BI Analyst Case Study: Strategic Lending Acquisition Analysis

1. Introduction

This report analyzes loan disbursement and repayment data to evaluate the lending product's performance and provide actionable insights for risk management and operational improvement. The data covers the period from January 1, 2024, to August 11, 2024.

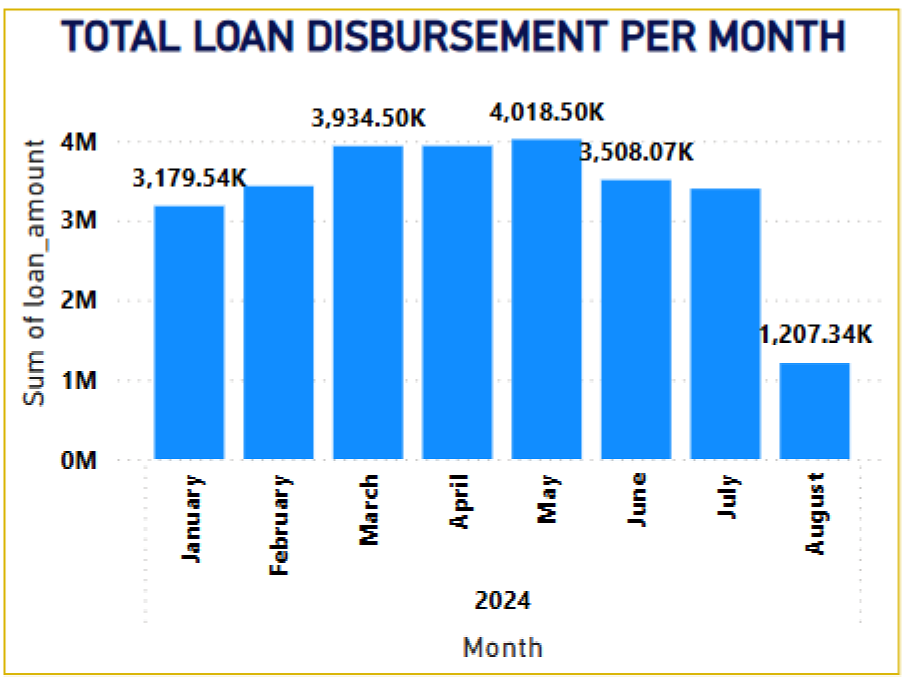
Assumptions:

- Loan repayment includes both the disbursed amount and the charged fee.
- No further disbursements or repayments occurred after August 11, 2024.
- A balance of 1,500 was used as the threshold for identifying high-risk customers.
- The loan due date was determined by adding the tenure to the disbursement date, assuming no grace period after disbursement or when the tenure ended.

2. Key Features of the Lending Product

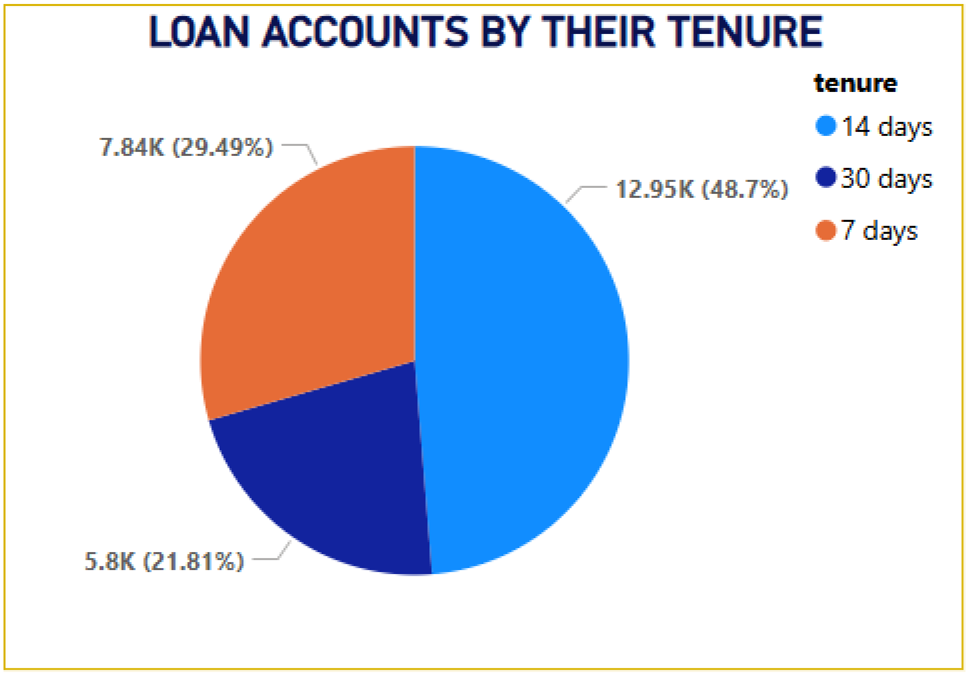
Disbursement Trends

- The highest loan disbursement occurred in May, totaling 4,018,499.
- The lowest disbursement was recorded in August at 1,207,338, though this may be due to incomplete data, as only transactions up to August 11 were available.



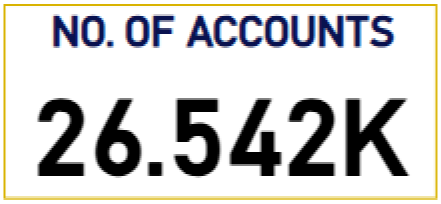
Loan Tenure Distribution

- The majority of loans are short-term, with a 14-day tenure accounting for 48.7% of the total.
- The 30-day tenure represents the smallest share, comprising 21.81% of total loans.



Customer and Account Relationship

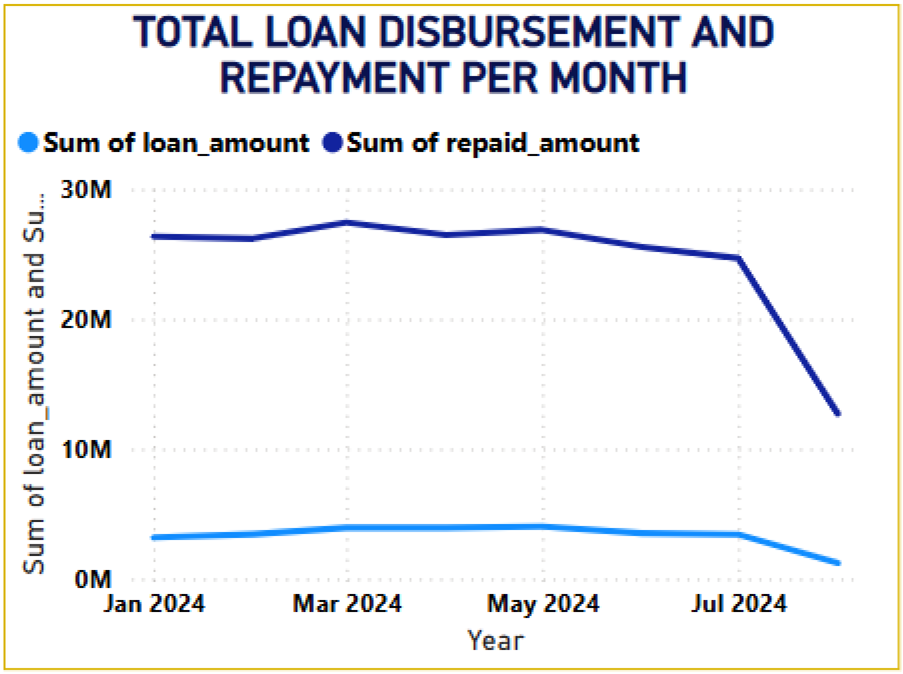
- A single customer may hold multiple accounts.
- There are 2,996 unique customers managing 26,542 unique accounts.



3. **Business Intelligence Visualizations**

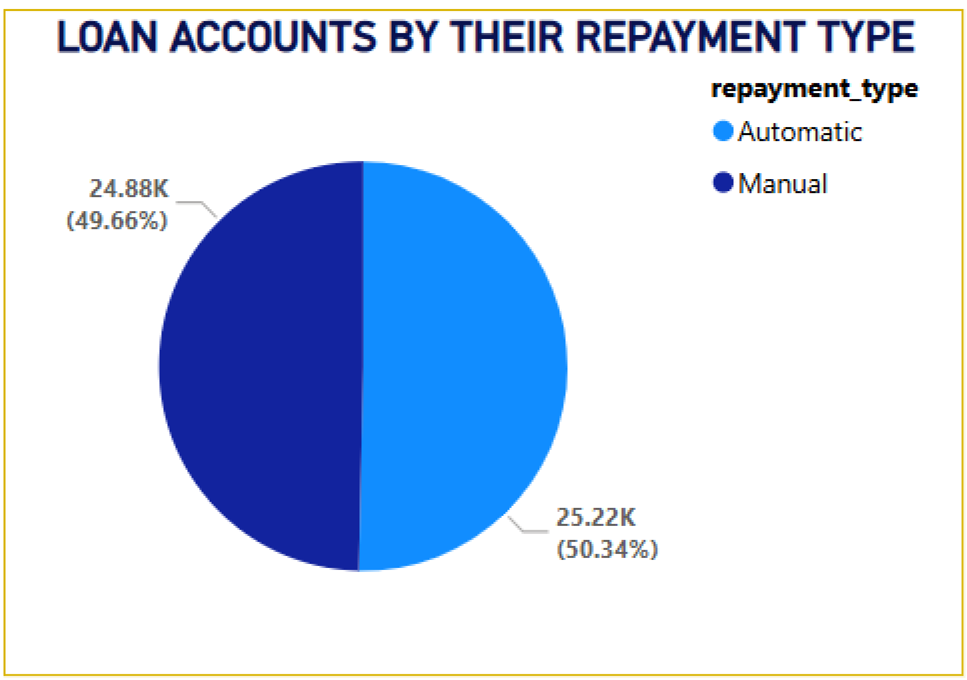
Disbursement and Repayment Trends

- The highest loan disbursement was in May at 4,018,499, while the lowest was in August at 1,207,338.
- Loan repayments peaked in March at 27,428,276.44, while the lowest repayment was recorded in August at 12,696,947.84.



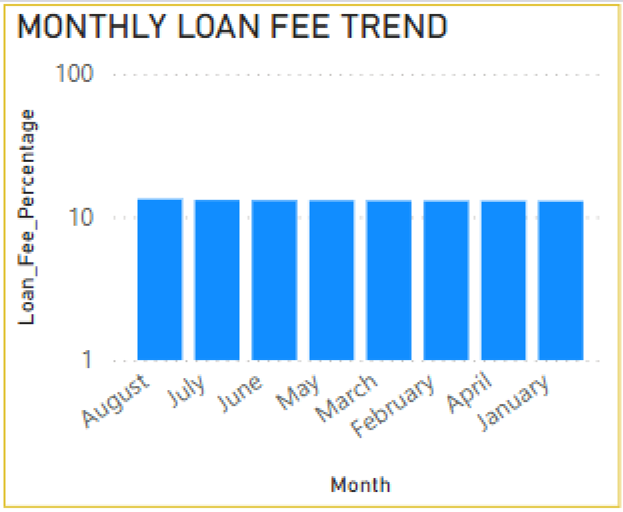
Repayment Methods

- Automatic repayment accounts for 50.34%.
- Manual repayment represents 49.66%.



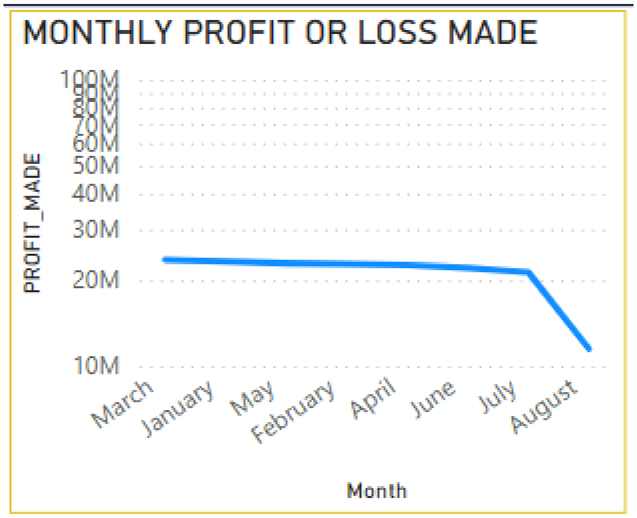
Fee Charges

- The highest fee was charged in August, at 13.28%.
- The lowest fee was recorded in January, at 12.85%.



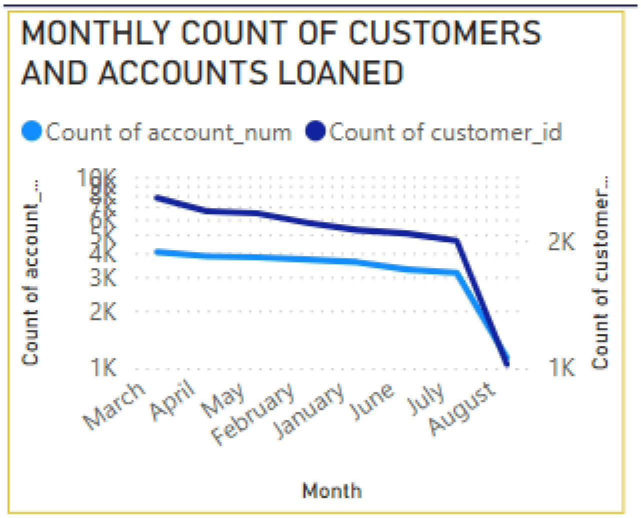
Profit Trends

- The highest profit was recorded in March at 23,493,775.44.
- The lowest profit was recorded in August at 11,489,609.84.



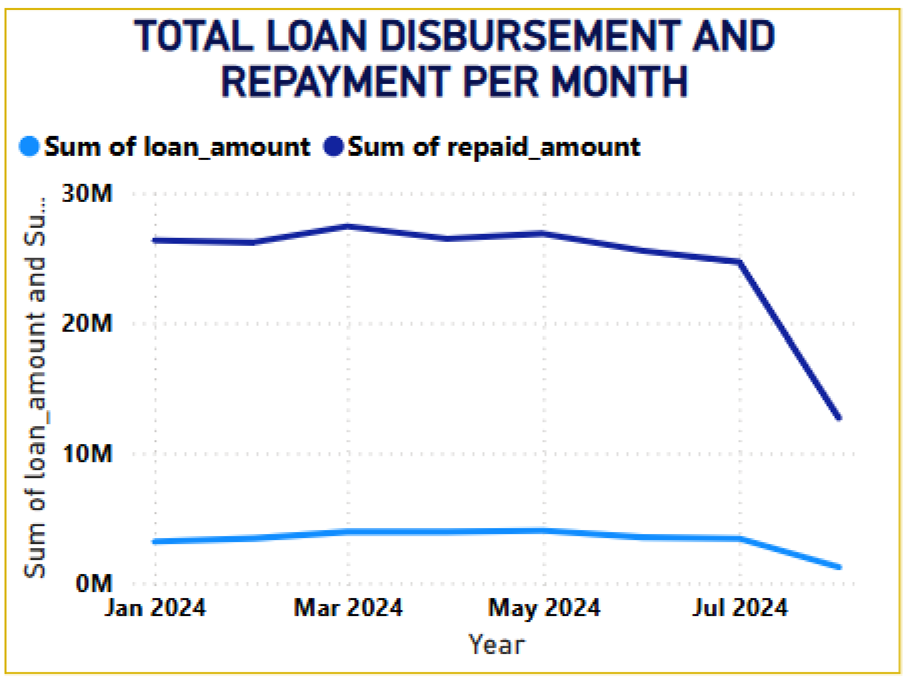
Loan Account Distribution

- March had the highest number of loan accounts at 4,057.
- August had the lowest number of loan accounts at 1,139.



Loan Repayment vs. Disbursement

- Monthly loan repayments were consistently higher than disbursements, indicating that older loans were being successfully repaid.



4. **Three-Month Profit and Loss Forecast**

A time series forecasting was used, with an Autoregressive Integrated Moving Average (ARIMA) model of order (1,2,1) to forecast upcoming repayments.

Projected profit and loss:

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2024-09-01     0.001849
2024-10-01    -0.267633
2024-11-01    -0.438441
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The forecast suggests a very small profit in September but potential losses in October and November. The limited data available for August may have affected the accuracy of these projections, leading to uncertainty in the trends.

5. **Risk Analysis and Credit Exposure**

- High-risk customers were identified based on outstanding balances greater than 1,500.
- Defaulting customers collectively owed a total outstanding balance of 325,614,269.23.

6. **Provisioning and Write-Off Recommendations**

- Identified 31 customers who had defaulted on their payments by exceeding the expected due date
- Recommended setting aside provisions for potential write-offs in future cases.

7. **Portfolio Triggers and Alerts**

- Automatic alerts for customers with high default risk (balances exceeding 1,500).
- Monitoring of customers with increasing outstanding balances over time.
- Implementation of repayment reminders and dynamic risk scoring.

8. **Recommendations**

- Improve repayment monitoring by setting up alerts for delayed payments exceeding the expected tenure and reminders a few days before the due date.
- Enhance risk-based pricing by adjusting interest rates dynamically based on customer risk scores.
- Strengthen recovery mechanisms through automated follow-ups and penalties for overdue amounts.

- Implement data-driven loan restructuring by offering extensions or installment plans for high-risk borrowers.

9. Conclusion

This analysis provides insights to optimize lending strategies and manage credit risk effectively. By implementing business intelligence dashboards, predictive modeling, and risk-based triggers, the organization can enhance profitability while reducing loan defaults.