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Globepay Payment Acceptance Rate

A case study of the Acceptance rate of payments made through Globepay API.

Presented by: Raimi Azeez

The problem

Company

Deel is a pioneering platform revolutionizing global HR by empowering companies to break down staff hiring and management barriers, enabling seamless collaboration and access to opportunities worldwide.

Context

Deel has partnered with Globepay to process all account funding credit and debit card transactions.

- Deel has connectivity into Globepay using their API

Problem statement

Deel is experiencing a decline in the acceptance rate of credit and debit card payments processed by Globepay in the recent period.

The “acceptance rate” is defined as the ratio of accepted transactions to the total attempted transactions.

Acceptance Rate

Acceptance Rate	Decline Rate
69%	31%

How much decline?

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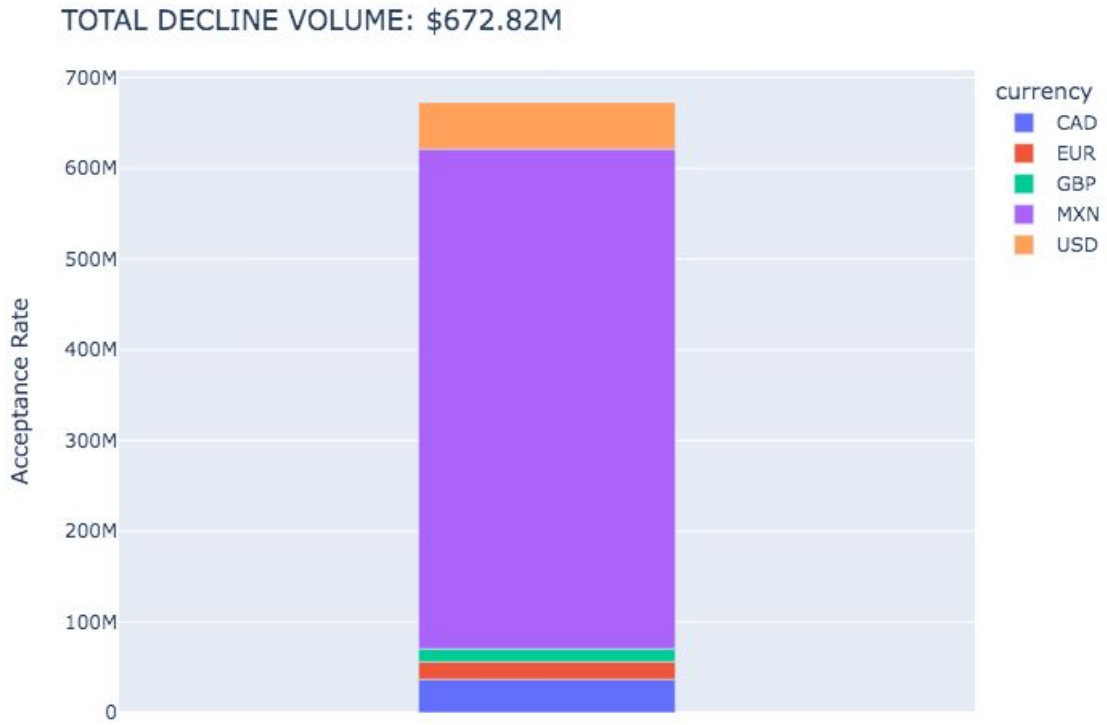

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Root Cause Analysis

Hypothesis

Transactions are getting declined because:

- Currency Conversion.
- Geographic Factors.
- Security Factors (cvv).
- Time Factor (6 months of transaction data).
- Transaction Value (amount).

Data Collection & Pre-processing

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Data from acceptance and chargeback reports.

Dataset description:

- **external_ref** The card expiry year. Format: 4 digits. For example (_0fqf75KiPa0iiviKCSsU)
- **date_time** The timestamp of the transaction.
- **state** The binary state of the transaction. For example: Accepted or Declined.
- **chargeback** If the transaction has been chargedback. For example: True or False
- **amount** The amount that has been charged from the card.
- **currency** The three-character ISO currency code.
- **country** The two-character ISO country code of the card.
- **rates** The exchange rate used. Funds are settled to you in USD.

Exploratory Data Analysis & Visualization

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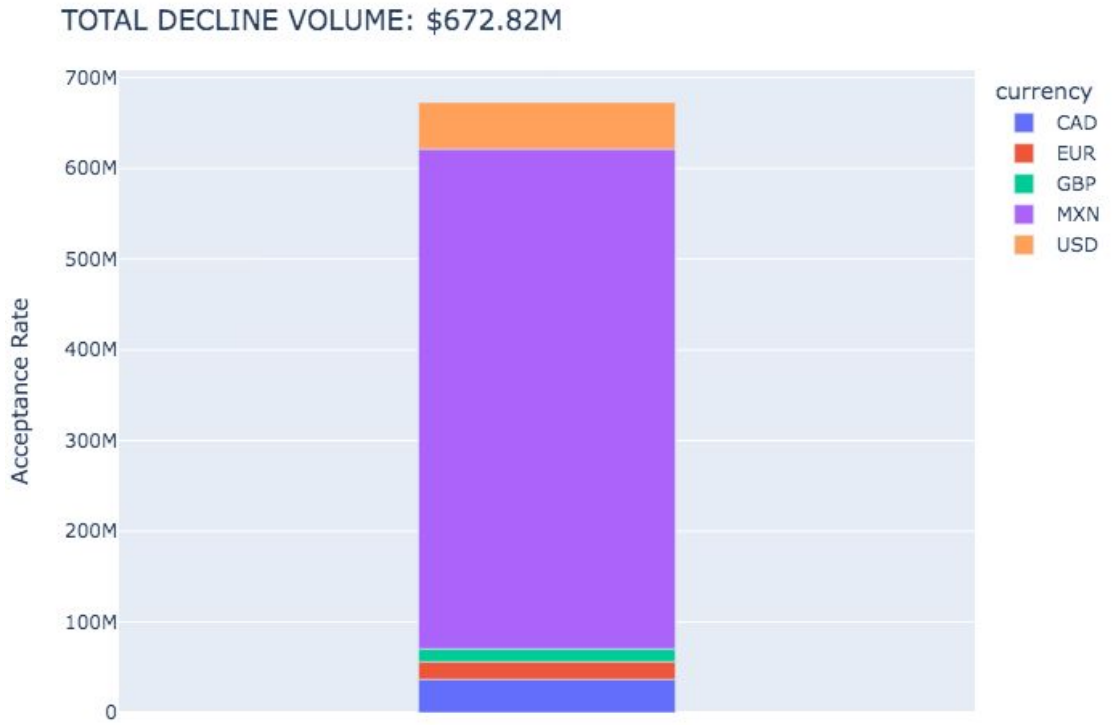

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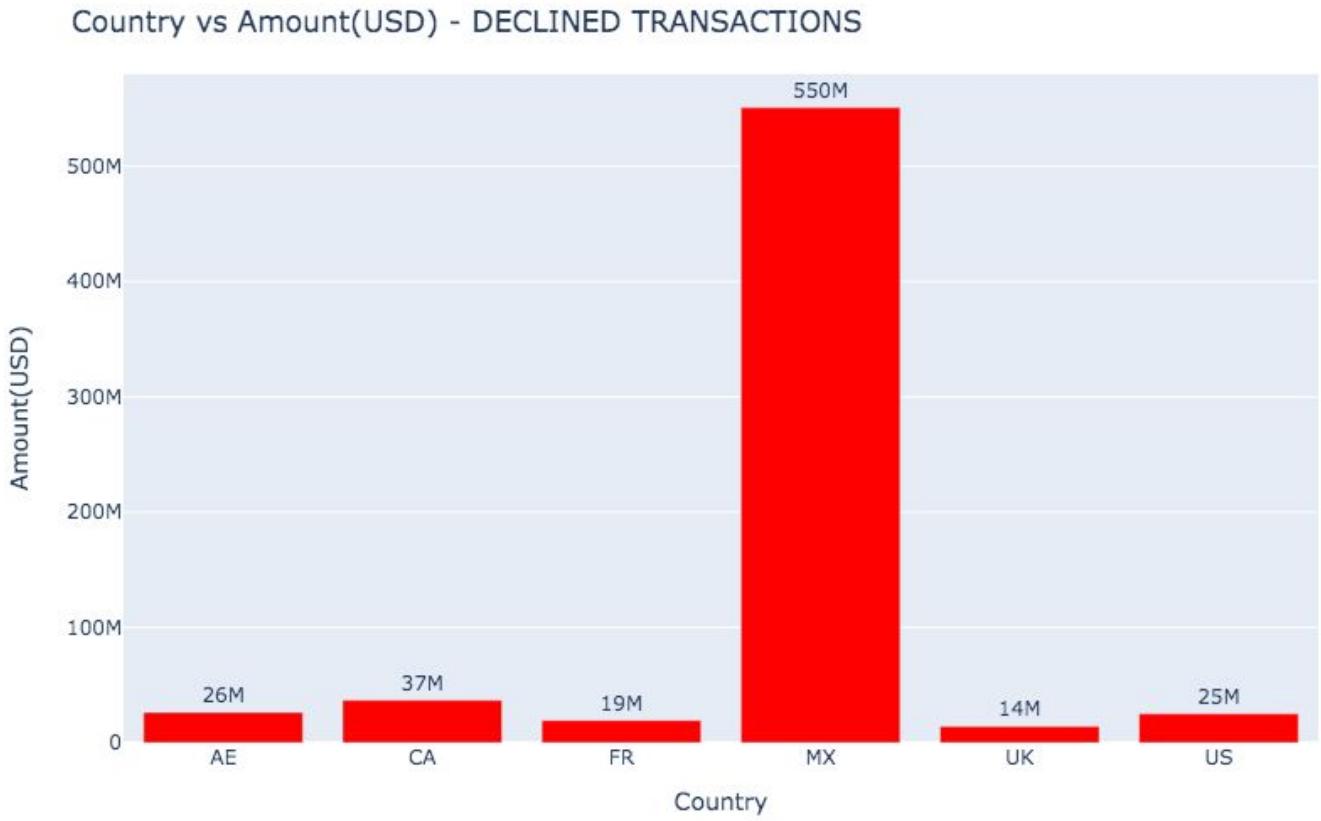

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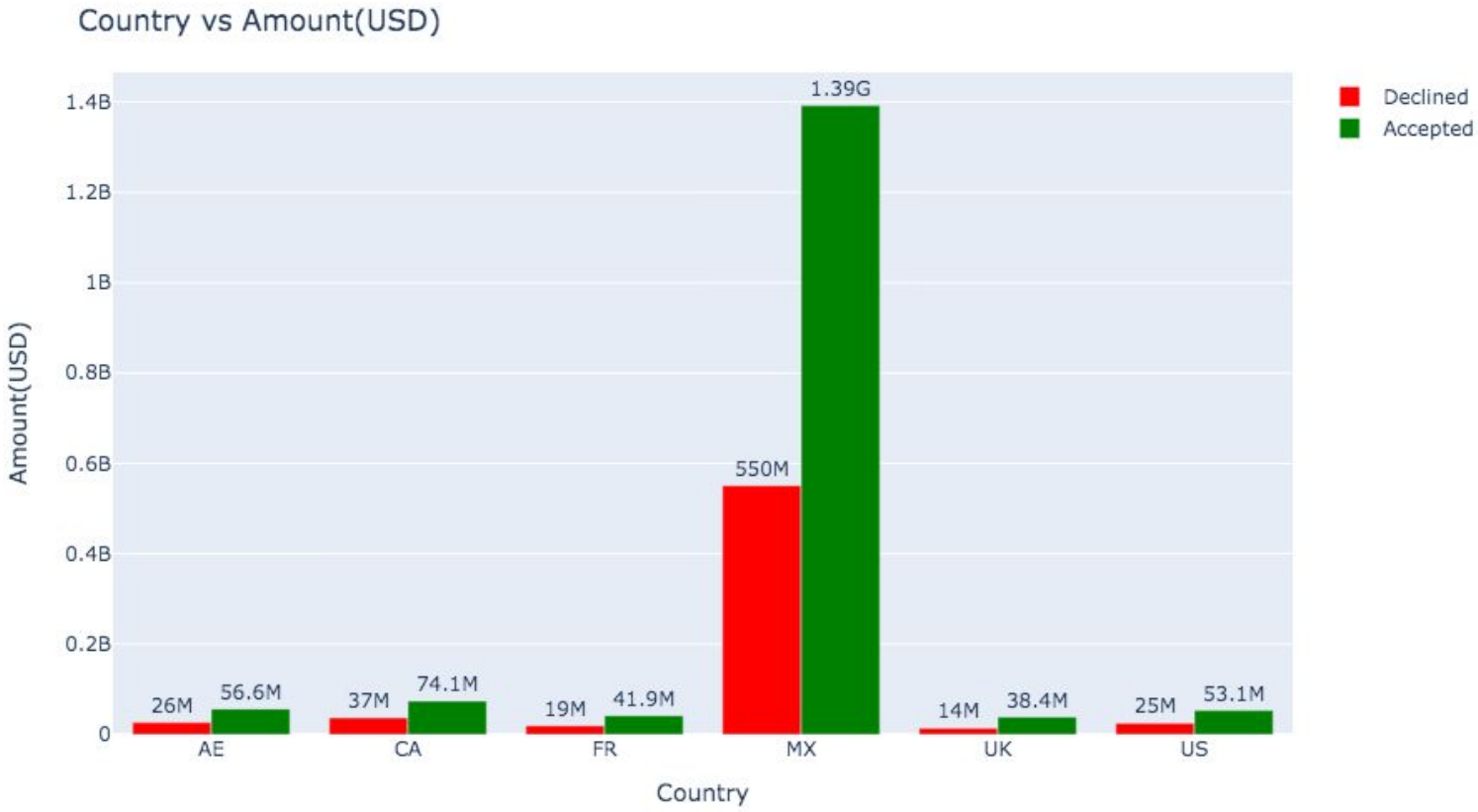

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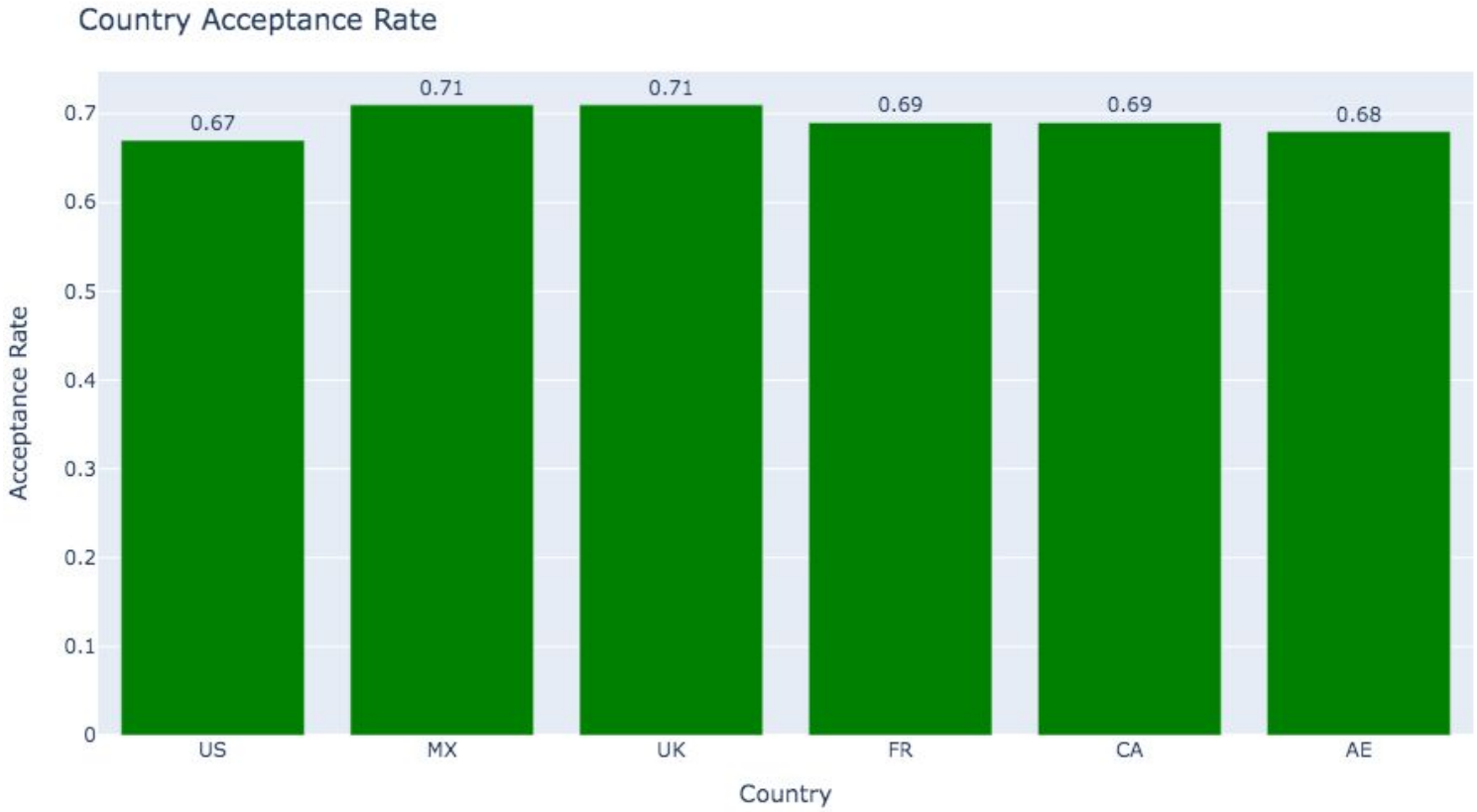

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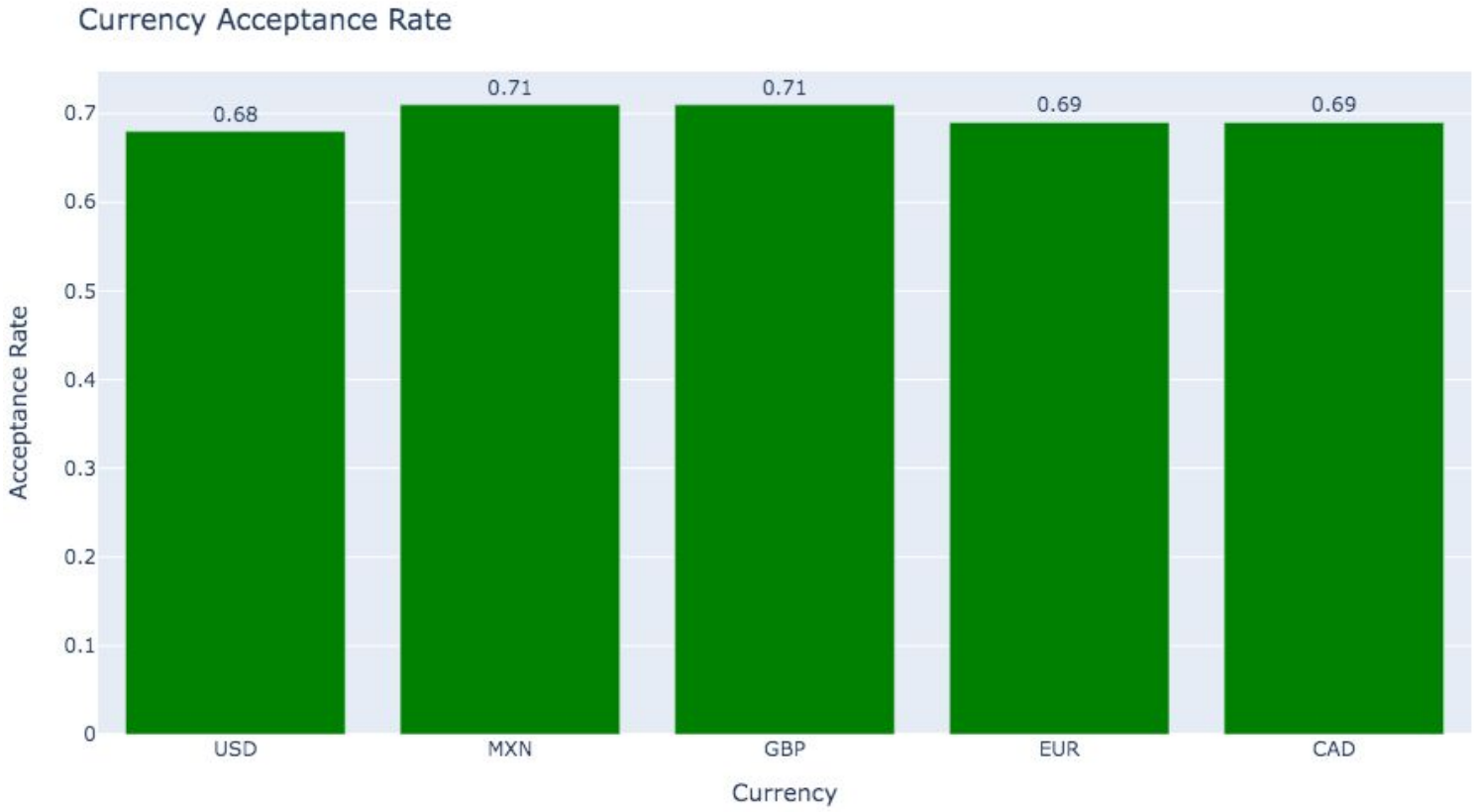

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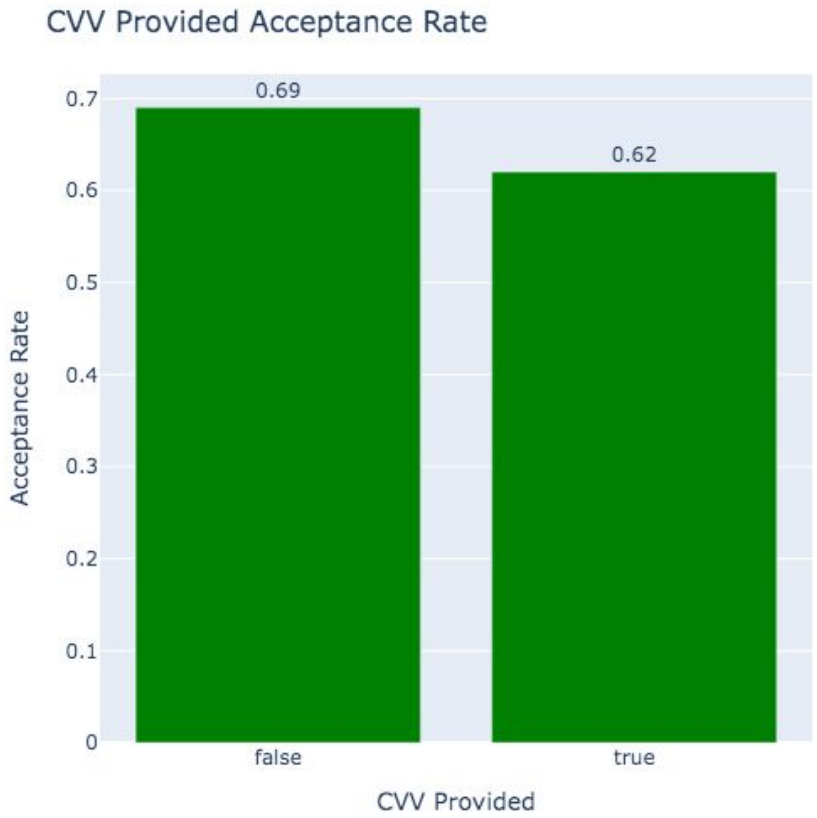

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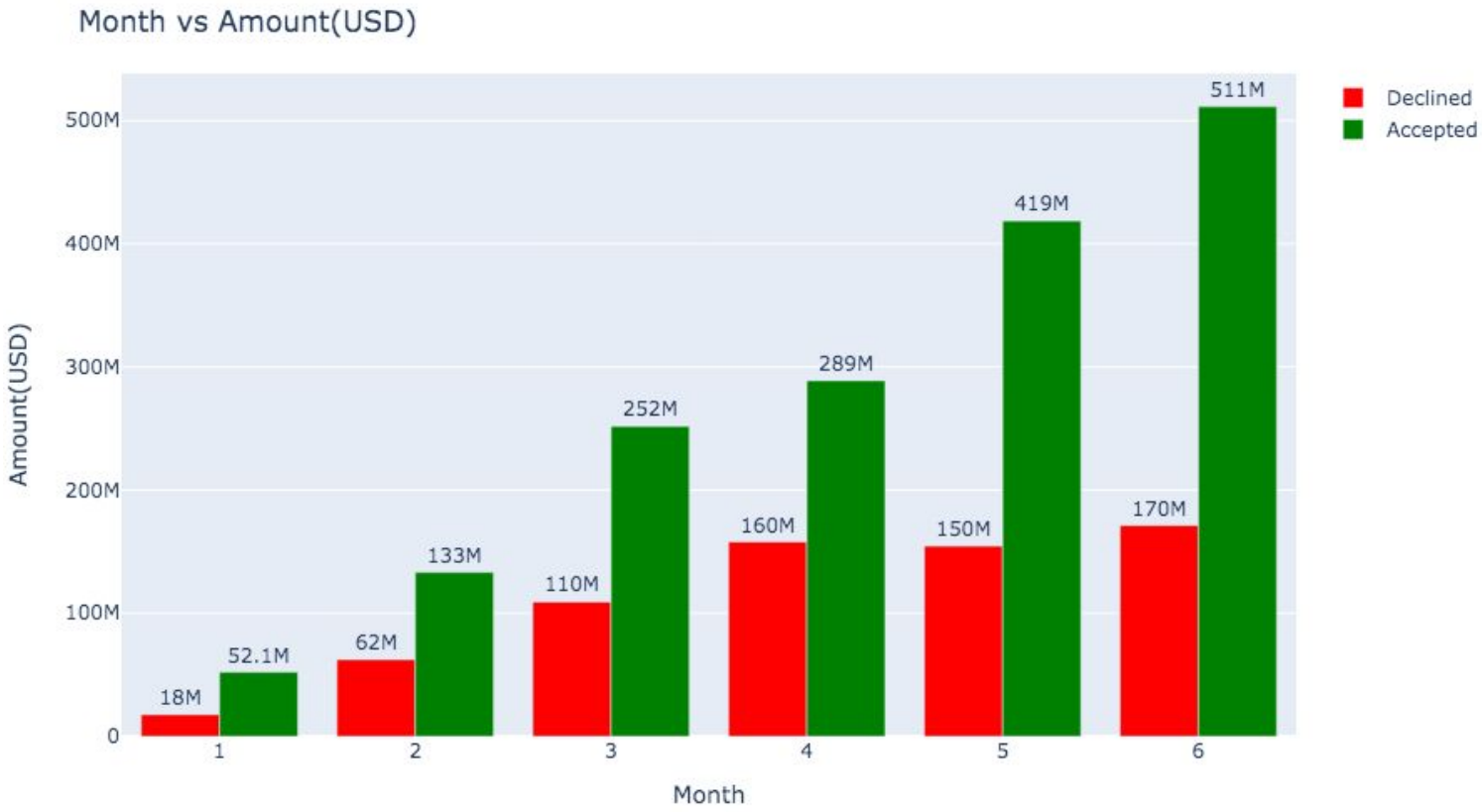

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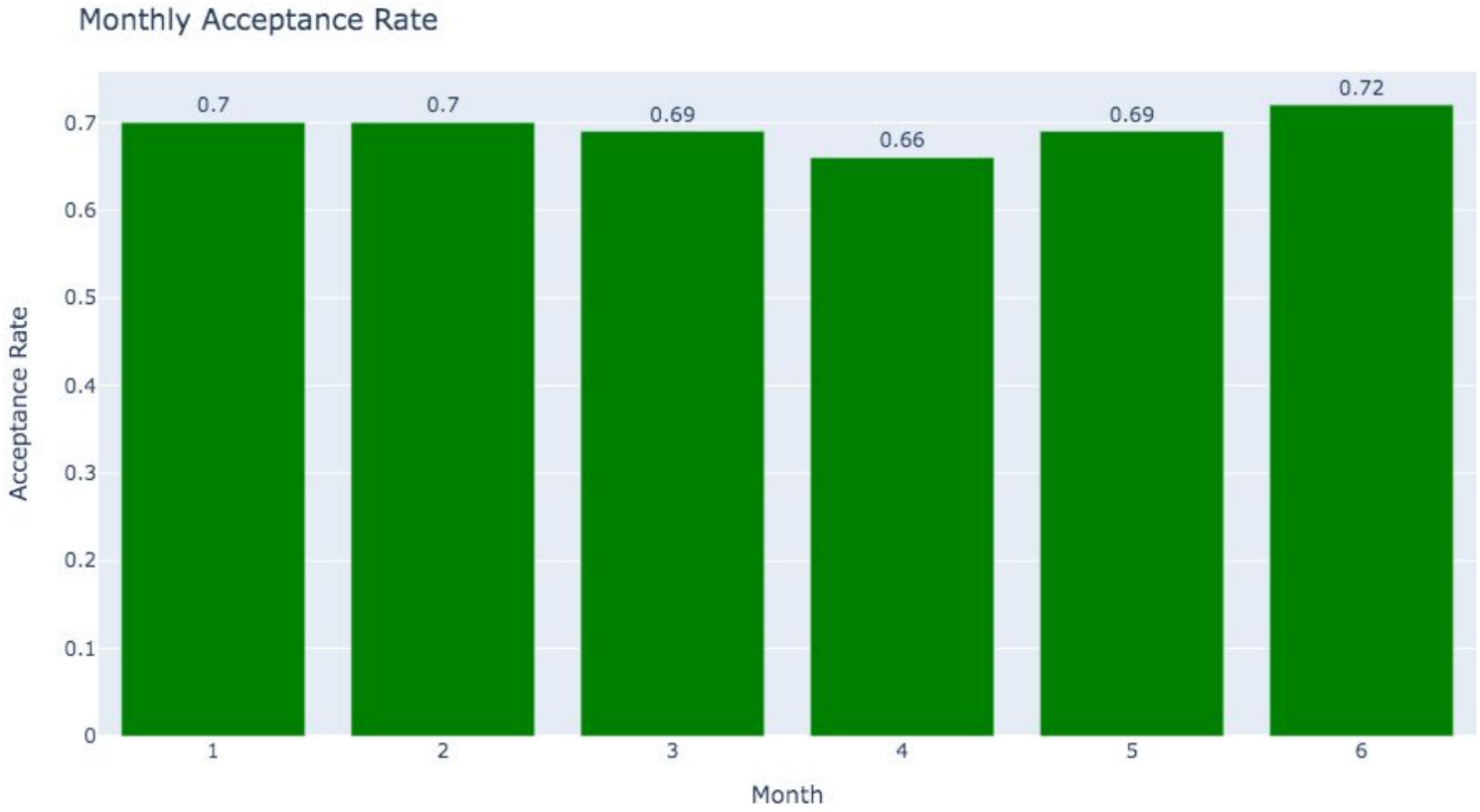

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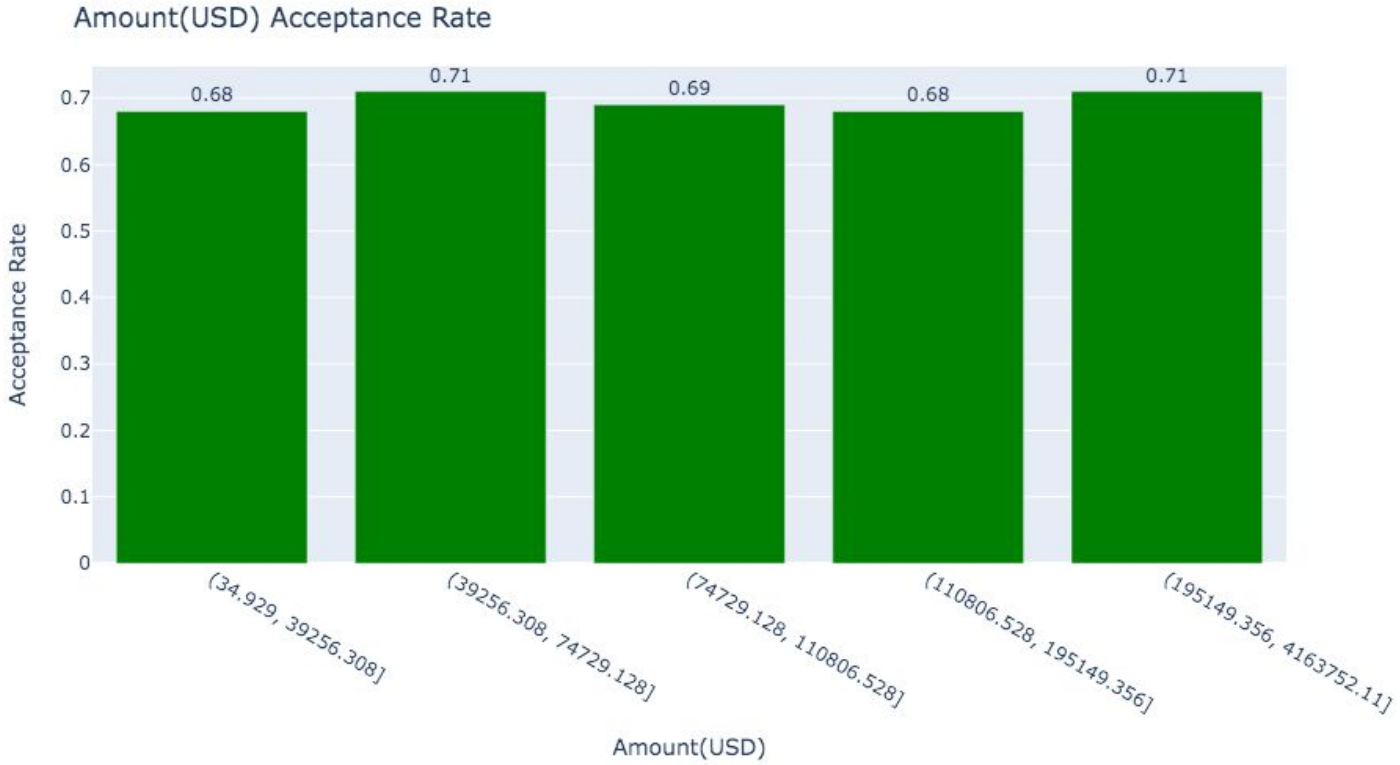

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Conclusion

Findings

All factors investigated shows no significant relationship with the acceptance rate of transactions.

Note:

- Investigate negative payment
- Investigate accepted payment where chargback is True

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Recommendations

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- **Customer Support :** Declined transaction will negatively impact customer experience, having a responsive customer support will help build customer trust and confidence for continuous patronage. - Customer First!
- **Contract an alternative payment processing company:** The company is losing a significant amount of money to declined transactions ($672M in 6 months) which is definitely bad for business and user experience. Having an alternative payment processing option will give customers option to use a different payment service, and also provide data for benchmarking.
- Contact GLOBEPAY to find out their transaction processing methods (fraud detection, currency conversion processes) and **suggest/request business-specific processing methods for Deel** to improve acceptance rate.
    - **Are the declined transactions suspected fraudulent transactions?**
    - **How is the currency conversion done?**

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Next Steps

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- **A/B Testing:** Statistical tests to compare the performance of GLOBEPAY with industry benchmark (if data is available), and also do some significance tests with every changes made to the payment processing process to measure their impact and learn where to focus on for more improvement.
- **Customer Segmentation:** Given information available on customers, a customer segmentation model could provide more insight on common features of declined transactions.
- **Investigate Technical Compatibility:** Investigate the software development and API connection process to ensure standard practices and ensure transaction security.
- **Client Feedback:** Collect client feedback on every transaction to get more insight on their experience

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Thank you!

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