Paytm FinTech Business Performance Dashboard

Executive Summary

In this project, I worked on analyzing a Paytm-like FinTech company that operates in digital payments, merchant services, loans, cashback offers, and user retention.

The main business problem was that the company had large volumes of data but lacked clarity about:

1. Which users and merchants actually generate sustainable revenue
2. Where incentive money like cashback is leaking
3. How much credit risk exists in loans
4. Why transactions fail
5. How user retention changes over time

To solve this, I built a SQL-driven data analysis system where all business calculations were performed in MySQL, and then an interactive dashboard was created in Power BI for non-technical stakeholders.

Key findings include:

1. A high overdue loan percentage indicates credit risk stress.
2. Cashback and refunds significantly impact net revenue.
3. Merchant revenue is highly concentrated among top merchants.
4. Retention drops noticeably after a few months of onboarding.

This dashboard helps leadership shift focus from just transaction volume to sustainable and profitable growth.

Business Context

This project is based on a Paytm-like FinTech ecosystem that includes:

1. Digital payments (UPI, wallet, card)
2. Merchant QR services
3. Loan products
4. Cashback and promotional offers
5. Fraud monitoring
6. User retention tracking

Such companies process millions of transactions and work with users, merchants, banks, and regulators. Because of high transaction volume, fraud risk, loan defaults, and cashback costs, business decisions must be data-driven.

Without proper analysis:
1. Incentives may reduce profitability
2. Loan defaults may increase unnoticed
3. Merchant performance may not be optimized
4. Retention problems may go undetected

This project focuses on solving these issues through structured data analysis.

Data Overview

The dataset used in this project includes:
- ~20,000 Users
- ~100,000 Transactions
- ~5,000 Merchants
- ~8,000 Loans
- ~1,300 Fraud Cases
- Multiple years of transaction history

The data covers transaction activity, revenue generation, cashback amounts, merchant performance, loan disbursement, overdue amounts, fraud flags, and user behavior.

All data was stored in MySQL and analyzed using SQL queries before being visualized in Power BI.

Methodology
Data Preparation (MySQL)

All raw data was stored inside MySQL Workbench.

I used SQL queries to:
- Calculate total revenue and GMV
- Identify active users and merchants
- Compute transaction success rate
- Calculate overdue loan percentage
- Measure cashback impact on revenue
- Perform retention and cohort analysis
- Identify fraud patterns
- Aggregate data by month, year, category, and user type

Business rules applied included:
- Active users = users who performed transactions
- Active merchants = merchants who processed transactions
- Fraud rate = fraud transactions divided by total transactions
- Overdue % = overdue loan amount divided by total loan amount
- Cashback % of GMV = cashback divided by total GMV

This ensured that all KPIs were calculated consistently and correctly before moving to Power BI.

Visualization Layer (Power BI)

Power BI was used only for:
- Creating interactive dashboards
- Adding filters and slicers
- Visual storytelling
- Drill-down and trend analysis

The dashboard includes:
- Date filters (Year, Month)
- Cross-filtering between visuals
- Multiple pages for different business areas
- Clean KPI cards and charts for easy understanding

The goal was to create a dashboard that a non-technical client could use easily without needing SQL knowledge.

Dashboard Pages Explanation

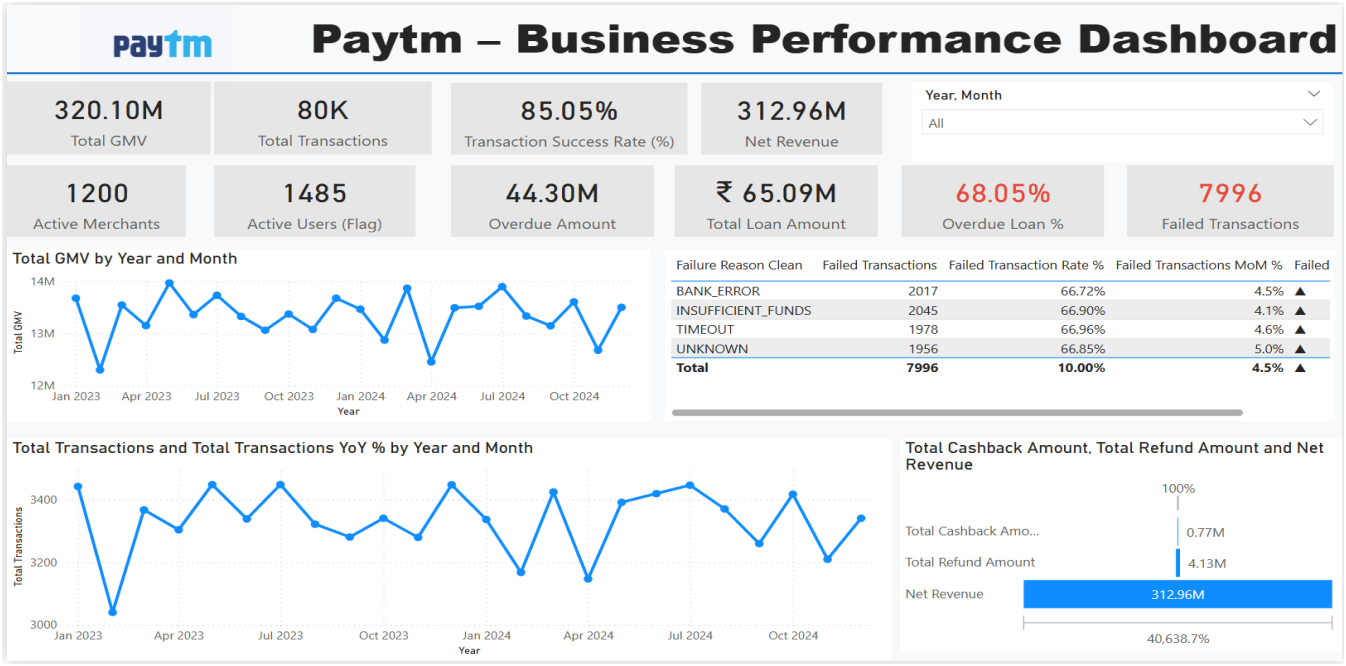
Page 1 – Executive Overview

This page gives leadership a quick summary of overall performance.

KPIs included:
- Total GMV
- Total Transactions
- Transaction Success Rate
- Net Revenue
- Active Users
- Active Merchants
- Overdue Loan %
- Failed Transactions

This page helps leadership understand:
- Overall business size
- Revenue health
- Operational performance
- Credit stress level
- Transaction reliability

Trend charts help monitor monthly movement in GMV and transactions.



Page 2 – Transaction Analysis

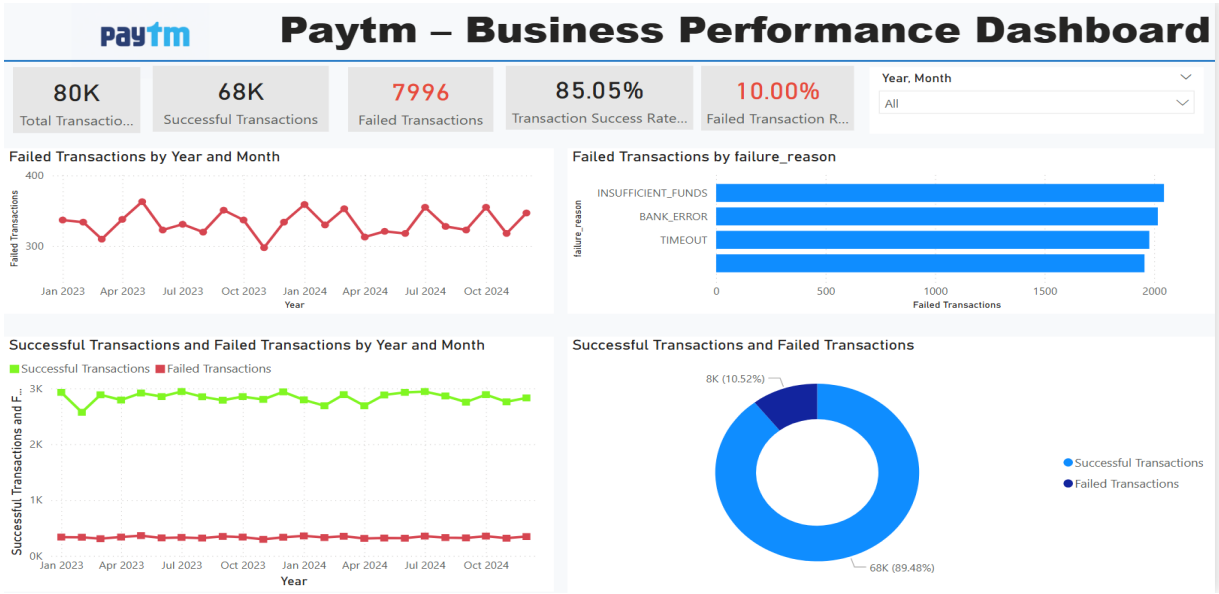
This page focuses on transaction success and failures.

It shows:

- Successful vs failed transactions
- Success rate
- Failure reasons (bank error, insufficient funds, timeout)
- Monthly trends of failures

This helps the operations team identify:

- System reliability issues
- High-risk payment modes
- Patterns in transaction failures



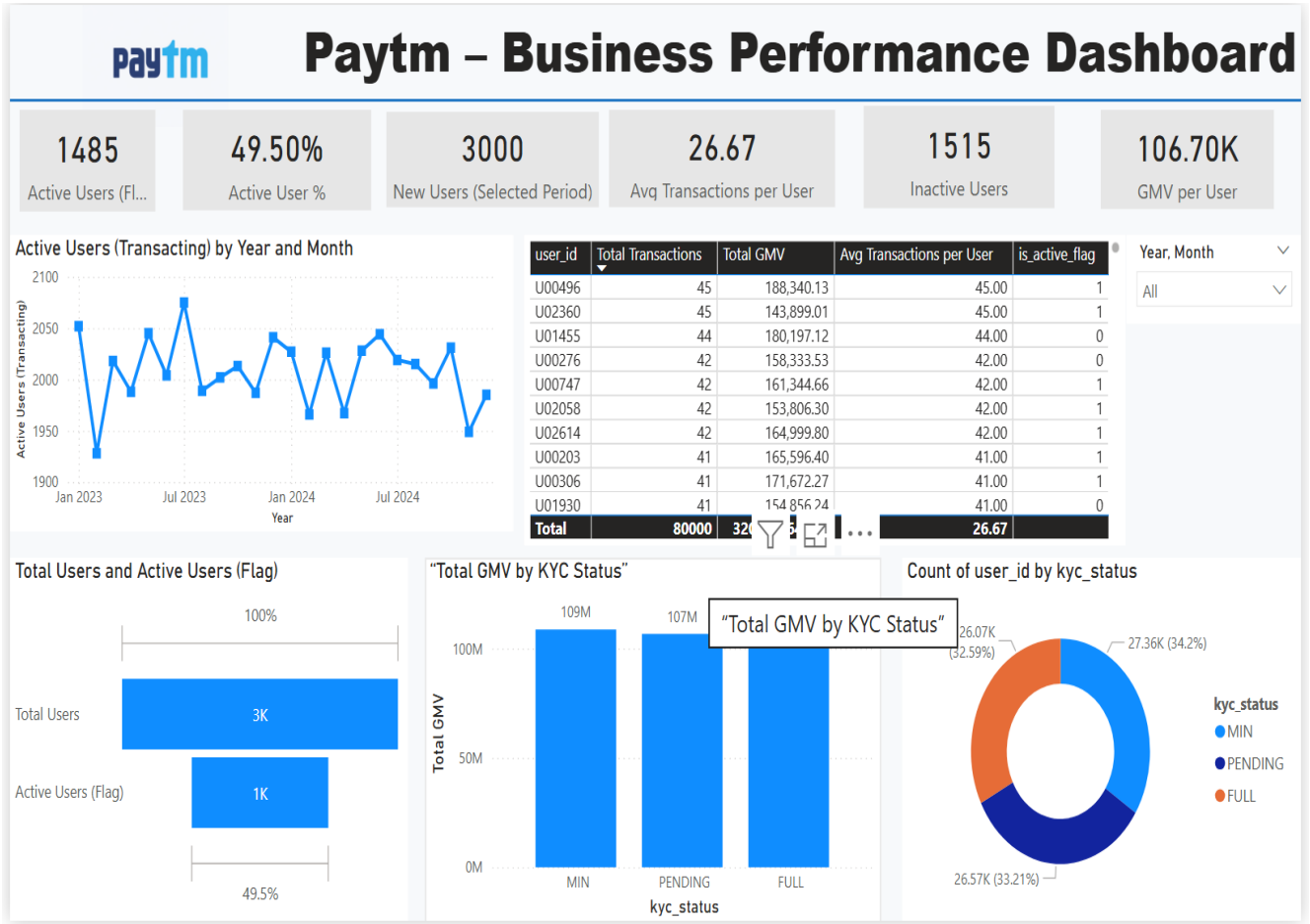
Page 3 – User & KYC Analysis

This page analyzes user activity and KYC status.
It includes:

- Active users
- New users
- Transactions per user
- GMV by KYC status
- KYC distribution

This helps understand:

- User engagement level
- Contribution of verified vs pending users
- Overall platform growth



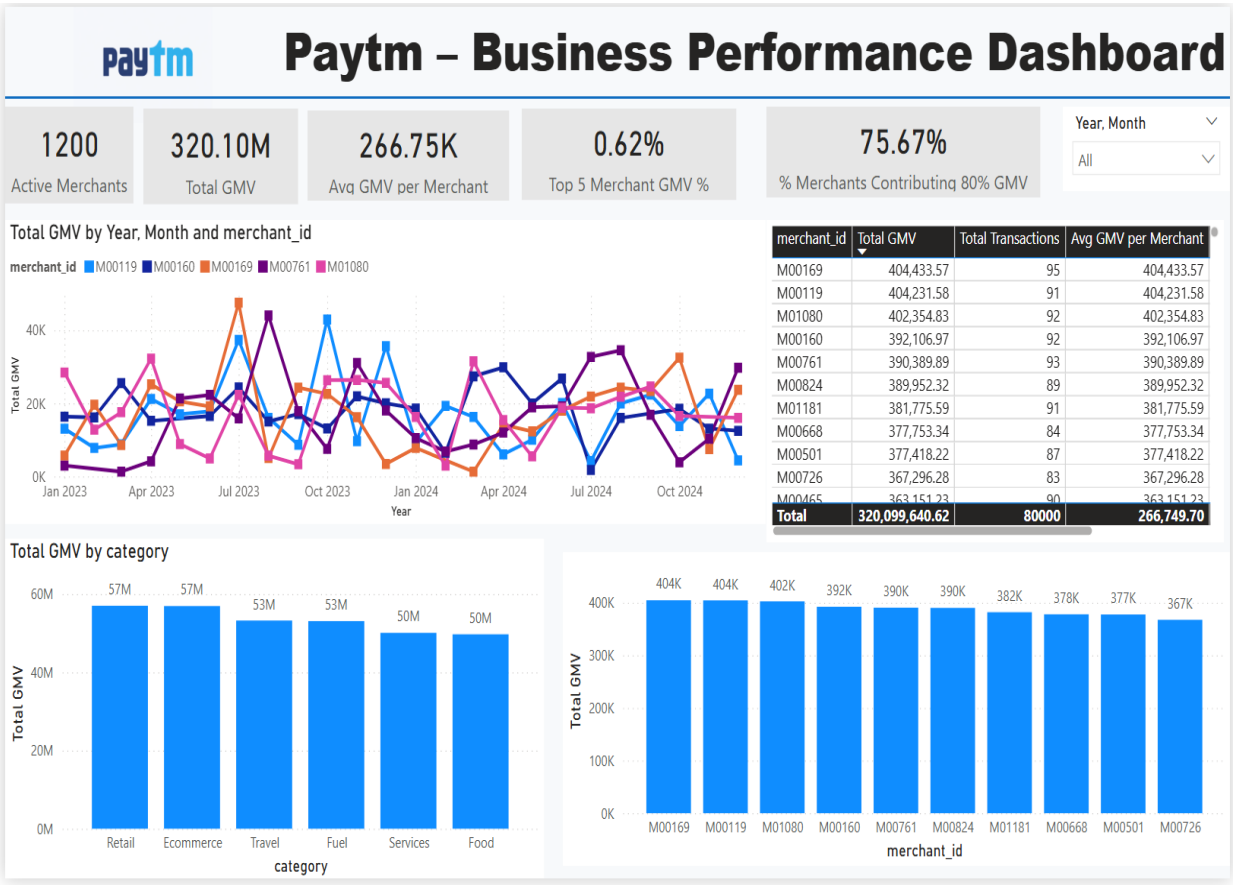
Page 4 – Merchant Performance

This page evaluates merchant contribution.
It includes:

- GMV per merchant
- Top 5 merchant contribution %
- GMV by category
- Merchant ranking

This shows:

- Revenue concentration risk
- High-performing categories
- Monetization opportunities



Page 5 – Cashback & Refund Analysis

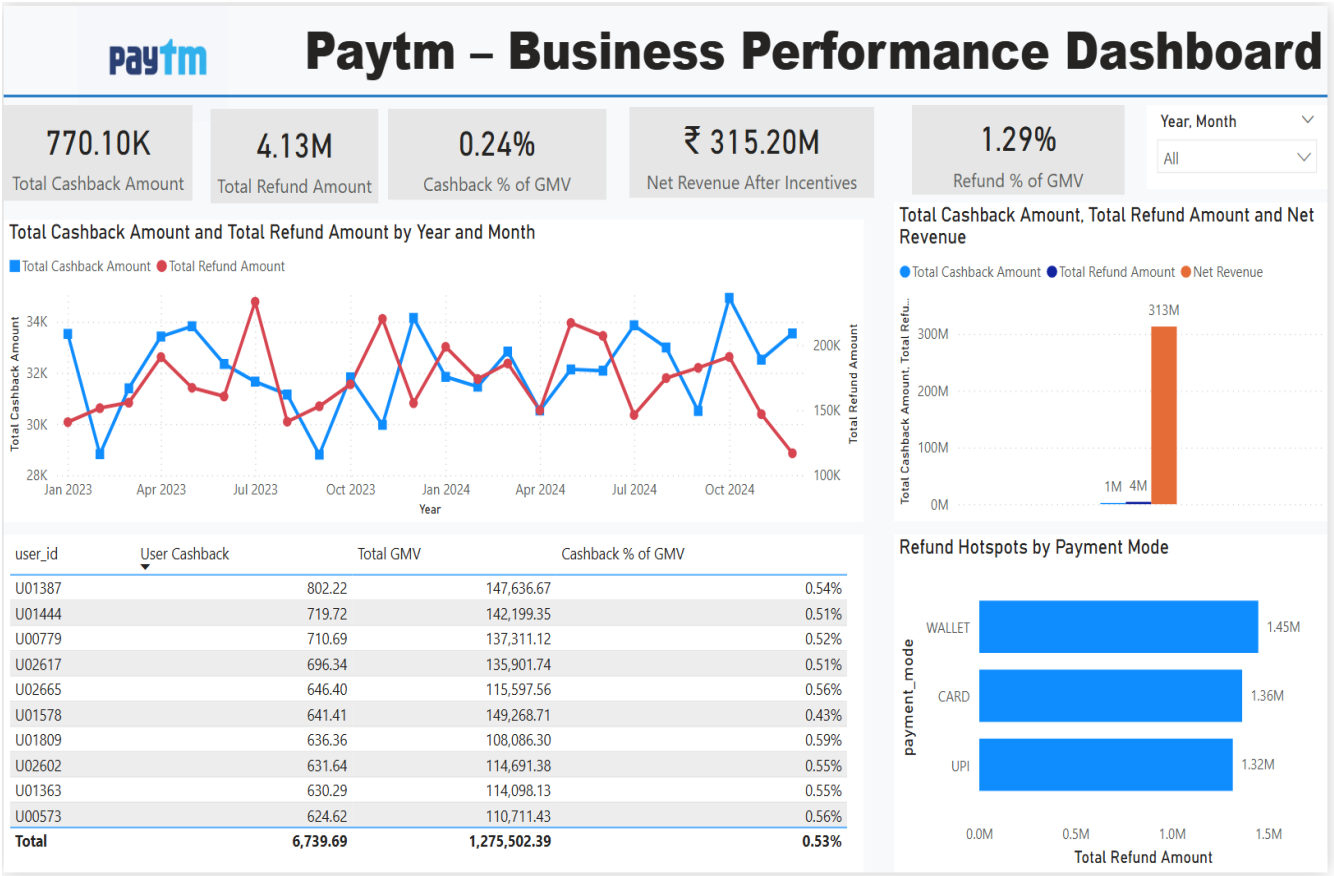
This page analyzes incentive impact.

It includes:

- Total cashback amount
- Refund amount
- Net revenue after incentives
- Cashback as % of GMV
- Refund hotspots by payment mode

This helps identify:

- Incentive leakage
- Unprofitable promotional spending
- Areas where refund rates are high



Page 6 – Loan & Risk Analysis

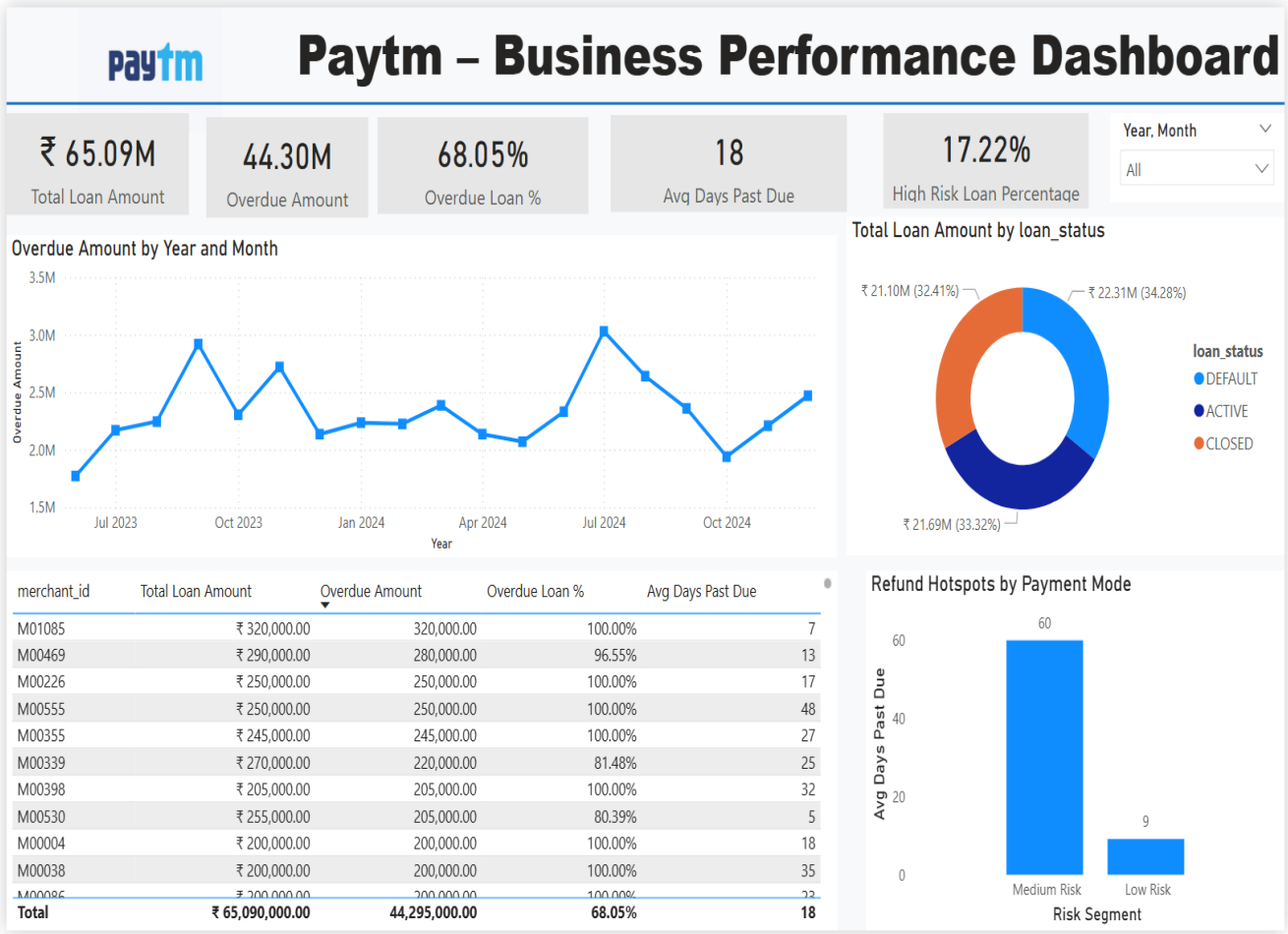
This page focuses on credit risk.

It includes:

- Total loan amount
- Overdue loan %
- Average days past due
- Loan status distribution
- Risk segmentation

This shows:

- Level of credit stress
- Default trends
- High-risk segments



Page 7 – Retention & Cohort Analysis

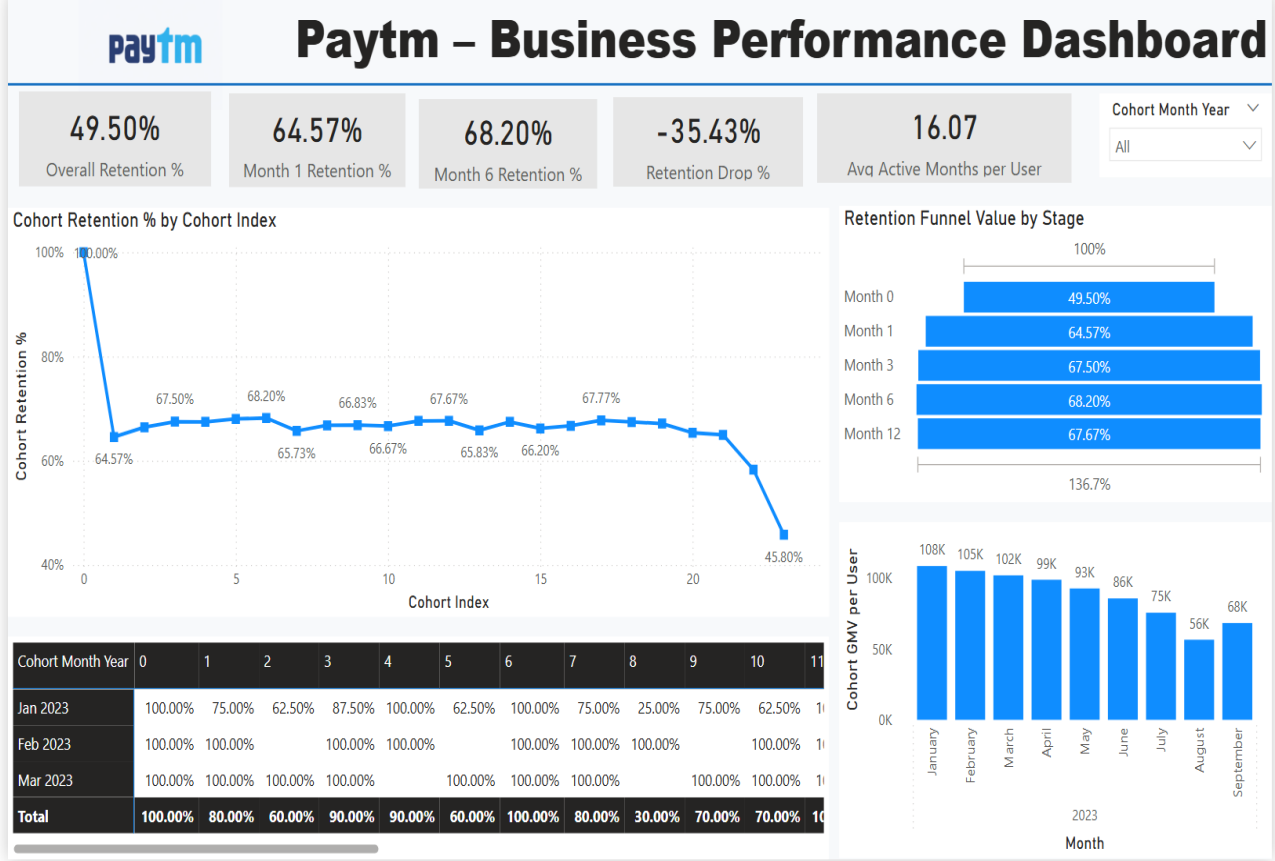
This page studies user retention.

It includes:

- Overall retention %
- Month 1 and Month 6 retention
- Retention drop %
- Cohort heatmap
- Retention funnel

This helps identify:

- Drop-off timing
- Long-term engagement
- Weak onboarding stages



Key Insights

1. Overdue loan percentage indicates increasing credit risk.
2. Cashback and refund amounts significantly reduce net revenue.
3. Merchant revenue is concentrated among a small group of top merchants.
4. Retention drops sharply after a few months.
5. Transaction failures are mainly driven by specific technical reasons.
6. Incentive spending may not always translate to long-term retention.

Business Recommendations

1. Reduce cashback for low-GMV users and focus on profitable segments.
2. Improve fraud monitoring for suspicious small transactions.
3. Introduce retention campaigns around month 2–3 after onboarding.
4. Strengthen merchant cross-sell strategies.
5. Monitor overdue loans closely and adjust approval policies.
6. Reduce dependency on top merchants by growing mid-tier merchants.

Conclusion

This project demonstrates how a Paytm-like FinTech company can move from volume-driven growth to value-driven growth.

By using SQL for structured data preparation and Power BI for interactive visualization, this dashboard helps leadership:

1. Understand revenue health
2. Monitor operational performance
3. Control credit risk
4. Optimize incentives
5. Improve user retention

The final result is a fully interactive, business-focused dashboard built using real data analysis practices.