**2.1 Understand the Industry**

**1. Explain the money flow, the information flow and the role of the main players in the payment industry.**

[Payment processing Industry Overview](https://www.youtube.com/watch?v=k76g9jQMxAo)

Example:

[Diagrama

Descrição gerada automaticamente com confiança média](https://www.google.com/imgres?imgurl=https%3A%2F%2Fmiro.medium.com%2Fmax%2F1400%2F1*Fur0f2-IM0JgTcmbblIhlw.png&imgrefurl=https%3A%2F%2Flucascmrosa.medium.com%2Fsistemas-de-pagamentos-i-cart%25C3%25B5es-53ece499f9e3&tbnid=MT67NAoTmDcZLM&vet=12ahUKEwjSqLbO66z1AhXzA9QKHTtFAn0QMygGegQIARBN..i&docid=utKuZIwot4cuGM&w=836&h=290&q=sub%20acquirer%20o%20que%20%C3%A9&ved=2ahUKEwjSqLbO66z1AhXzA9QKHTtFAn0QMygGegQIARBN)

\*Autorização

1. O cliente paga por bens ou serviços usando um cartão de crédito no ponto de venda do comerciante (Point of Sale — POS).
2. O POS captura as informações do cartão e as envia ao Adquirente.
3. A adquirente solicita a bandeira para a autorização do banco emissor.
4. A bandeira envia as transações para o banco emissor do cartão (por exemplo: Itau), para obter a autorização. O banco emissor verifica a transação, aprovando ou negando de acordo com o limite do cliente e a análise de risco da transação.
5. O banco emissor envia a autorização de volta a bandeira e a adquirente, autorizando a compra no POS.

\*Compensação e Liquidação

A compensação é o processo pelo qual a bandeira coleta dados da transação do adquirente, valoriza a transação, aplica análises de risco, calcula taxas, cobranças e entrega as informações validadas ao emissor para lançamento na conta do titular do cartão.

A liquidação é o processo de acumular informações da compensação, determinando o valor líquido de liquidação de cada membro (em outras palavras, quem deve o que a quem) e iniciando a troca de fundos.

1. O banco emissor envia o pagamento para a adquirente por meio de uma câmera de compensação (clearing house).
2. A adquirente paga o merchant.
3. O dono do cartão paga o banco emissor por meio da fatura do cartão.

First things first, the customer or cardholder buy a product or a service from the merchant. The information of the purchase is sent from the merchant to the acquirer,we have informations like: amount of the purchase, date, time, device id, etc.

The acquirer send a request to the credit card band for the authorization of the Issuing bank. The issuing bank send the approval or deny back to the credit card band and acquirer, and they sent it to the merchant, approving or not the transaction.

This was the information flow, now talking about he money flow, or the green arrows in the picture, The issuing bank sent the payment to the acquirer through the clearing house, responsible to guarantee the security and transparency of transactions.

After that, the acquirer pays the merchant. And in the end of it, the customer needs to pay the inssuing bank (by paying the credit card bill).

* Money flow:
* Information flow:
* Role of the main players:

**2. Explain the difference between acquirer, sub-acquirer and payment gateway, and how the flow explained in the previous question changes for these players.**

* Acquirer (creditor): Responsible for processing payments, meaning that it processes credit card payments on behalf of a merchant. Thorough its network of accredited partners (or acquiring network) it enables a store to offer various payment conditions to its customers.

The acquirer receives the payment information, process it and passes it to the card brand and the issuing bank. Some examples of acquirers are: Rede, Cielo, Stone and Infinity Pay

* Sub-acquirer: Is a company that processes payments and transmits the generated data to the other players involved in the payment flow. Its role is similar to that of an acquirer, but it doesn’t completely replace it due to the lack of autonomy to perform all the functionalities of an acquirer. It can be understood as a kind of Intermediary player between acquirer and store. For example: Paypal and Pagseguro.

Its main advantage are low implementation cost, own anti-fraud system and ease of integration witch makes this a very attractive solution for small stores. On the other hand, that choice of using the sub-acquirer may jeopardize the retailer’s profits because of the high rates charged for each transaction.

* Payment gateway: It is a system that transmits the data of purchases made at a store. It is responsible for sanding this information to acquirer, card brands and issuring banks then obtain a response about the continuation of the process or its cancellation.

In other words, the gateway sends data and receives responses so that you know whether or not a particular purchase should be confirmed.

* Credit Card Brand: They are the ones responsible for defining the business rules for purchases made usian a credit card. They define the standards by witch the acquirer must process the transactions carried out by this payment method. Some examplkes are: Mastercard, Visa, and American Express
* Issuing bank: It is the financial institution responsible for the payment method, be it by bank slip (), debit or credit card. It is the one who, when receiving the data of a purchage made in your store, will either authorize the sale or not. Some examples are: Itau, Santander and Bradesco.

**3. Explain what chargebacks are, how they differ from a cancellation and what is their connection with fraud in the acquiring world.**

Chargeback: It is the act of a customer filing for the return of theis funds directly with the bank. When a buyer makes a purchase, they pay the required amount of money for the transaction. But, on occasion, the customer will request the money back from the merchant. This can happen for several reasons, the top three being payment processing error, fraud, and commercial disagreement.

Another definition is: “A chargeback is a dispute of a purchase that has already been charged to an account that can result in a return of funds.” []

Or: “A chargeback is a credit or debit card charge that is reversed by a bank. This often happens after a cardholder contacts their bank to dispute a transaction, claiming that it resulted from fraud or abuse. The funds are pulled from the merchant's account, and returned to the cardholder's account as part of the chargeback process.”

How it differs from a cancellation: A cancellation needs to occur before capture in the bank, in other words, the customer should not see any operation on their account. This method occurs directly with the customer and the merchant. The difference between cancellation and charge back is that.

O simples estorno costuma ter uma tratativa mais amigável e fácil, diretamente entre consumidor e lojista, enquanto o chargeback é uma contestação de compra que acontece do cliente direto para a administradora do cartão, sem ação do lojista.

Its connection with fraud: Chargebacks are designed to keep customers feeling secure. It helps merchant stay transparent and prevent frauds like:

Purchases by a stolen creditcard;

Customers receive a defected product or does not receive it;

Charges were different by what was displayed;

But it also makes possible the emergence of frauds by the customer. We call those as “Friendly frauds”. Customers abuses the chargeback process in other to steal from merchants.

In both cases, the correct analysis of the case by the acquirer and issuing bank are necessary to prevent fraudulent chargebacks.

**2.2 Solve the problem**

**A client sends you an email asking for a chargeback status. You check the system, and see that we have received his defense documents and sent them to the issuer, but the issuer has denied it. They claim that the cardholder continued to affirm that she did not receive the product, and our documents were not sufficient to prove otherwise.**

**You respond to our client informing that the issuer denied the defense, and the next day he emails you back, extremely angry and disappointed, claiming the product was delivered and that this chargeback is not right.**

**Considering that the chargeback reason is “Product/Service not provided”, what would you do in this situation?**

**R:** In this situation, it could be a friendly fraud, once the Chargeback process is classified as “Product/service not provided” and the issuer confirmed that. But the customer claimed, in the last e-mail, that she did receive the product. Being the opposite of the chargeback reason provided.

So, in other to solve the situation, I would send her an e-mail, instructing her to request a second chargeback (pre-arbitration), considering that the reason of the new chargeback would be different. And request her to provide the correct documentation for her new chargeback.

**3. Get your hands dirty**

**1. Analyze the data provided and present your conclusions.**

Knowing the amount of the transactions, time, user ID and merchant ID, we can assume some transactions that the customer might request the chargeback, whether by a fraud or a situation of multiple “payments” due to any mistake during the purchase.

**2. In addition to the spreadsheet data, what other data would you look at to try to find patterns of possible frauds?**

I think that the transaction location would be a nice addition, because it would bring to us more datail and help us during a chargeback analysis. We could also add an aditional verification step during the transaction approval process.

**3. Considering your conclusions, what could you do to prevent chargebacks?**

Vocabulary

|  |  |
| --- | --- |
| Acquirer | Adquirente |
| Sub-acquirer | Subadquirente/subcredenciador ou facilitador |
| Credit card brand | Bandeiras de cartão |
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