



Bank Loan Report

SQL and Tableau Data Analysis Portfolio Project

SQL Analysis

Tableau Visualization

Financial Domain

Project Overview

This comprehensive data analysis project demonstrates end-to-end analytics skills using SQL for data processing and Tableau for interactive visualization in the financial domain. The project analyzes bank loan data to provide actionable insights for business decision-making.



Data Processing

MySQL data transformation, cleaning, and KPI calculations with 38,576 loan records



Data Visualization

Interactive Tableau dashboards with dynamic charts, filters, and navigation



Business Insights

Risk analysis, performance metrics, and trend identification for loan portfolio

Key Performance Indicators

38.6K

Total Loan Applications

MTD: 4.3K | MoM: +6.9%

\$435M

Total Funded Amount

MTD: \$54M | MoM: +13%

\$473M

Total Amount Received

MTD: \$58M | MoM: +15.8%

13.3%

Average DTI Ratio

MTD: 13.7% | MoM: +2.7%

Technical Implementation



SQL Data Analysis

Data Transformation

Converted date formats, created calculated fields, and standardized data types

KPI Calculations

Month-to-Date (MTD), Previous Month-to-Date (PMTD), and Month-over-Month (MoM) metrics

Risk Analysis

Good vs Bad loan categorization based on loan status and payment history

-- Sample KPI Calculation

```
SELECT
  COUNT(ID) AS total_loan_applications,
  SUM(loan_amount) AS total_funded_amount,
  AVG(int_rate * 100) AS avg_interest_rate
FROM bank_loan
WHERE MONTH(issue_date) = 12
AND YEAR(issue_date) = 2021;
```



Tableau Visualization

Interactive Dashboards

Three comprehensive dashboards with dynamic navigation and filtering

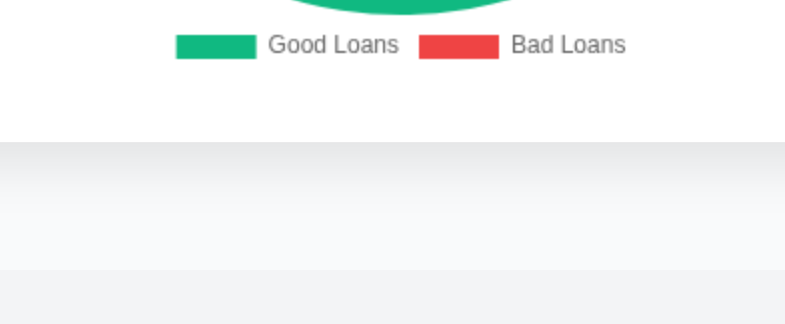
Dynamic Parameters

Parameter-driven charts that update based on user selection

Advanced Charts

Pie charts, line charts, geographical maps, bar charts, and tree maps

Loan Portfolio Distribution



Good Loans Bad Loans

Dashboard Components



Summary Dashboard

- Key Performance Indicators
- Good vs Bad Loan Analysis
- Loan Status Grid View
- Interactive Filters
- Dynamic Pie Charts



Overview Dashboard

- Monthly Trend Analysis
- Regional State Analysis
- Loan Term Distribution
- Employment Length Analysis
- Loan Purpose Breakdown

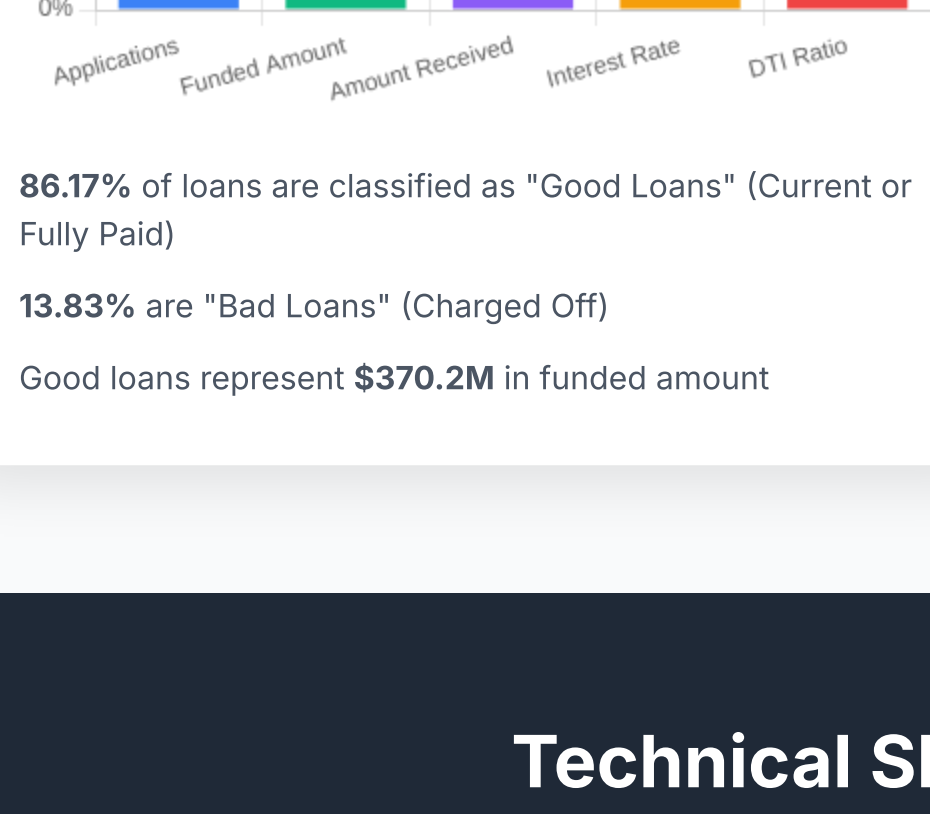


Details Dashboard

- Detailed Loan Records
- Borrower Information
- Loan Terms & Conditions
- Payment Information
- Export Capabilities

Key Business Insights

Loan Performance Analysis



86.17% of loans are classified as "Good Loans" (Current or Fully Paid)
13.83% are "Bad Loans" (Charged Off)
Good loans represent \$370.2M in funded amount

Growth Trends

Loan Applications	+6.9% MoM
Funded Amount	+13.0% MoM
Amount Received	+15.8% MoM
Interest Rate	+3.5% MoM

Technical Skills Demonstrated



SQL Expertise

Data transformation
Complex queries
Aggregate functions
Date manipulation



Tableau Mastery

Dashboard design
Interactive visualizations
Parameters & filters
Calculated fields



Data Analysis

KPI development
Trend analysis
Risk assessment
Performance metrics



Domain Knowledge

Financial analysis
Banking operations
Risk management
Loan classification

Project Resources



Project Structure

```
Bank-Loan-Analysis/
├── data/
│   └── bank_loan_data.csv
├── sql/
│   ├── data_cleaning.sql
│   ├── kpi_calculations.sql
│   └── analysis_queries.sql
├── tableau/
│   └── bank_loan_dashboard.twbx
├── documentation/
│   ├── methodology.md
│   └── findings.md
```



Tools & Technologies

MySQL Workbench	Data Processing
Tableau Public	Visualization
Microsoft Excel	Data Import
Git/GitHub	Version Control

Project Impact & Value

This comprehensive bank loan analysis project demonstrates advanced data analytics capabilities, combining technical expertise in SQL and Tableau with financial domain knowledge to deliver actionable business insights.



Data-Driven Decisions

Enables stakeholders to make informed decisions based on comprehensive loan portfolio analysis



Risk Management

Provides clear visibility into good vs bad loan performance for improved risk assessment



Performance Tracking

Offers real-time monitoring of key metrics with month-over-month trend analysis

Ready to showcase advanced analytics skills in the financial domain

Portfolio Ready

Industry Relevant

Professional Quality