Report

Payment acceptance analysis

Analysis period: April 2023 – September 2023

Scope: Transactional activity, payment methods, geographic performance, and decline reasons

Dashboard link

1. Executive summary

An analysis of more than 826,000 transactions over a six-month period in 2023 shows that the overall payment approval rate is 57.41%. While this figure serves as a high-level indicator of payment infrastructure performance, it conceals substantial disparities across payment methods and geographic markets.

Tokenized payment methods (Apple Pay and Google Pay) emerge as the primary drivers of stability, demonstrating significantly lower volatility compared to traditional card payments. The main obstacles to higher conversion are customer behavioral factors (insufficient funds) and fraud prevention configurations, which together account for a large share of declined transactions.

2. Methodology and data quality

The report is based on transactional data collected between April 1 and September 22, 2023.

As part of the Data Quality Assurance process, time-series integrity checks were performed using Python. A total of 7,587 records (less than 1% of the dataset) were excluded from time-based analyses due to missing or invalid timestamps, ensuring the reliability of all temporal insights.

Transaction volume analysis was intentionally excluded due to the categorical nature of the input data, which could distort financial metrics. Accordingly, the analysis focuses exclusively on conversion and acceptance performance.

3. Detailed performance analysis

3.1 Performance overview

The analyzed dataset includes 826,063 payment attempts.
The resulting approval rate of 57.41% is treated as the North Star Metric for evaluating payment performance.

- Values below this benchmark indicate potential technical or business issues
- Higher values identify well-performing market segments

At the current level, nearly half of all initiated transactions fail, highlighting the need for deeper segmentation of decline drivers.

3.2 Time dynamics by payment method

Daily time-series analysis reveals a clear structural distinction between payment methods:

- Apple Pay and Google Pay consistently operate in the upper approval-rate range
- These methods exhibit lower volatility and fewer sharp declines
- Traditional card payments show high variability with frequent performance drops

This behavior may indicate:

- intermittent acquiring bank processing issues,
- stricter 3D Secure enforcement for non-tokenized payments,
- lower issuer trust in raw card transactions.

Overall, the stability of tokenized methods confirms their stronger acceptance profile within the issuer ecosystem.

3.3 Geographic approval rate analysis

Approval rates vary significantly by card-issuing country, revealing pronounced market heterogeneity.

- Top-performing markets include Taiwan (TWN), Lesotho (LSO), and Israel (ISR)
    - Approval rates in the 75–85% range
    - Indicative of high-quality traffic and minimal structural restrictions
- Several countries fall well below the average benchmark (under 50–55%), representing underperforming regions

Low acceptance in these markets may be driven by:

- cross-border transaction restrictions,
- local banking policies,
- elevated fraud risk and defensive issuer behavior.

3.4 Payment decline structure

A Pareto analysis of decline reason codes identifies the key sources of transaction loss:

1. Insufficient funds - 33.37%
   The dominant decline reason, reflecting customer liquidity constraints rather than platform issues.
2. Suspected fraud - 17.04%
   A notably high share, suggesting potentially over-aggressive fraud rules and elevated false-positive rates.
3. Do not honor - 11.25%
   A generic issuer decline often associated with bank-specific security policies.

4. Recommendations

Based on the findings, the following initiatives are recommended to improve overall approval rates:

- Prioritize tokenized payment methods

Optimize the checkout experience by making Apple Pay and Google Pay the default or most visible options, thereby routing traffic through the most reliable payment channels.

- Recalibrate fraud prevention rules

Conduct a targeted review of fraud-scoring models and rules to reduce false positives while maintaining an acceptable fraud risk profile.

- Implement smart retry logic

Introduce intelligent retry strategies for insufficient-funds declines, timing retries around periods with higher account liquidity (early month or salary payment days). This approach can improve conversion without incremental marketing spend.