

Bank Loan Analytics Report

1. Project Overview

This project presents an end-to-end **Bank Loan Analytics** solution designed to evaluate lending performance, portfolio quality, and risk trends. Using historical loan data for 2021, the report delivers executive-ready insights through clearly defined KPIs, trend analysis, and segment-level breakdowns. The output supports data-driven decisions across credit risk, operations, and portfolio management.

2. Business Objectives

- Measure overall loan portfolio performance
 - Track Month-to-Date (MTD), Previous MTD (PMTD), and Month-over-Month (MoM) changes
 - Assess credit quality using Good vs Bad loan indicators
 - Identify trends by time, geography, and borrower characteristics
 - Enable interactive analysis through filters and drill-downs
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3. Dataset Description

Source: Bank loan transactional data

Key Fields Used:

- Loan ID
- Issue Date
- Loan Amount
- Total Payment
- Interest Rate
- Debt-to-Income Ratio (DTI)
- Loan Status
- Term, Purpose, Grade
- Employment Length
- Home Ownership
- State

Time Period: January–December 2021

4. Key Performance Indicators (KPIs)

4.1 Loan Application Metrics

- Total Loan Applications
- MTD Loan Applications
- PMTD Loan Applications
- MoM % Change in Applications

4.2 Funding & Collection Metrics

- Total Funded Amount
- MTD / PMTD Funded Amount
- MoM % Change in Funded Amount
- Total Amount Received
- MTD / PMTD Amount Received
- MoM % Change in Amount Received

4.3 Risk & Pricing Metrics

- Average Interest Rate (%)
 - Average Debt-to-Income Ratio (DTI %)
 - MTD / PMTD Averages
 - MoM % Change in Interest Rate and DTI
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5. Credit Quality Analysis

5.1 Good Loans

Definition: Loans with status *Fully Paid* or *Current*

Metrics:

- Good Loan Percentage
- Good Loan Applications
- Good Loan Funded Amount
- Good Loan Amount Received

5.2 Bad Loans

Definition: Loans with status *Charged Off*

Metrics:

- Bad Loan Percentage
- Bad Loan Applications

- Bad Loan Funded Amount
- Bad Loan Amount Received

This classification helps evaluate portfolio health and credit risk exposure.

6. Loan Status Performance

A comparative grid view provides performance metrics by loan status, including:

- Total Applications
- Total Funded Amount
- Total Amount Received
- Average Interest Rate
- Average DTI

Additional analysis includes MTD, PMTD, and MoM comparisons for both funded and received amounts by loan status.

7. Trend & Segmentation Analysis

7.1 Time-Series Trends

- Monthly loan application volume
- Monthly funded amount
- Monthly amount received

7.2 Regional Analysis

- State-wise loan distribution
- Regional funded and received amounts

7.3 Loan Characteristics

- Loan Term Analysis
- Purpose-wise Breakdown
- Employment Length Analysis
- Home Ownership Analysis

These views highlight high-performing segments and potential risk concentrations.

8. Filtering & Interactivity

The dashboard supports dynamic filtering across multiple dimensions such as:

- Grade
- Purpose
- Loan Status
- Time Period

Users can validate insights by applying filters (e.g., Grade A loans) and observing KPI changes in real time.

9. Key Insights (Illustrative)

- A consistent MoM increase in funded amount indicates growing credit demand
 - Lower average DTI correlates with higher Good Loan percentage
 - Certain purposes and regions contribute disproportionately to total funding
 - Charged-off loans show distinct patterns in DTI and interest rate levels
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10. Conclusion

This Bank Loan Analytics project demonstrates how structured KPIs and interactive dashboards can transform raw loan data into actionable insights. The analysis supports strategic decisions related to risk management, portfolio optimization, and operational planning, making it suitable for real-world banking and financial analytics use cases.

Project Type: Data Analytics / Business Intelligence

Tools Used: SQL (Data Preparation), Power BI (Visualization & Reporting)