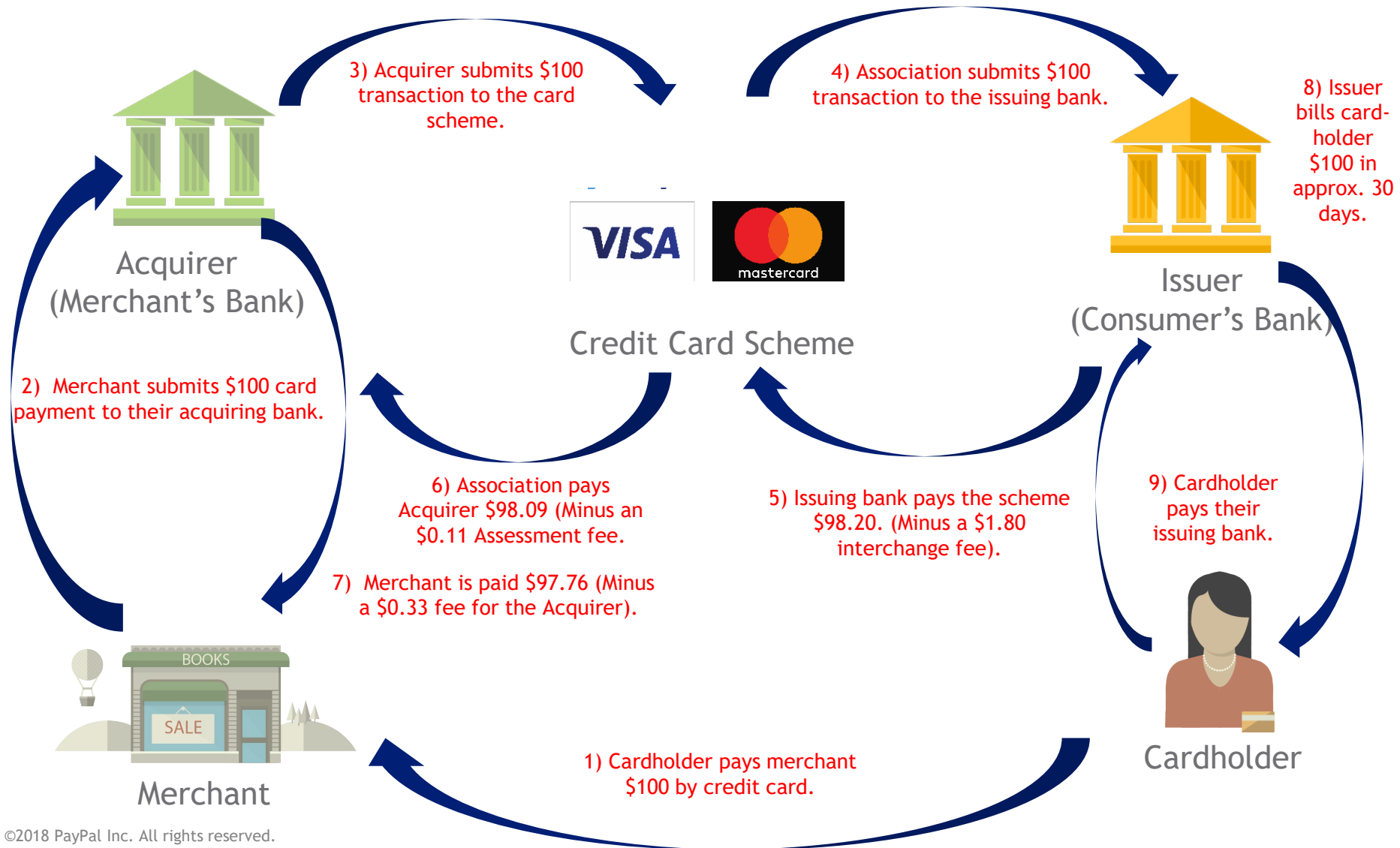
Fees to Merchant

Every card and merchant account provider has a different set of costs associated with its services:

- Interchange Reimbursement Fees & Assessments
- Terminal Fees
- Payment Gateway Fees

Other fees can include statement fees, early termination fees, monthly fees, and, network fees.

The Fees in a Credit Card Transaction



Payment Landscape and Trends



Payment Landscape

QR Code Payments

P2P payments

Biometric Payments

M-Commerce - InApps Payments



Future Payments Trends

Social Media Commerce
Facial Recognition
Vision Tech Shops

