

BANK LOAN REPORT - PROBLEM STATEMENT

DASHBOARD 1: SUMMARY

To evaluate and oversee the bank's lending operations and overall performance, it is essential to develop a detailed Bank Loan Report. This document seeks to offer valuable insights into fundamental loan-related indicators and their variations over time. Its purpose is to support data-informed decision-making, monitor the condition of our loan portfolio, and pinpoint trends that can guide and enhance our lending strategies.

Key Performance Indicators (KPIs) Requirements:

1. Total Loan Applications:

- Calculate the total number of loan applications submitted within a defined timeframe.
- Track Month-to-Date (MTD) loan applications to monitor current activity levels.
- Analyse Month-over-Month (MoM) variations to identify trends or changes in application volume.

2. Total Funded Amount:

- Determine the total value of loans disbursed during the specified period.
- Monitor the MTD funded amount to assess recent loan distribution levels.
- Examine Month-over-Month (MoM) changes to evaluate growth or decline in loan funding.

3. Total Amount Received:

- Measure the total repayments collected from borrowers, reflecting cash flow and repayment trends.
- Analyse the MTD total amount received to evaluate recent repayment performance.
- Assess MoM changes to identify variations or patterns in borrower payments.

4. Average Interest Rate:

- Compute the average interest rate across all issued loans to understand the overall cost of lending.
- Track the MTD average interest rate to gauge recent trends.

- Monitor MoM changes in interest rates to detect shifts in lending practices or market conditions.

5. Average Debt-to-Income Ratio (DTI):

- Evaluate the average DTI for borrowers to assess their financial stability and repayment capacity.
- Calculate the MTD average DTI to understand current borrower profiles.
- Track MoM fluctuations to monitor changes in the financial health of the borrower base.

Good Loan v Bad Loan KPI's

To effectively evaluate the performance of lending activities and analyze the quality of the loan portfolio, it is essential to develop a detailed report that differentiates between "Good Loans" and "Bad Loans" based on specific loan status criteria. Below are the Key Performance Indicators (KPIs) for each category:

Good Loan KPIs:

Good Loan Application Percentage:

- Calculate the proportion of loan applications classified as "Good Loans."
- This includes loans with a status of "Fully Paid" or "Current."

Good Loan Applications:

- Identify the total number of loan applications categorized as "Good Loans."
- Includes loans with a status of "Fully Paid" or "Current."

Good Loan Funded Amount:

- Determine the total principal amount disbursed as "Good Loans."
- Includes loans with a status of "Fully Paid" or "Current."

Good Loan Total Received Amount:

- Track the total repayments received for "Good Loans."
- Encompasses all payments for loans with a status of "Fully Paid" or "Current."

Bad Loan KPIs:

Bad Loan Application Percentage:

- Calculate the proportion of loan applications categorized as "Bad Loans."
- This includes loans with a status of "Charged Off."

Bad Loan Applications:

- Identify the total number of loan applications classified as "Bad Loans."
- Consists of loans with a status of "Charged Off."

Bad Loan Funded Amount:

- Calculate the total principal amount disbursed as "Bad Loans."
- Includes loans with a status of "Charged Off."

Bad Loan Total Received Amount:

- Measure the total repayments received for "Bad Loans."
- Includes all payments made on loans with a status of "Charged Off."

To achieve a comprehensive understanding of our lending operations and evaluate loan performance effectively, we plan to develop a Loan Status Grid View Report. This report will be organized by loan status categories, offering a structured and detailed analysis of key performance metrics.

Purpose and Benefits:

Purpose:

To provide a centralized, categorized view of loan performance metrics based on loan statuses.

Benefits:

- Enables quick identification of trends and patterns.
- Facilitates data-driven decision-making.

- Enhances understanding of the health and dynamics of the loan portfolio.

Key Metrics to Include:

1. *Total Loan Applications:*
 - The number of loan applications received under each loan status.
2. *Total Funded Amount:*
 - The aggregate amount disbursed as loans for each loan status.
3. *Total Amount Received:*
 - The total repayments collected from borrowers for loans in each status category.
4. *Month-to-Date (MTD) Funded Amount:*
 - The total disbursed loan amount for the current month under each status.
5. *MTD Amount Received:*
 - The total repayment amount collected for the current month under each loan status.
6. *Average Interest Rate:*
 - The mean interest rate applied to loans within each status.
7. *Average Debt-to-Income Ratio (DTI):*
 - The average DTI for borrowers within each status category, reflecting their financial stability.

Expected Outcomes:

This grid view report will serve as a practical tool to monitor lending performance across various loan statuses. By categorizing and analyzing key indicators, it will enable the identification of areas requiring attention or optimization, thereby supporting the bank's strategic goals.

DASHBOARD 2 - OVERVIEW

In our Bank Loan Report project, we aim to visually represent critical loan-related metrics and trends using a variety of chart types. These charts will provide a clear and insightful view of our lending operations, facilitating data-driven decision-making and enabling us to gain valuable insights into various loan parameters. Below are the specific chart requirements:

1. Monthly Trends by Issue Date (Line Chart):

- Chart Type: Line Chart
- Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'
- X-Axis: Month (based on 'Issue Date')
- Y-Axis: Metrics' Values

Objective: This line chart will showcase how 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received' vary over time, allowing us to identify seasonality and long-term trends in lending activities.

2. Regional Analysis by State (Filled Map):

- Chart Type: Filled Map
- Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'
- Geographic Regions: States

Objective: This filled map will visually represent lending metrics categorized by state, enabling us to identify regions with significant lending activity and assess regional disparities.

3. Loan Term Analysis (Donut Chart):

- Chart Type: Donut Chart
- Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'
- Segments: Loan Terms (e.g., 36 months, 60 months)

Objective: This donut chart will depict loan statistics based on different loan terms, allowing us to understand the distribution of loans across various term lengths.

4. Employee Length Analysis (Bar Chart):

- Chart Type: Bar Chart
- Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'
- X-Axis: Employee Length Categories (e.g., 1 year, 5 years, 10+ years)
- Y-Axis: Metrics' Values

Objective: This bar chart will illustrate how lending metrics are distributed among borrowers with different employment lengths, helping us assess the impact of employment history on loan applications.

5. Loan Purpose Breakdown (Bar Chart):

- Chart Type: Bar Chart

- Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'
- X-Axis: Loan Purpose Categories (e.g., debt consolidation, credit card refinancing)
- Y-Axis: Metrics' Values

Objective: This bar chart will provide a visual breakdown of loan metrics based on the stated purposes of loans, aiding in the understanding of the primary reasons borrowers seek financing.

6. Home Ownership Analysis (Tree Map):

- Chart Type: Tree Map
- Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'
- Hierarchy: Home Ownership Categories (e.g., own, rent, mortgage)

Objective: This tree map will display loan metrics categorized by different home ownership statuses, allowing for a hierarchical view of how home ownership impacts loan applications and disbursements.

Incorporating diverse chart types will significantly improve our capacity to visualize and convey insights related to loan performance. This approach will enable more effective communication of complex data, facilitating informed, data-driven decisions and supporting strategic planning in our lending operations.

DASHBOARD 3: DETAILS

In the context of our Bank Loan Report project, we understand the importance of developing a thorough “Details Dashboard” that consolidates all essential information within our loan data. This dashboard will offer a unified view of key loan-related metrics, providing users with efficient access to crucial information.

Objective:

The core objective of the “Details Dashboard” is to deliver a comprehensive, user-friendly interface for retrieving vital loan data. It will act as a central hub, allowing users to easily explore detailed insights into our loan portfolio, borrower profiles, and overall loan performance.