Strategic Lending Acquisition Analysis Report

Prepared by: Emmanuel Ouma

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Tools Used: SQL Server(Data Analysis), Power BI(Visualization) and Python (Forecasting)

# 1. Executive Summary

This analysis explores the financial performance and risk exposure of a strategic lending firm operating in the underbanked market. Based on disbursement and repayment data, we evaluated key metrics such as loan issuance trends, repayment behavior, and credit risk. Our results show [summary of insights], and we recommend [brief summary of key changes].

# 2. Data Overview

## 2.1 Source Tables

- Disbursements: [contains loan issuance records]

- Repayments: [contains actual repayments by customers]

## 2.2 Cleaning Steps

- Removed duplicates using `customer\_id + disb\_date + amount`  
- Standardized date formats (e.g., `disb\_date`, `rep\_month`)  
- Trimmed and standardized text fields  
- Formatted currency and tenure values

## 2.3 Final Table Schema

|  |  |
| --- | --- |
| Column | Description |
| customer\_id | Unique customer identifier |
| disbursement\_date | Date when loan was issued |
| loan\_amount | Principal amount issued |
| loan\_fee | Processing fee charged |
| tenure | Repayment period (e.g., 7 days) |
| repayment\_date | Actual repayment date |
| repayment\_amount | Amount repaid |
| repayment\_type | Channel or category of repayment |

# 3. Key Features of the Lending Product

- Average loan amount: 1110.5794

- Common tenures: 14 days

- Typical loan fee: range between 10-15%

- Disbursement frequency: 4712

# 4. Performance Analysis (Visuals & KPIs)

## KPIs:

|  |  |
| --- | --- |
| Metric | Value |
| Total Loans Disbursed | 761.26M |
| Total Repaid | 308.75M |
|  |  |
| Repayment Rate | 36.75-52.13 |
|  |  |

Visuals (Power BI):  
- Disbursement vs Repayment trend over time  
- Repayment types comparison  
- Top 10 customers by loan size  
- Defaults or unpaid loans heatmap

# 5. Forecasting (Python)

Model used: [ ARIMA]

Forecast period: September–November 2024

|  |  |  |
| --- | --- | --- |
| Month | Profit/Loss Forecast |  |
| September 1, 2024 | approximately 883,211 |  |
| October 1, 2024 | approximately **1,459,193** |  |
| November 1, 2024 | approximately **1,668,654** |  |

# 6. Credit Risk & Exposure

# 7. Recommendations

### Recommendations Based on Project Insights

1. **Investigate Persistent Negative Profit/Loss**  
   The forecast shows consistent negative profit/loss values, indicating the business is operating at a loss.
   * Conduct a detailed review of disbursement policies and repayment efficiency.
   * Identify high-cost drivers or bottlenecks in loan recovery processes.
2. **Improve Forecast Model by Incorporating Seasonality and External Factors**  
   Fluctuations in profit/loss suggest potential seasonality or irregular business cycles not fully captured by the current model.
   * Consider using more advanced forecasting methods like Prophet or LSTM that handle seasonality better.
   * Integrate external factors such as economic conditions, interest rate changes, or borrower behavior patterns.
3. **Address Data Gaps and Null Values in Repayment Data**  
   Missing repayment data for some months leads to incomplete profit/loss calculations.
   * Continue forecasting missing values where applicable but also verify if data collection/reporting processes can be improved.
   * Ensure data completeness for more accurate forecasting and decision-making.
4. **Perform Scenario Analysis for Strategic Planning**  
   Run “what-if” simulations such as:
   * Effects of improved repayment rates on profit/loss.
   * Impact of adjusted loan disbursement volumes on cash flows.  
     This helps management make informed decisions on lending strategies and risk management.
5. **Regularly Monitor and Update Forecasts**  
   Since forecasts project losses for the next 3 months, keep updating your models with real-time data.
   * Compare actual disbursement and repayment performance against forecasts to identify model drift.
   * Adjust business strategies promptly if negative trends persist.
6. **Communicate Clear Financial Health Indicators**  
   Present profit/loss trends and forecasts clearly to stakeholders to support proactive measures.
   * Highlight the urgency of improving repayment rates or cost controls to turn around losses.
   * Use visual dashboards for easier understanding of complex financial flows.

# 8. Conclusion

The analysis of loan disbursement and repayment data reveals a consistent negative profit/loss trend, highlighting challenges in achieving financial sustainability. Despite fluctuations that hint at seasonality or irregular cycles, the forecast for the next three months suggests continued losses unless corrective actions are taken. Missing repayment data points underline the need for better data completeness and more robust forecasting methods that incorporate external factors affecting loan performance.

To improve financial outcomes, it is crucial to investigate underlying causes of losses, optimize repayment processes, and apply advanced forecasting techniques. Scenario analyses can provide valuable insights for strategic decision-making, while ongoing monitoring will ensure the business adapts proactively to emerging trends. Clear communication of these insights will empower stakeholders to implement targeted interventions aimed at reversing the current negative trajectory.

With focused efforts on data quality, modeling, and operational improvements, the loan portfolio can move toward profitability and sustainable growth.

# Appendices

- SQL queries  
- Python forecasting notebook  
- BI dashboard screenshots  
- Raw data samples