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Review Article

Card Payments Refunds, and Chargebacks in United States of America

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Abstract *- Card payments in the US are secure because of the Authorization and Capture model, but often there is a scope of fraudulent transactions, which leads to disputes being raised by the customer with their bank. Also, customers usually want to return the services or products bought at a merchant due to several reasons, such as customer dissatisfaction with the product or service, poor quality products, or better alternative options. Now, for the Payment Service Providers, Merchants, and Technical Service Providers, it is essential to support both refunds and chargeback processing while protecting merchants from fraudulent chargebacks raised by scam customers. The article will discuss refunds and the chargeback process in detail. Then the article will discuss the reconciliation problem, which arises due to the asynchronous nature of refunds and chargebacks, which also affects payouts, and provide a solution to reconcile the transactions and solve payout problems.*

Keywords *- Refunds, Payouts, Chargebacks, Arbitration, Reconciliation.*

1. Introduction

Card payments in the United States are built upon a foundation of robust security, enabled mainly by the Authorization and Capture model Ref [1]. In this two-step transaction process, the authorization stage confirms the card's validity, verifies the cardholder's identity, and either holds or reserves the necessary funds—without immediately transferring them—thus acting as a safeguard against fraud and payment disputes.

The capture stage then completes the payment by transferring the held funds into the merchant's account. This separation enables businesses to approve payments only upon order fulfillment, such as delayed shipping or hotel stays, while mitigating risk.

However, while this model enhances security, there remains an ever-present risk of fraudulent transactions and legitimate chargebacks, where customers dispute charges through their issuing banks. Additionally, customer-initiated refunds frequently arise due to product dissatisfaction, quality issues, or a preference change.

For Payment Service Providers (PSPs), Merchants, and Technical Service Providers, supporting both refunds and chargeback processing is essential. At the same time, Banks, PSPs, and TSPs must protect merchants from scam-driven or frivolous chargebacks from customers, which can erode margins and reputational trust.

Refunds vs. Chargebacks: What is the Difference?

- Refund: Initiated by the merchant, typically voluntary, for reasons such as returns, cancellations, or customer dissatisfaction.
- Chargeback: A consumer-driven dispute where the issuing bank reverses the payment—often accompanied by fees and additional processing complexity Ref [2].

Both types of reversals impact merchant cash flow and require careful handling, but chargebacks particularly pose operational and financial risks that demand proactive dispute resolution.

1.1. Reconciliation Challenges amid Asynchronous Processing

One of the core operational issues that arises is asynchronous transaction flows. Refunds and chargebacks do not always align cleanly with original purchases—they might be processed on different timelines or through separate systems. This misalignment can cascade into reconciliation problems, affecting how payouts are calculated, how ledgers are balanced, and how financial accounting remains accurate. Ref [3]

- Manual reconciliation, particularly in high-volume contexts, is error-prone, inefficient, and time-consuming, leading to revenue leakage and frustrated customers.
- Automated solutions offer a remedy—intelligent matching, real-time discrepancy detection, and audit-

ready reporting help streamline reconciliation, mitigate financial risk, and enhance compliance

1.2. Merchants' Sanctions

Merchants who do not take necessary steps to prevent chargebacks can face significant losses, which include chargeback fees and product or service fees. Apart from that, merchants can also face penalties and sanctions from PSP and Card Schemes if excessive genuine chargebacks are raised by the customer and the customer wins the case.

2. Introduction to Refund / Chargeback

Refund is the process of returning the product or service bought by the customer from the merchant. Refunds usually take 5-10 business days, depending on the merchant and type of product or service. For example, if you are returning something that you bought on an e-commerce website, then for the merchant to issue the refund, the product first has to reach the merchant's warehouse. The quality inspection of the product has to be done to make sure there is no damage to the product or that the product is not used. After that, the merchant will initiate a refund to the customer's card. In the case of subscription, a refund will be initiated to the customer's card as soon as the subscription ends.

Chargebacks, also called disputes, are the process of raising complaints by the customer with their card's issuing bank to get a refund for the product or service that the customer believes was unauthorized or unfair. Chargebacks can happen due to many reasons, including but not limited to:

1. The customer did not authorize the transaction, which can happen if the card is stolen, or deductions are made as part of the transaction that the customer did not authorize.
2. The customer got the service or product from the merchant, but the service or product was not up to the customer's satisfaction, so the customer got frustrated and filed a chargeback.
3. The customer got the service or product from the merchant. After that, the customer tried to return the service or product for any reason, but the merchant denied the refund or delayed the refund. In this case, customers can raise a chargeback with the issuing bank.
4. The customer is fraudulent and raising chargebacks even though there is nothing wrong with the product or services given by the merchant.
5. The customer is fraudulent and raising chargebacks even though there is nothing wrong with the product or services given by the merchant.

Figure 1 shows how refunds typically happen in the case of online (through app/web) payments, which shows several different scenarios depending on the merchant integration for the online payments.

1. Case 1: Merchants integrate with PSPs, PSP then routes the refund request to the acquiring bank, and from there the request goes to the issuing bank through the card networks.
2. Case 2: Merchants integrate with PSPs, where PSPs are also acquiring, so they then send a request to issuing banks through card networks
3. Case 3: Merchants have their own TSP, which routes requests to PSPs with acquiring bank integration. PSP then routes requests to issuing banks through card networks.

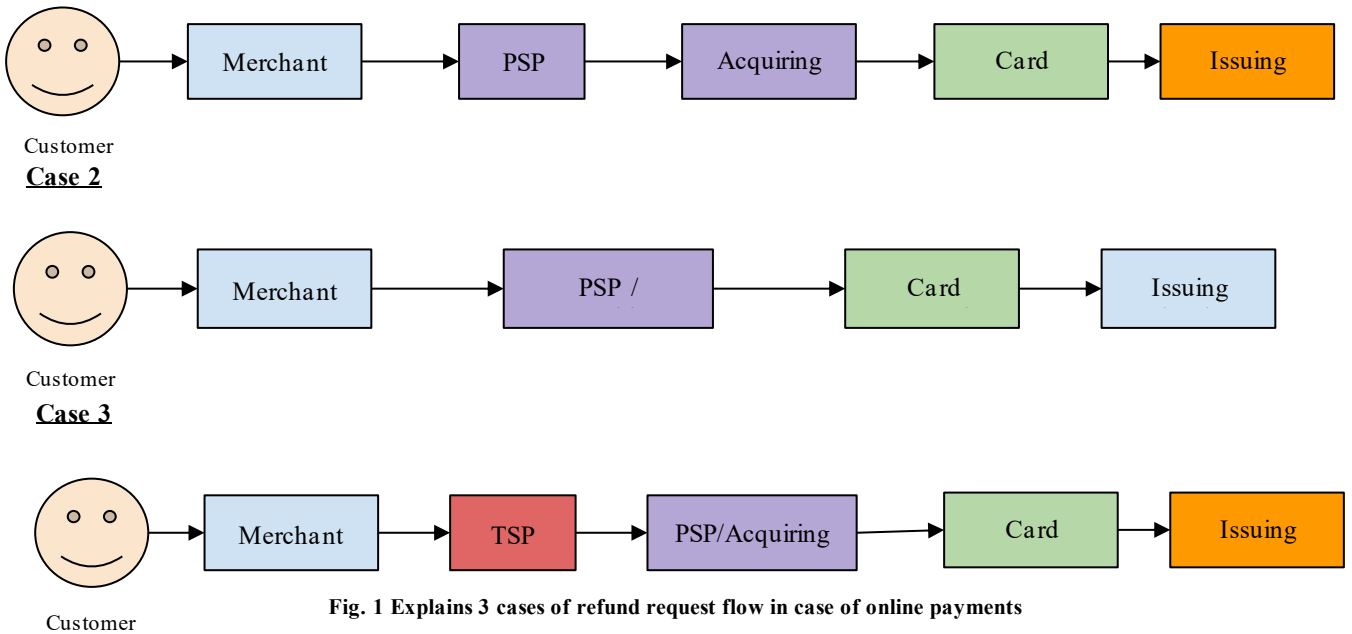

Fig. 1 Explains 3 cases of refund request flow in case of online payments

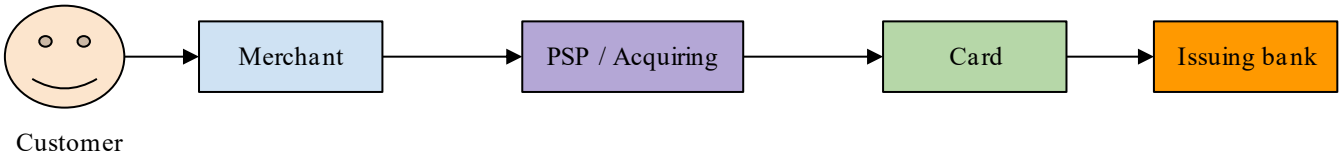

Fig. 2 Explains the refund request flow in case of point-of-sale (POS) merchant offline payments

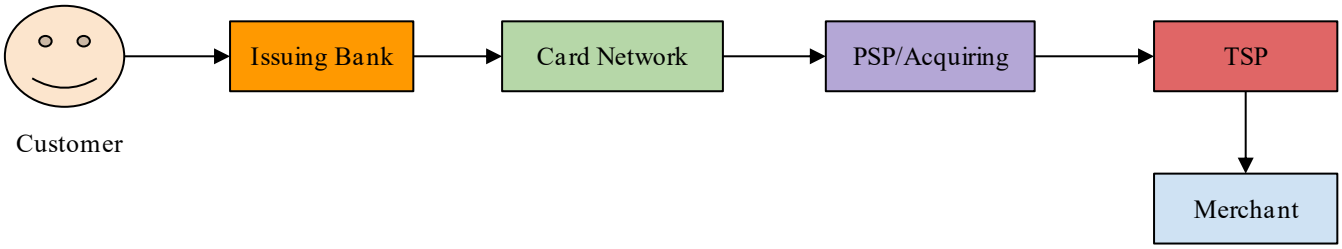

Fig. 3 Explains the chargeback request flow, which starts at the Issuing Bank, and the merchant is notified in the end about this chargeback

Figure 2 shows the refund process for point-of-sale (POS) terminal payments. This is similar to Figure 1, Case 2. Here, merchants initiate the refund through the POS terminal upon verifying the product or service with the customer.

Figure 3 shows how chargebacks are raised and how merchants are notified about the chargebacks. For this case, we will analyze the case where the merchant has its own TSP, and the rest of the cases will be similar. We will discuss the timelines and the detailed steps involved in the process of chargeback in depth in later sections.

3. Chargeback Process and Timelines

In the previous section, we showed the high-level flow of orders in which different entities are informed about the chargeback. In this section, we will discuss the various stages of the chargeback and the timelines involved between these stages.

From the chargeback initiation to case closure, the chargeback case will need to go through various stages, and we call this the Chargeback Cycle or Dispute Cycle. The following are the common chargeback stages:

1. Retrieval Request (Also called Soft Chargeback, which is supported by card schemes where the cardholder requests more information about the transaction from the merchant without actually initiating the chargeback.)
2. Chargeback
3. Representment / Second Presentment
4. Pre-arbitration
5. Pre-arbitration Response
6. Arbitration

The article will explain each of these stages in detail below. The cardholder has 120 days to initiate a chargeback. The timeline goes up to 540 calendar days in some rare cases of natural disaster or emergency. The whole dispute cycle takes about 2 to 4 months to complete. Issuer and acquirer have around 30-45 calendar days to review the case and communicate with cardholders and merchants involved.

Since each card scheme has a different way of handling the chargeback, let us understand how the chargeback process happens and what the meanings of these above stages are in the case of Visa and Mastercard.

For the sake of explanation, let us take a real-world example where Customer A buys USD 200 of shoes from Merchant X using its Master Card. In this case, the chargeback is related to product or service issues or to extra charges or duplicate transactions.

1. First Presentment: It is the original transaction that the merchant sent to the acquirer, which in turn sent the transaction to the issuer via the card network to authorize the transaction on the customer's card.
2. Retrieval Request: Mastercard does not support retrieval requests anymore and has phased them out in most countries.
3. Chargeback: This is when a customer or cardholder raises a dispute with their card-issuing bank. At this stage, the issuing bank gives the customer temporary credit to their credit card or bank account and debits the merchant's account through the acquirer bank.
4. Second Presentment: The merchant can defend this chargeback by giving the relevant evidence to its acquirer. The acquirer will then send the evidence to the issuer bank. This stage usually takes 30 days.
5. Pre-arbitration: The issuer, if it disagrees with the merchant and finds the evidence provided by the merchant insufficient, sends a pre-arbitration to the merchant. This step is the second review stage to challenge the merchant's defence. This stage usually takes 30 days.
6. Pre-arbitration Response: The Merchant can accept or reject the pre-arbitration. This stage usually takes 30 days.

a. If the merchant accepts the Pre-arbitration, it will lose USD 200.
b. If the merchant rejects the Pre-arbitration by providing more evidence, the case will go to the Arbitration stage.

7. Arbitration: At this stage, the issuer will send the case to the card network, and the decision made by Master Card will be binding and final. This stage usually takes 10 days.

So the total time to process a chargeback is 100 calendar days. Figure 4 helps to visualize this case.

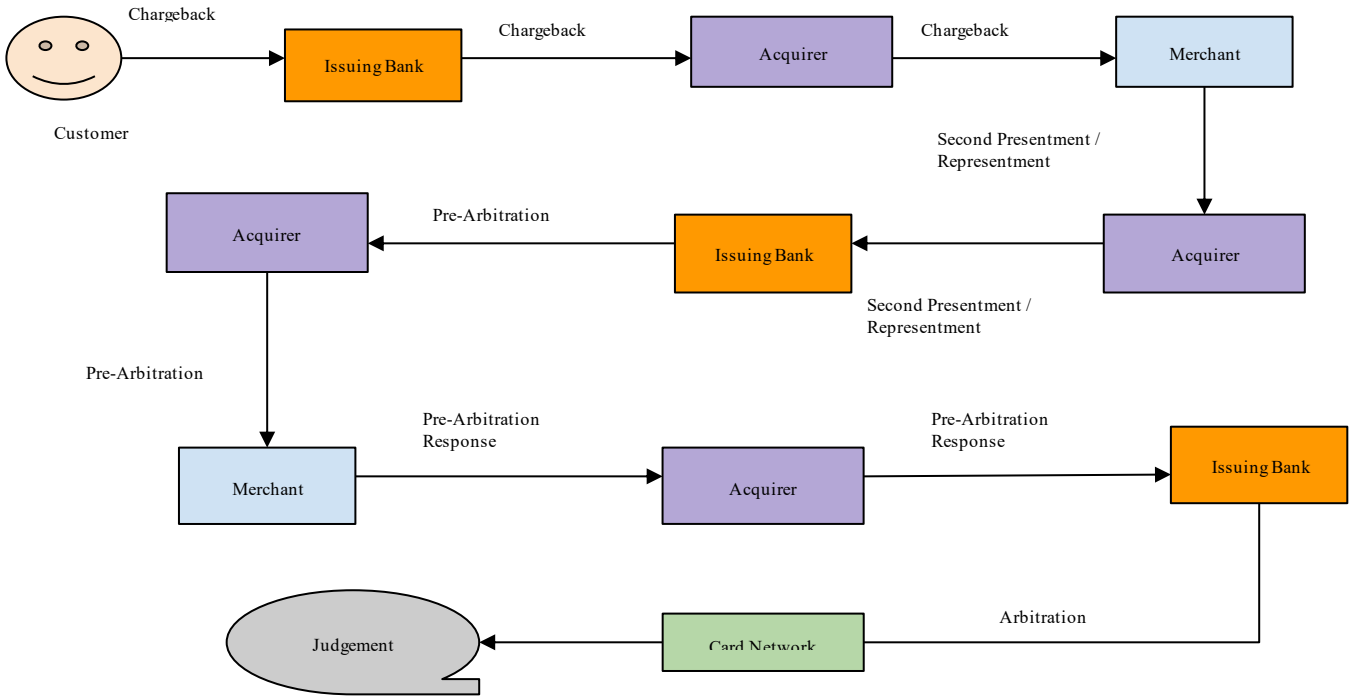

Fig. 4 This flow chart shows different stages of the chargeback and the chargeback information flow in case of product or service-related chargebacks

Now, let us take another example of the Master, where a chargeback is raised by the customer for fraud or unauthorized transactions. Assume that the same USD 200 is not authorized by the customer and is claimed to be a fraudulent transaction by the customer.

1. First Presentment: It is the original transaction that the merchant sent to the acquirer, which in turn sent the transaction to the issuer via the card network to authorize the transaction on the customer's card.
2. Retrieval Request: Mastercard no longer supports retrieval requests and has phased them out in most countries.
3. Chargeback: This is when a customer or cardholder raises a dispute with their card-issuing bank. At this stage, the issuing bank gives the customer temporary credit to their credit card or bank account and debits the merchant's account through the acquirer bank.
4. Pre-arbitration: In this case, since the transaction is marked as fraudulent, merchants have limited defence unless they can prove the actual delivery of the product or services to the customer. So if the merchant disagrees with the issuer and decides to provide the evidence to the issuer, it will send a pre-arbitration notice to the issuer. This stage usually takes 30 days.
5. Pre-arbitration Response: The issuer can accept or reject the merchant's pre-arbitration. This stage usually takes 30 days.
   a. If the issuer accepts the Pre-arbitration, the customer will lose USD 200.
   b. Suppose the issuer rejects the pre-arbitration stage because the evidence is insufficient. In that case, the case will go to the Arbitration stage if the merchant decides to pursue the case further. But merchants do not usually pursue cases like these unless they are very confident, due to the high amount of fees involved in the Arbitration process, which is typically USD 500+
6. Arbitration: At this stage, the merchant will send the case to the card network, and the decision made by Master Card will be binding and final. This stage usually takes 10 days.

In this case, the total time to process a chargeback is 70 calendar days, which is 30 days less than in the case of product or service issues. This is due to the absence of the Second Presentment or Representment stage. Figure 5 helps to visualize this case.

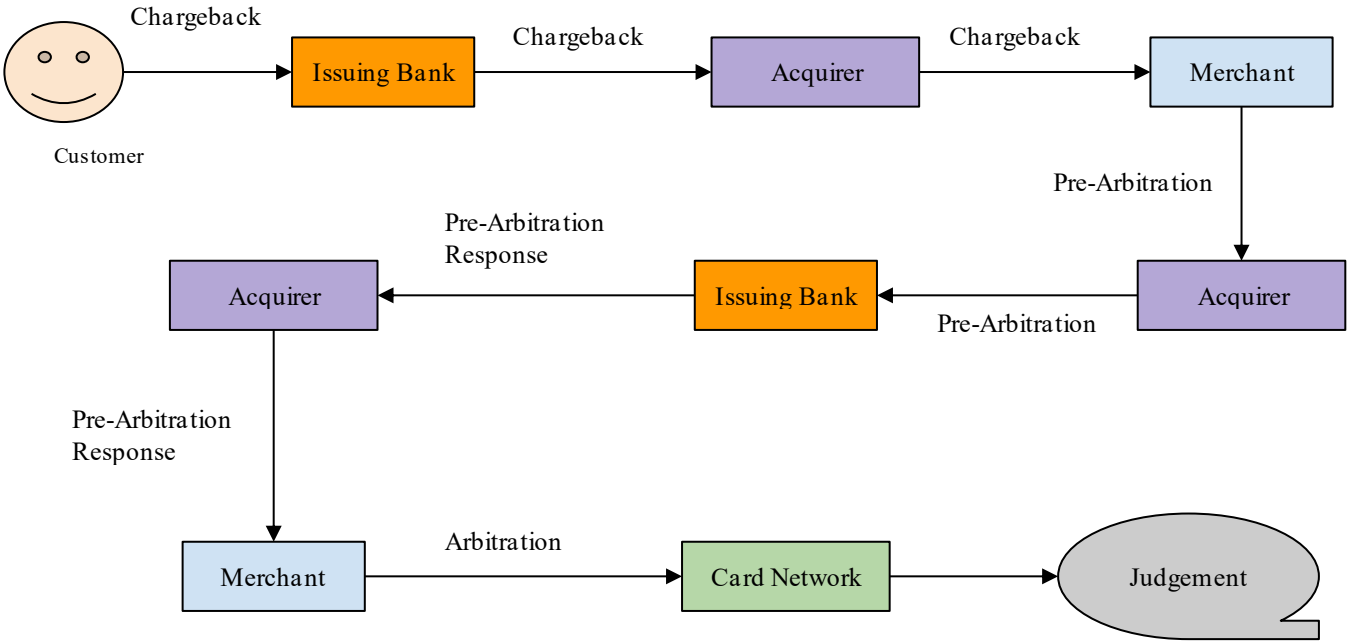

Fig. 5 This flow chart shows different stages of the chargeback and the chargeback information flow in case of fraudulent or unautho rized transaction chargebacks. Note that in this case, there is no second Presentation / Representation as explained in the text.

Now, Visa processes the chargebacks in a similar way, but there are some differences:

1. In the case of Visa, the Second Presentment Stage is called Representment.
2. In the case of Visa, the chargeback process is automated (which is done by the Visa Claims Resolution system), while in the case of Master Card, it is a manual process.
3. The Master Card chargeback process is costlier than that of Visa.

4. Reconciliation & Payout Problems

As discussed in sections 3 and 4 of the article, it is observed that refund and chargeback are asynchronous flows and can happen at any time. Refund timelines are generally 5-10 days, while chargeback timelines are up to 4 months. So it becomes difficult for Merchants, TSPs, and PSPs to maintain consistency in the fund flow. So we can see there will be a race condition between chargebacks and refunds. The following cases can occur:

1. Case 1: Customer raises both a refund and a chargeback together. In this case, there will be a race condition between refund and chargeback.
2. Case 2: The Customer first creates a refund, and after some time, when the customer did not receive the money back, the customer raised a chargeback with the issuing bank.
3. Case 3: The Customer first raised a chargeback, and after some time, also raised a refund on the merchant platform without telling the merchant that it had already raised a chargeback.

So to solve the three problems discussed above, we need to design a system that can handle all these scenarios and does not cause inconsistencies in the fund flow. So merchants and PSPs need to handle such cases so as not to allow chargeback in case a refund is already raised, and inform the issuer bank about it. Also, if the chargeback is already created, then not allowing a refund and rejecting the refund from the merchant gateway or terminal while informing the customer that the chargeback has already been created. So to achieve this reconciliation, we need to maintain a centralized ledger, which will be updated anytime a refund or chargeback is raised. Also, we need to put a locking mechanism on this ledger so that simultaneous updates for the same transaction are not performed on this ledger.

Consider a case where a customer buys product A and product B for each USD 5 and USD 6, respectively. Now, let us consider the following scenario and order of events chronologically:

1. A refund request for product A was received by the merchant and has been successfully processed. So the remaining money in the merchant's account is USD 6.
2. Refund request for product B received by merchant, but processing of the request failed on the merchant TSP or PSP side, so the refund request is not successfully processed, and transaction records are not updated, and on the merchant side, it is still showing processing.
3. Now, if the customer does not receive a refund for product B for a long time, then the customer can raise a chargeback and get USD 5 back. In this case, a chargeback is allowed because in step 3, transaction

records are not updated due to an issue in the merchant TSP or PSP.

4. Now, if the TSP or PSP corrects the refund, they may overrefund the money to the customer, so they have to put constraints in place so that excess money is not refunded to the customer. So, in this case, ideally, TSP or PSP should deny the refund and inform the customer about the status of the refund.

If the refund or chargeback is in process, then that money will be held from the merchant's account with the acquirer or PSP and will not be settled or paid out in the merchant account. Figures 6 and 7 show the amount of chargebacks and refunds in the US for card payments for the year 2025, and the number of chargebacks in different stages of the chargeback process, respectively.

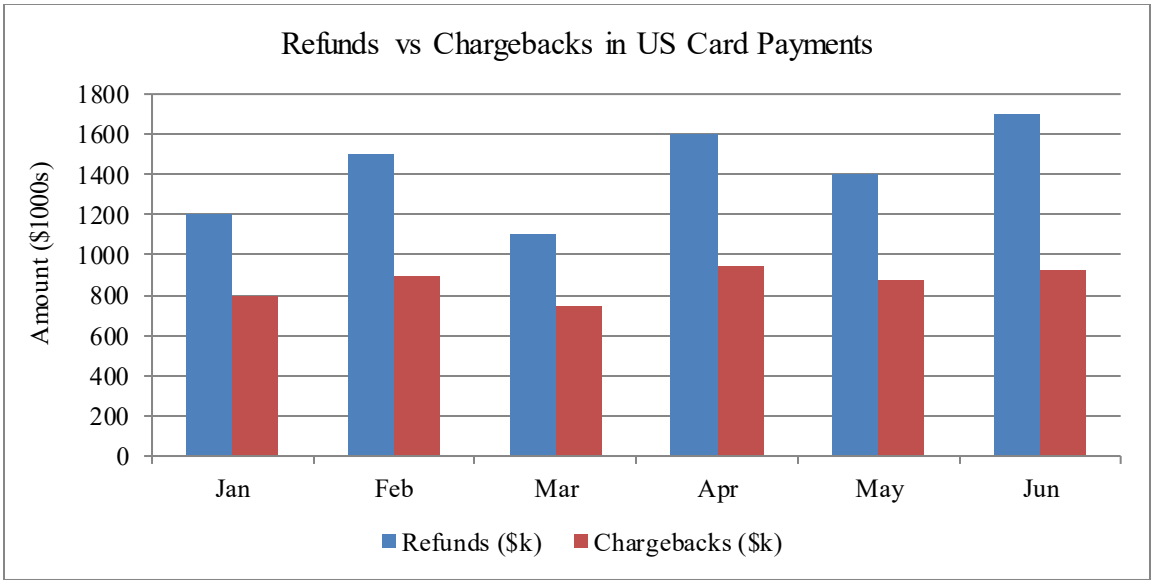

Fig. 6 Shows the number of refunds and chargebacks in the US Card Payments Industry for the year 2025 in $k (thousands of dollars)

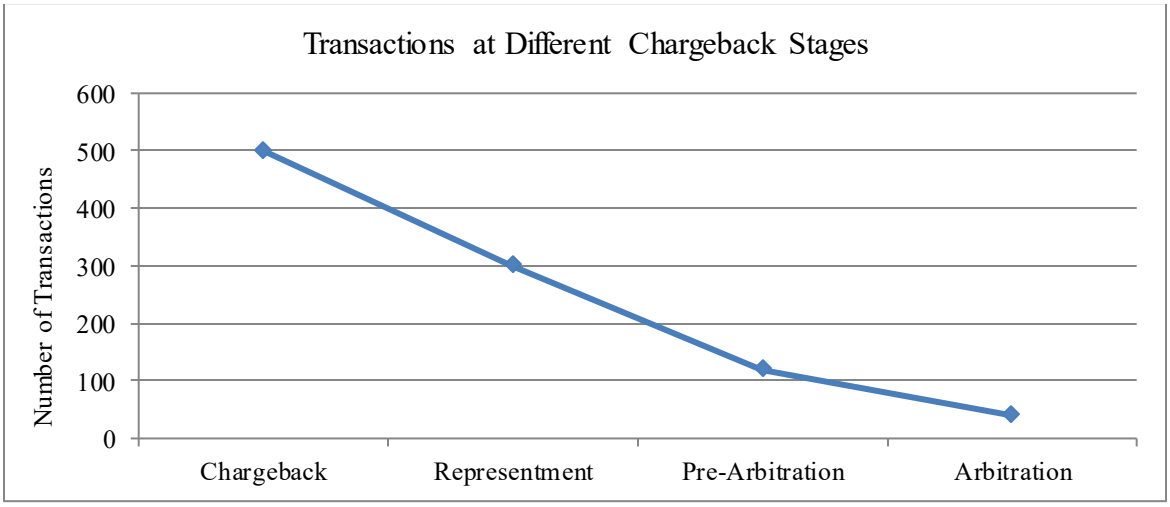

Fig. 7 Shows the number of transactions in different stages of chargebacks for the year 2025

5. Conclusion and Future Scope

This article discusses the refund and chargeback process for card payments. It first introduces the article and then explains what refunds and chargebacks are. Then, it talks about the different stages of chargeback and how the process differs depending on the type of chargeback. Fraudulent and unauthorized transactions have a different chargeback process than chargebacks for products or services issues. It also explains how chargeback is handled by different card networks by taking the example of Visa and Master Card and how their internal process differs. In the future, we will talk about chargeback and refunds in the case of Wallet-based transactions, Account-based transactions, and Peer-to-Peer transactions, which will help understand the complete landscape of payments, refunds, and chargebacks in the United States of America.

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