

Úvod do platebních karet

Michal Prázný

Sales and Business Development Director
FIS

13.10.2026

Agenda

Platební karty a Bezhotovostní platby

Typy platebních karet

Autorizace, Clearing a Settlement

Nákladovost a výnosnost

Alternativní platby

Platební karty a Bezhotovostní platby

Payment card

A payment card is a financial instrument issued by a bank, credit union, or financial institution that allows individuals and businesses to make electronic transactions. These cards have become a ubiquitous and convenient method of payment, offering a wide range of benefits for both consumers and merchants. There are several types of payment cards, including credit cards, debit cards, prepaid cards, and others, each serving different purposes. Here's a brief introduction to payment cards:

Historically, bank cards have also served the purpose of a cheque guarantee card, a now almost defunct system to guarantee cheques at point of sale.

1967 - The first bank cards were automated teller machine (ATM) cards issued by Barclays in London

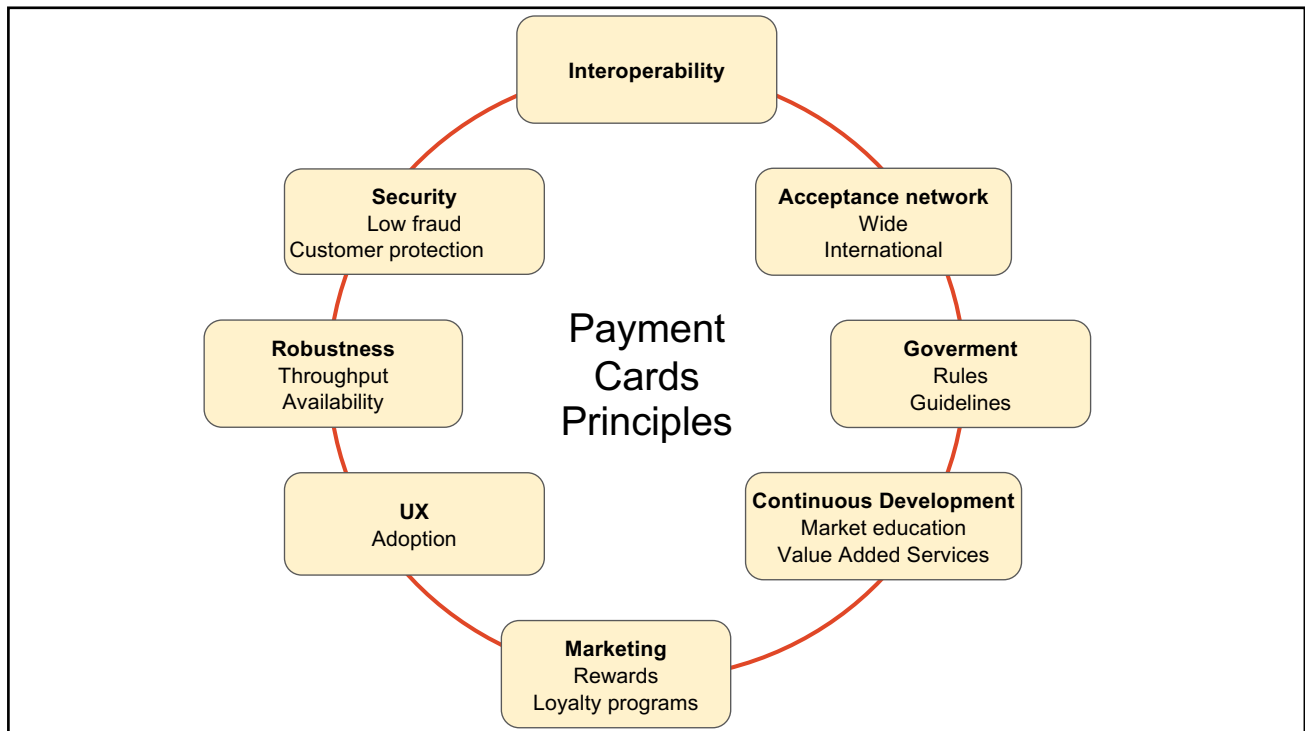
1972 - Lloyds Bank issued the first bank card to feature an information-encoding magnetic strip, using a personal identification number (PIN) for security.

1979 - The smart card, which was introduced in the 1970s, was adapted for use as a payment card. Smart payment cards were introduced to the banking sector

	Global Schemes	Local Schemes
Scope	International Presence:	Regional or National: Local schemes are typically limited to a specific country or region. They are designed to cater to the needs of users within that geographical area.
Acceptance	Widespread Global Acceptance:	Limited Global Acceptance: Cards may not be widely accepted outside their designated region.
Network	International Networks: extensive international networks that connect banks, merchants, and payment processors , transactions can be processed across borders seamlessly.	Domestic Networks: Transactions usually stay within the borders of the country or region. The processing and clearing of transactions are managed by domestic networks.
Regulation	Compliance with Global Standards	Subject to Local Regulations
Examples	Visa, MasterCard, American Express, and Discover are examples of global payment card schemes. These cards can be issued by banks around the world and are recognized by merchants globally	RuPay in India, Interac in Canada, and Cartes Bancaires in France.

Payment card schemes





Other payment schemes

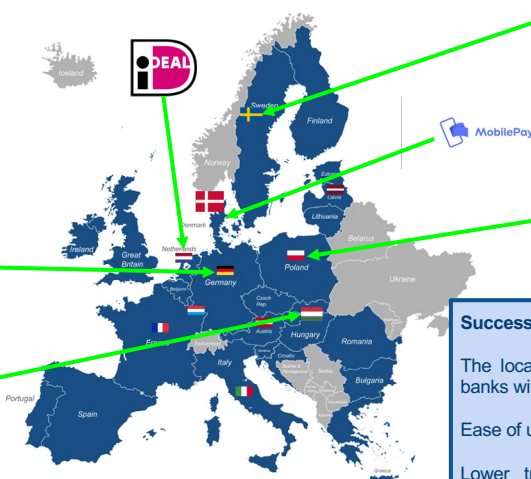
Domestic schemes generate 40% of the volume of card transactions

The European Mobile Payments Solution brings together providers of alternative mobile methods in Europe - it already has 14 members



> 80% instore

AFR



MobilePay



> 50% on-line

Success criteria

The local scheme is supported by a group of banks with a majority market share

Ease of use and wide acceptance network

Lower transaction costs, new services and benefits, ideally both

EPI - European Payment Initiative



EPI's ambition is a joint Instant Pay/SEPA Instant Credit Transfer (SCT Inst) payments scheme that would offer cards, a digital wallet and P2P payments for customers and merchants across Europe. The solution is intended to be the new European standard for all types of transactions including payments in stores, on the Internet, cash withdrawals and "peer-to-peer" payments as an alternative to existing global schemes such as Visa and Mastercard (and probably also WeChat and Alipay in the future). It is one of the other attempts in this direction, which can be successful also considering that Covid 19 increases the pressure on contact-free, in-app, omni-channel payments.

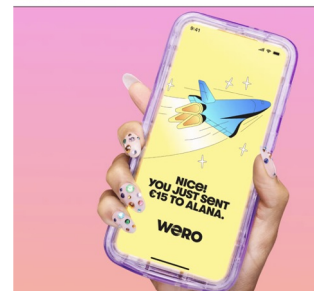
MOTIVATION, BENEFITS AND FOCUS OF EPI

- Client-driven payment evolution
- The basis is instant payments primarily for the SEPA area
- Full use of PSD2 and other regulations
- Balance between digitization and customer use
- Digital currencies
- Stable, regulated environment

EPI LIMITATIONS

- It is one of several European payment initiatives
- Primarily focused on Eurozone countries
- Must take into account existing domestic schemes (FR, DE)
- Probably a long time for practical use

weero

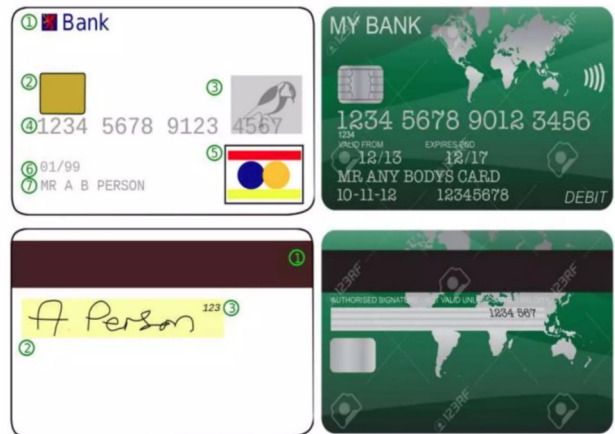


Typy platebních kart

Structure of a Card

Front View

1. Issuing Bank logo
2. EMV chip (only on "smart cards")
3. Hologram
4. Card number
5. Card Network logo
6. Expiration date
7. Cardholder's name
8. Contactless Chip



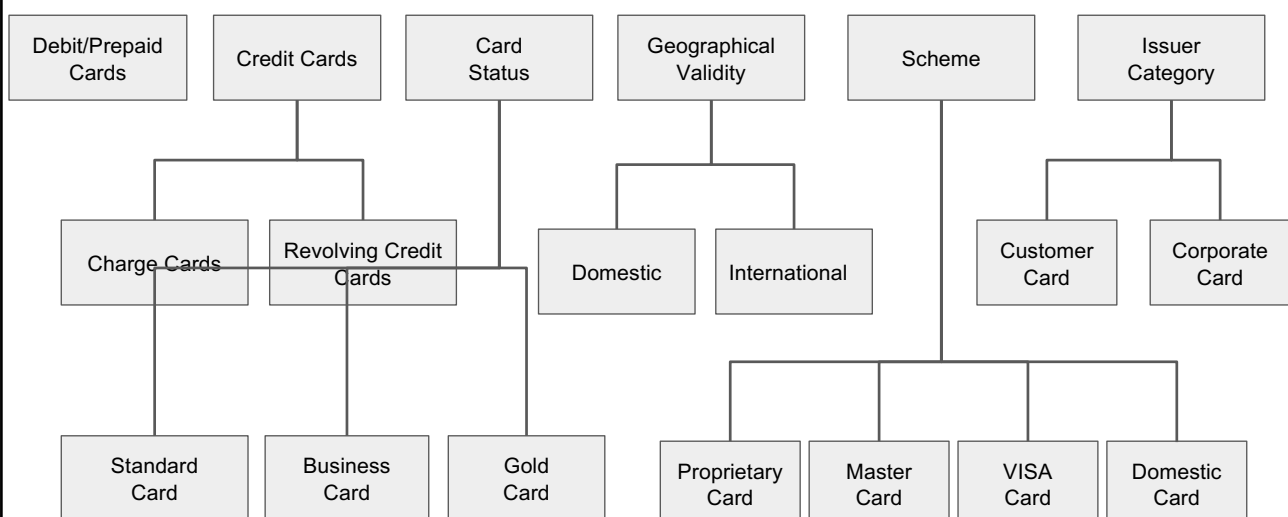
Back View

1. Magnetic stripe
2. Signature strip panel
3. Card Security Code

BIN: Bank Identification Number
NFC: Near field communication

PCI DSS: Payment Card Industry Data Security Standard.
PIN: Personal Identification Number

Classification of Payment Cards



Credit Card vs. Debit Card

Borrowing money from a bank or financial institution.
(Spending "other's" money)

Funds taken from the money that you have in your bank account. (Spending your "own" money)

Need not be connected to any bank account

Needs checking Account/Savings Account

Pay additional interest drawn on the amount borrowed

No interest to be paid

Limit: Credit line

Limit: Equals your account limit

Generates profit for Bank

Customer Service

Consumer vs. Corporate Cards

Feature	Customer Card	Corporate Cards
Usage	These are typically issued to individuals for personal use	These are designed for businesses and are used by employees on behalf of the company
Ownership	Owned and issued to individual consumers	Owned by the company and issued to its employees for business-related expenditures
Liability	Individual cardholder	Company is typically liable, some corporate cards may offer individual liability of the employee
Credit Limit and Spending Control	Individual's creditworthiness and financial history	By the company, and it may have features that allow for controls on employee spending limits and categories
Rewards and Perks	Rewards programs, cashback, or other perks tailored for individual consumers	Business-related expenses, such as travel rewards, discounts on business services, or expense management tools
Expense Tracking and Reporting	Primarily for personal use and finance management	Features for expense tracking, reporting, and integration with corporate accounting systems to facilitate business expense management

Virtual Cards



- A card for which no plastic is produced
- Typically used for e-commerce MOTO and other card-not-present transactions, as well as 'lodge card' programs
- CVV2/CVC2 value can be generated if needed
- Can be replaced with a new card if card details are compromised
- Can be permanent or one time use only

Tokenization

Tokenization can be broken down into 3 stages:

- **Provisioning:** the process of requesting and receiving a token. Once approved the token is 'provisioned' - i.e. created and stored on the mobile device.
- **Transaction Processing:** the process of using a token to initiate a digital payment transaction
- **Lifecycle Management:** the process of managing and maintaining the token throughout its entire lifecycle.

Key Benefits

- Reduced exposure of PAN
- Lower fraud and data-breach risk
- Secure digital payments
- Card lifecycle / token lifecycle management
- Improved customer experience for recurring and wallet payments



Payment Schemes

- Visa Token Service (VTS)
- Mastercard Digital Enablement Service (MDES)

Tokenization Use Cases

- **Digital Wallet Tokenization**
 - Apple Pay, Google Pay, etc.
 - Device-specific payment token
 - Token + cryptogram used for each transaction
- **Card-on-File Tokenization**
 - Token replaces PAN stored by merchants
 - Used for e-commerce and recurring payments
 - Can be merchant-specific



Typical Customer Service Actions

Customer Related Actions

- Add/Change address
- Change credit limit
- Change embossing name
- Change status
- Change currency.

Card Related Actions

- Change product
- Change profile
- Reissue card
- Renew card
- Replace card
- Change embossing details
- Change authorization information
- Change statuses.

Financial Account Actions

- View balance/payments
- Change credit limit
- Generate letter
- Close account
- Change profiles
- Send account to Collection
- Change statement billing cycle
- Change billing details.

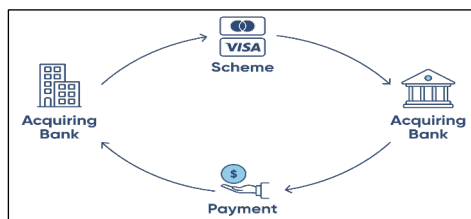
Other

- Manage reward points, redemption, etc.
- View transaction history
- Define periodic cash limits
- Define temporary Bonus
- Define periodic OTB replenishment.

Four Party System

The card scheme uses its rules to transfer the card transaction information from the acquiring bank to the issuing bank (from the merchant to the consumer). It then passes the payment back to the acquirer to confirm the payment.

Credit and debit card schemes work with **four parties**. Together, these four parties make up an **open-loop system** that allows consumers to seamlessly purchase items or services from merchants by letting the banks do all the work on their behalf.



The cardholder:

Is the buyer. They hold the debit or credit card offered by their bank.

The card issuer:

It provides debit or credit cards from the card scheme to its qualifying customers. Issuers are banks (and other qualifying institutions). Even when the card is branded (such as an airline loyalty card), there is a bank or financial institution backing the card.

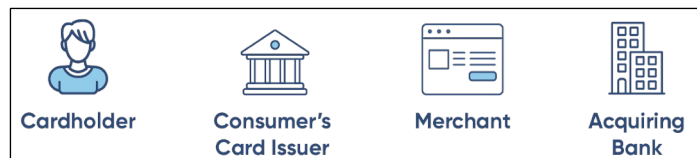
The merchant:

Is a retailer or a business that sells goods or services to the cardholder.

The acquirer:

Is the institution that provides a merchant service agreement to the merchant and processes the card transactions on their behalf.

Although these are the four primary players, there are also intermediaries that facilitate the transaction, including the payment gateway and the [payment processor](#).



Autorizace, Clearing a Settlement

Authorization, Settlement, Clearing, Reconciliation

Authorization of Payment

The merchant passes the card information to the acquirer for authorization of the payment. The acquirer then sends the authorization request to the card network associated with the card. The card network receives the authorization request and routes it to the consumer's bank, which issued the card, for approval. It is the consumer's bank that determines whether the authorization request should be approved or denied and passes that decision back through the same process in reverse order.

Settlement and Funding of Payment

For approved transactions, the acquirer submits a settlement request to the card network on behalf of the merchant. The card network then sends the settlement request to the consumer's bank, which issued the card, for clearing. As part of this clearing process, the card network pulls the funds from the consumer's bank and passes it back to the merchant's acquirer for funding to the merchant. The merchant's acquirer will net out any fees associated with the transaction processing prior to funding the merchant's account. These fees include both the card network's fees as well as the acquirer's fees.

What role does the network play in the payment ecosystem?

Card networks play an important role in the payment ecosystem by facilitating the entire authorization, settlement and funding process between the merchant's acquirer and the consumer's bank. By facilitating this complex process, acquirers do not have to interact with each consumer's bank individually.

Card networks also create and govern the rules a merchant must follow to accept the network's cards. Card networks have the authority to penalize a merchant for not following these strict rules by imposing fines or in severe cases prohibiting acceptance of the network's cards.

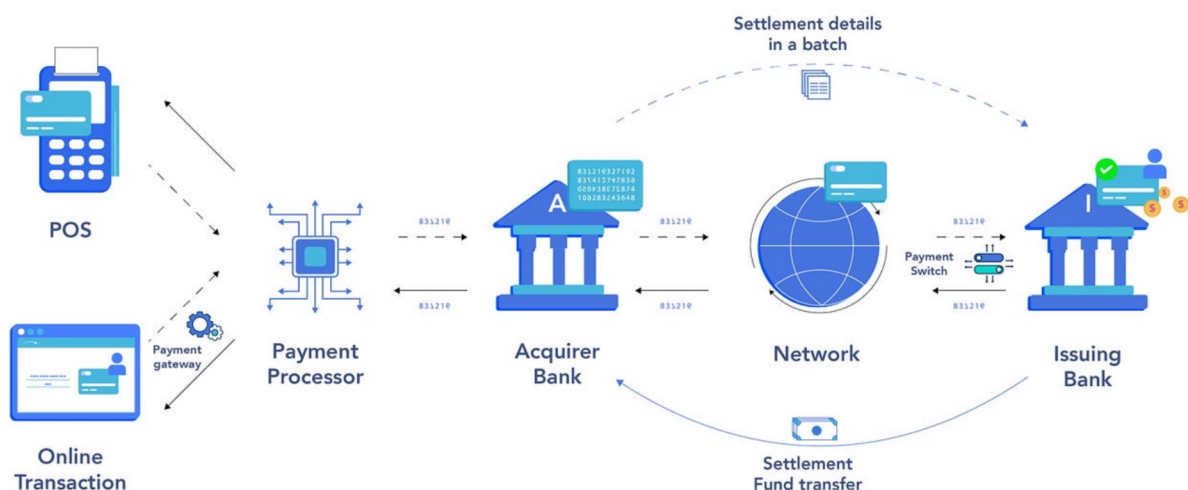
In addition to creating and governing the rules, the card networks set the fees a merchant must pay to accept the network's cards. A large portion of these fees is what is commonly referenced to as "interchange," which is the amount card networks give the consumer's bank for issuing the card.

What role does the financial institution play in the payment ecosystem?

Financial institutions, also referred to as simply the consumer's bank, play a crucial role in the processing of payments. The consumer's bank manages the available balance the consumer has at any given moment. The available balance along with other information received as part of the transaction is what the consumer's bank uses when determining if the transaction should be approved or denied.

For approved transactions, the consumer's bank allows funds to be pulled from the consumer's account and passed to the card network. The card network passes those funds on to the merchant's acquirer, whom deposits the funds into the merchant's account (less any transaction fees).

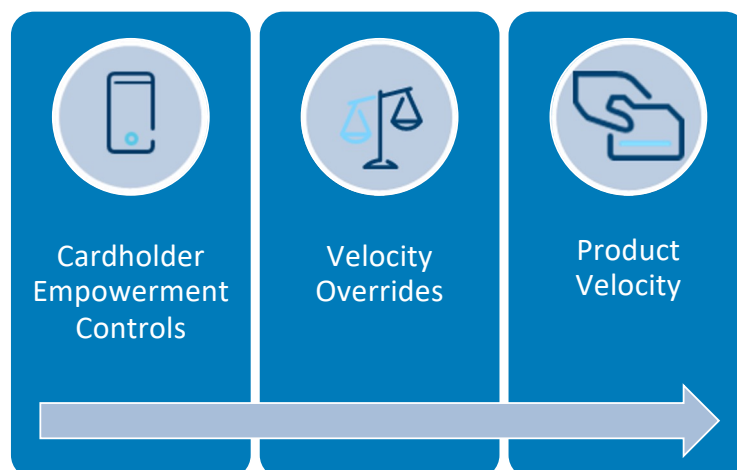
Card Processing Flow



Authorization Types

POS		ATM
• Purchase / Sales Draft • Quasi Cash • E-commerce • Telephone Order • Mail Order • Recurring Payments • Purchase with Cashback • Cheque request • Credit Voucher / Refund • Debit Adjustment • Credit Adjustment	• Pre-Authorization / Incremental / Completion • Pre-Authorization / Completion • P2P Debit • P2P Credit (OCT) • Account Verification • PIN Validation • Instalment Inquiry • Instalment Enrolment • Cash Advance • Payment to account– account can be credited	• Cash Withdrawal • Deposit • Linked Account Inquiry • Account to Account Transfer • Mini Statement – Financial • Mini Statement – Rewards • Rewards Redemption • Utility Bill Payment • Balance Inquiry – Financial • Balance Enquiry - Rewards • PIN Unblock • PIN Change

Authorization Control Flow



Cardholder Driven Authorization Controls



Transaction Type

- Block / allow based on transaction type



MCCs

- Block / allow specific MCCs



Geographic Country

- Block / allow specific countries or regions



Amount Range

- Specify amount range for single authorization (from and to amount)



Date and Time

- Specify specific date & time range for card usage per day (start date & time, end date & time, days/months)



Velocity

- Control velocity settings e.g. min/max txn. amount and count



Currency

- Block / allow specific currencies

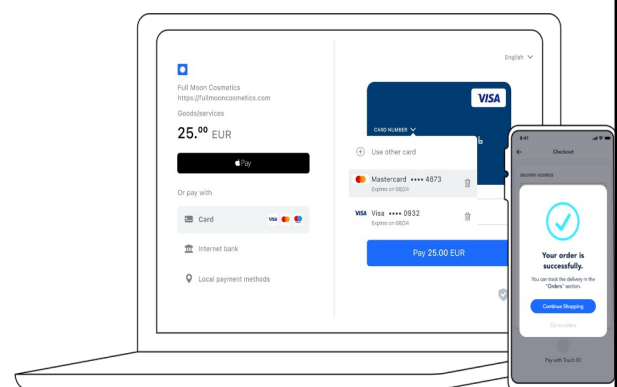


Transaction Entry Mode

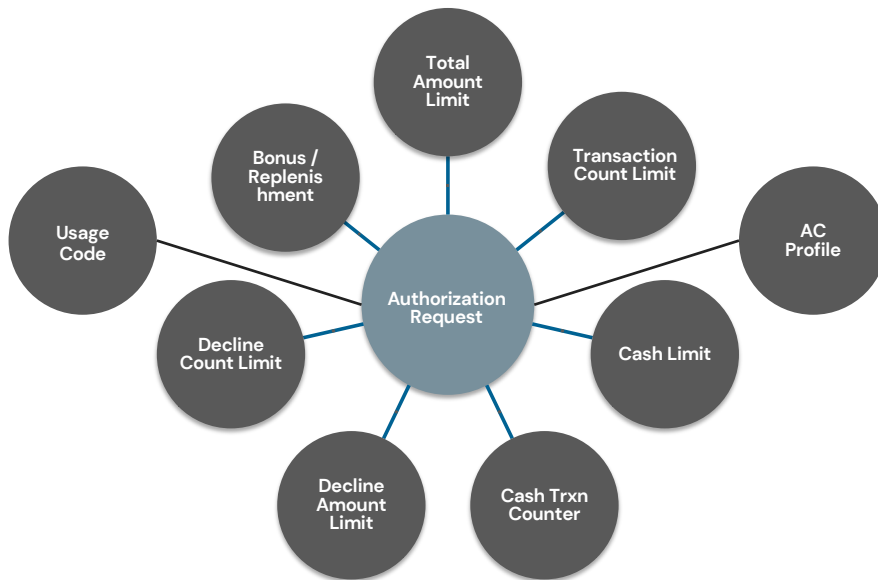
- Block / allow entry modes e.g. POS, ATM, contactless, e-commerce

Non-Financial Checks

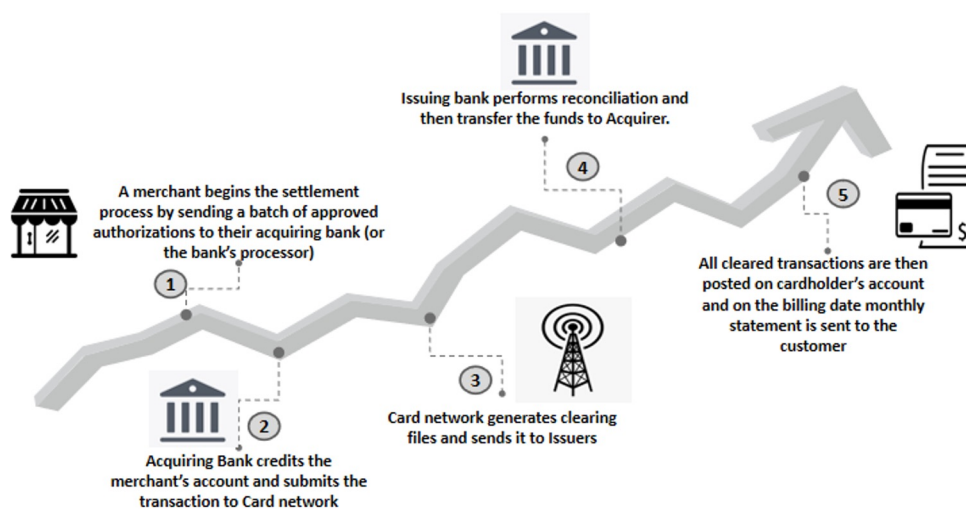
Card PAN
 Card Expiry Date
 Card Activation
 Card Authorization Status
 Card Security Values
 PIN Verification
 PIN Retries
 MCC and ACP Velocities
 ACP Blocking
 Card and Group Usage (ACPs)
 Account Verification
 Group Level Velocities
 Etc.



Risk Domain – Authorisation Controls



Clearing and Settlement



TBSYS

Clearing and Settlement

So to start with, clearing and settlement in financial service industry refers to all activities from the time a commitment is made for a transaction until it is settled. So the transactions which has been successfully authorized by Issuing Bank has to be settled before sales can be deposited into the merchant's bank account. When it comes to Credit card settlement, this is usually being done in three stages:

Stage 1 - Acquiring Settlement

Payments made through credit card is not completed until the transaction information is submitted to the processing bank(Acquiring Bank). Acquirer credits the merchant's account after adjusting the settlement amount with Merchant Discount Rate(MDR) and submits the transaction to card schemes(VISA, MasterCard etc.) in outgoing settlement file

Stage 2 - Clearing

Through this process Issuing Bank exchanges transaction information with the Acquiring Bank. Card networks then further break outgoing settlement files into clearing files and is sent to different Issuing banks.

Clean transactions are billed to the customer and gets reflected in the cardholder's monthly statement. All Bad transactions are sent back as chargebacks to the Acquirer bank through the Card schemes.

Stage 3 - Settlement

Settlement is the exchange of funds between a card issuer and an acquiring bank for all Clean transactions that would be billed to the customer. The cardholder is responsible for repaying his or her issuing bank for the purchases that has been billed on the statement and any accrued interest/associated fees.

Issuing Bank also levies an Interchange fees on the Acquirer and adjust the same while transferring the fund to Acquirer.

Reconciliation

Credit card reconciliation is an accounting process of double-checking and verification of credit accounts. The purpose of financial reconciliations in general is to demonstrate the accuracy and completeness of GL accounts through comparison to external transaction data sources. In this case, incoming or outgoing card payments recorded in the company accounts must be consistent with the payment provider statements of completed transactions.

Issuer Reconciliation	-	Incoming Files and customer Accounts (GL)
Acquirer Reconciliation	-	Outgoing files and Merchant Transactions
Merchant Reconciliation	-	Merchant Settlement and POS transaction
Corporate Reconciliation	-	Account Statement and Expenses

TBYS

Přestávka

Nákladovost a výnosnost

Card processing fees

The whole operation of credit card settlement and processing is notoriously confusing and complex. Still, it's made easy for a price, and that is your card processing fees. This amount is charged to the merchant based on the payment processor he is using.

Payment processors like the fintech providers who provide the payment infrastructure in the selling platform are the ones that collect this fee. It is then split among the other active players in the credit card processing framework.

Credit card processing fees are broken into

- **Interchange:** The commission fee that goes to the issuer bank, non-negotiable.
- **Assessments:** The commission fee that goes to the card network brand, non-negotiable.
- **Markup:** The commission fee that goes to the acquirer processor, negotiable.

Merchant Pricing

Interchange ++

Merchant contract for **Interchange + Scheme Fees + Merchant Service Fee**. This is known as **Interchange ++**. You will be quoted a price for debit and credit cards and that is the price you pay on top of the Interchange & Scheme Fees.

Blend

Merchant has one price for all cards, for small merchants, which known card portfolio

Interchange Fees

Payment Product	General	Comment	Who
Consumer Debit	0,20%	regulated	Acquirer to Issuer
Consumer Credit	0,30%	regulator	Acquirer to Issuer
Business	1,5% - 2,0%	non-regulated	Acquirer to Issuer
Meal Vouchers	2,5%	Non-regulated, RAN	Acquirer to Issuer
ATM Withdrawal	0,5 EUR	domestic	Issuer to Acquirer

Comments

- Fees are regulated in EU
- European interregional and intra-location (POS) interchange
- Domestic agreements e.g. ATM fees (AT - 0), Interchange Fee (PL Business Card the same as consumer)
- Cross border and international transactions have different conditions

Additional Fees to Customer

Card surcharge fee

A surcharge is an extra fee that a business or merchant adds to the price of a purchase when payment is made using a credit card instead of cash. The surcharge is often a percentage of the overall purchase cost and can range from 1% to 4%.

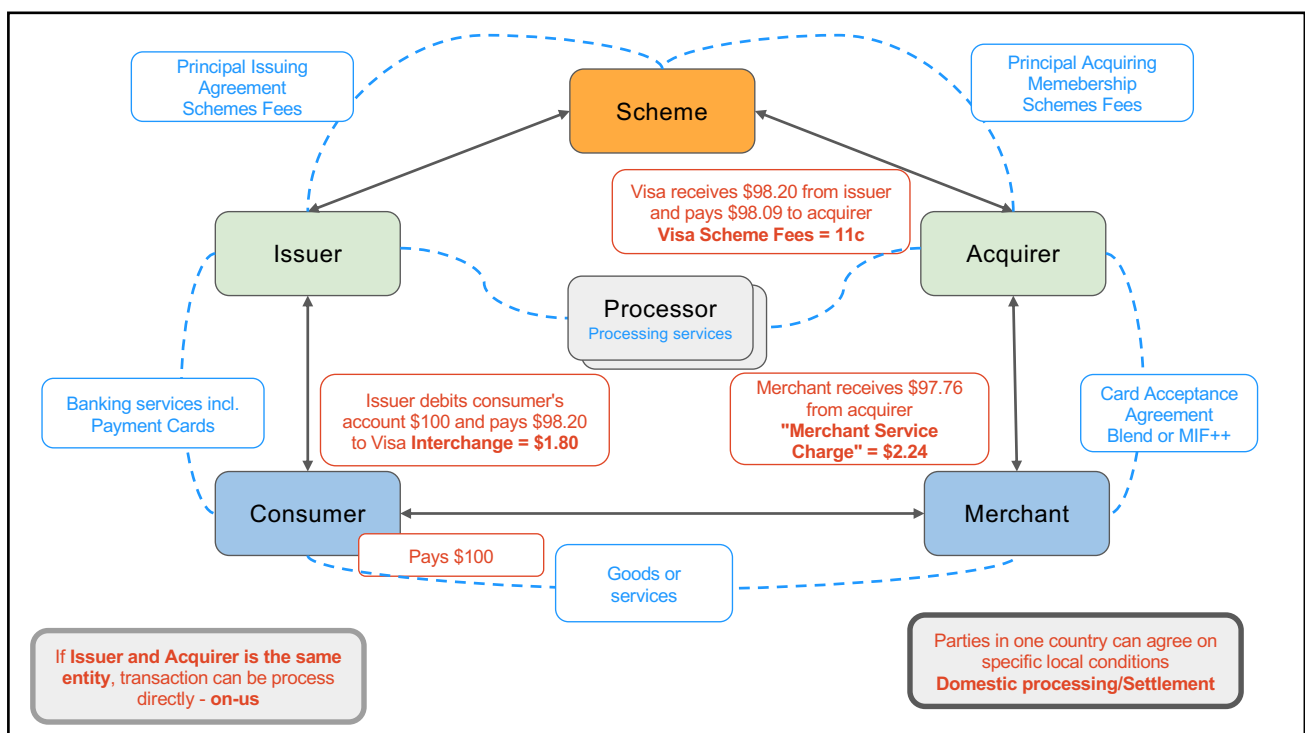
Foreign Transaction Fees

Foreign transaction fees are a predetermined percentage charged by your credit card issuer for making a purchase from a foreign merchant.

The fee is clearly stated on your credit card agreement and can range from 0% to 3%. Before you travel, determine what your foreign transaction fee is and if you hold a card that doesn't have one.

Dynamic Currency Conversion (DCC)

While a foreign transaction fee is charged by your credit card issuer, a currency conversion fee can be charged by the credit card payment processor or the individual merchant. These fees must be disclosed as a transaction fee on your card agreement. In most cases, this fee is built into the foreign transaction fee assigned to your card. A foreign transaction fee of 3% may comprise a 2% foreign transaction fee and a 1% currency conversion fee.



Issuer Fee Types



Transaction Fees

- Cash Advance Fee at CXB ATMs
- Cash Advance Fee at non-CXB ATMs
- Balance Inquiry Fee
- ATM Mini Statement Fee
- etc



Service Fees –Card

- Card Replacement Fee
- Card Issuance Fee
- Primary Card Annual Fee
- Supplementary Card Annual Fee
- Photo Card Fee (manual Fee)
- Card Delivery Fee
- Installment One Time Fee



Service Fees – Account

- Paper Statement Fee
- Advance Payment Manual Fee
- Installment One Time Fee
- Direct Debit Setup Fee

Card related Costs and Profit

Issuer

Costs

- Operational and infrastructure Costs
- Transaction Processing Fees
- Scheme Costs
- Compliance and Regulatory Costs
- Fraud and Security Costs
- Card Production Costs
- Rewards and Incentives
- Chargeback

Profit

- Interchange Fees
- Foreign Exchange Fees
- Interest Income (for Credit Cards)
- Annual Fees
- Late Payment Fees and Penalties
- Cross-Selling and Upselling
- Investment Income

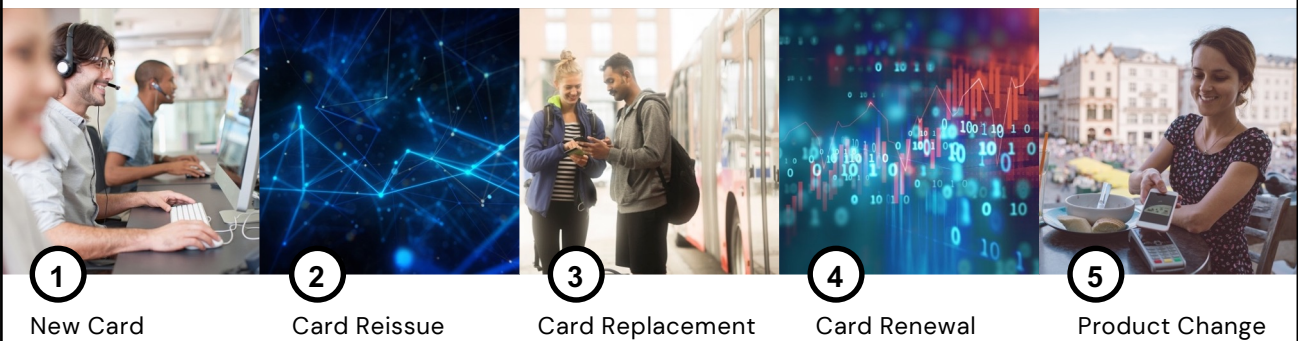
Acquirer

- Card acceptance (POS, eCommerce)
- Sales network

- Markup on Merchant Services Charge
- Value Added Services

Personalizace karet

Card Lifecycle



Card Production Functions



Card Production Triggers

- Triggered whenever a new card record is created in the system, or a new card plastic is required for an existing record.



PIN Management

- PIN generation options
- PIN generation per card production journey
- PIN management options via APIs
- Reissue or replace PIN
- Security data generation



Embossing File Generation

- The ability to include data in the embossing file from various sources – provided data exists within the database
- Generate different embossing file segregation (e.g. by product) – if needed.



Card Activation Options

- No Activation
- Manual Activation
- Automatic Activation
- Activation via API

Alternativní platby

eWallets

An e-wallet is a secure money management app or online platform that allows you to make purchases with retailers on-site, transfer or send money and track rewards programs. You can link the e-wallet to your bank account or pay as you go with a prepaid option.

E-wallets are mobile or computer-based applications that facilitate online transactions, cashless in-store payments and peer-to-peer transfers.

E-wallets store credit cards, debit cards, boarding passes, identification cards, membership cards and more in a digitalised form all in one place.

- Apple Pay, Google Pay, Samsung Pay
- Revolut, Twisto
- Paypal, Amazon Pay, Curve



Alternative Payment Methods

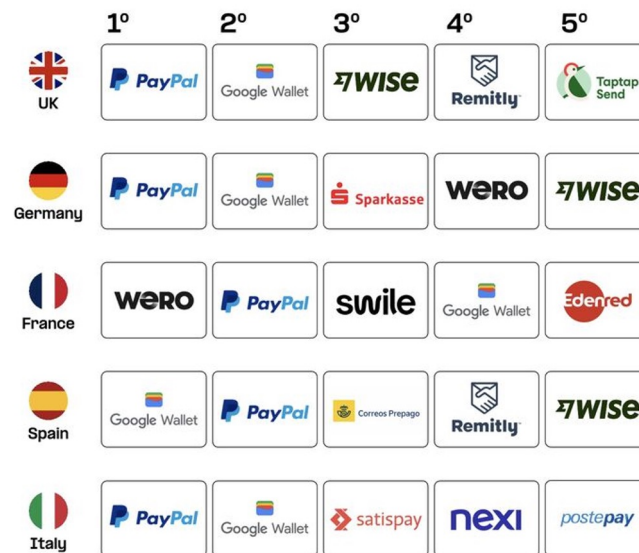
Seventy-seven percent of global online (20-30% in CZ) purchases are made with a local or alternative payment method rather than with a payment card. Sometime they covers specific need, provide better user experience or lower costs for acceptance

- Bank transfers
- Buy now, pay later
- Card-based payment methods
- Card wallets
- Carrier billing
- Cash-based payment methods
- E-wallets
- Mobile wallets
- Pass-through wallet
- Prepaid vouchers
- Virtual cards



How Europeans pay

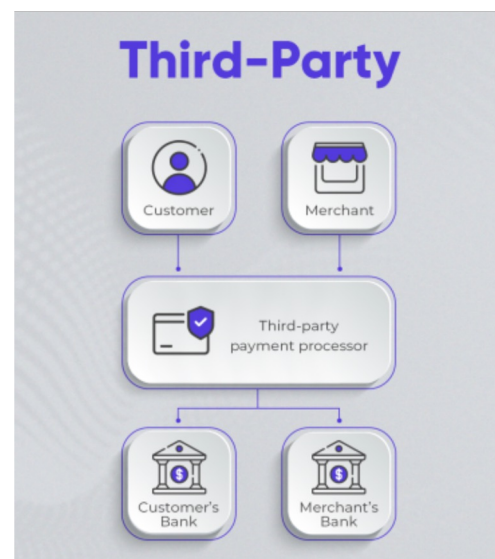
Top downloaded Digital Wallets & P2P Payment Apps



Third Party System

Third-party payments involve an additional player, usually a payment processor, to execute the transaction in addition to the seller and buyer. The payment processor receives the customer's payment information, reviews it, and uses anti-fraud systems before approving the transaction completion.

Paypal is an excellent example of a third-party payment player. It uses the information of a credit card provided by the buyer account to process the transaction. At the same time, the merchant has no contact with any sensitive information.



Co-Branded Cards

Co-branded cards are payment cards that carry the branding of both a financial issuing institution (like a bank or credit card company) and a non-financial partner, typically a retail merchant, airline, hotel chain, or other businesses.

KEY TAKEAWAYS

- A co-branded card is issued by two parties—typically, a retailer and a card issuer or card network—and usually bears the logos of both.
- Co-branded cards can be used anywhere that type of card (such as a Visa or Mastercard) is accepted.
- Airlines were the earliest adopters of co-branded cards.
- Many retail stores offer co-branded cards in addition to their own proprietary cards.
- Co-branding allow private brand cards to be accepted outside of the close network
- Scheme fees are usually decreased if used in close network
- More expensive than close loop cards

USES CASES

- Coobrand with local scheme (e.g. Girocard or Carte Bancaire) for acceptance outside of domestic network
- Meal Vouchers - benefit from acceptance network and special interchange fee
- Retailer card - business case is usually build on credit card)

Děkuji za pozornost