**BANK LOAN REPORT**

**PROBLEM STATEMENT**

**KPI Requirements:**

1. **Total Loan Applications:** We need to calculate the total number of loan applications received during a specified period. Additionally, it is essential to monitor the Month-to-Date (MTD) Loan Applications and track changes Month-over-Month (MoM).
2. **Total Funded Amount:** Understanding the total amount of funds disbursed as loans is crucial. We also want to keep an eye on the MTD Total Funded Amount and analyse the Month-over-Month (MoM) changes in this metric.
3. **Total Amount Received:** Tracking the total amount received from borrowers is essential for assessing the bank's cash flow and loan repayment. We should analyse the Month-to-Date (MTD) Total Amount Received and observe the Month-over-Month (MoM) changes.
4. **Average Interest Rate:** Calculating the average interest rate across all loans, MTD, and monitoring the Month-over-Month (MoM) variations in interest rates will provide insights into our lending portfolio's overall cost.
5. **Average Debt-to-Income Ratio (DTI):** Evaluating the average DTI for our borrowers helps us gauge their financial health. We need to compute the average DTI for all loans, MTD, and track Month-over-Month (MoM) fluctuations.

**Good Loan v Bad Loan KPI Requirements:**

**Good Loan KPIs:**

1. **Good Loan Application Percentage:** We need to calculate the percentage of loan applications classified as 'Good Loans.' This category includes loans with a loan status of 'Fully Paid' and 'Current.'
2. **Good Loan Applications:** Identifying the total number of loan applications falling under the 'Good Loan' category, which consists of loans with a loan status of 'Fully Paid' and 'Current.'
3. **Good Loan Funded Amount:** Determining the total amount of funds disbursed as 'Good Loans.' This includes the principal amounts of loans with a loan status of 'Fully Paid' and 'Current.'
4. **Good Loan Total Received Amount:** Tracking the total amount received from borrowers for 'Good Loans,' which encompasses all payments made on loans with a loan status of 'Fully Paid' and 'Current.'

**Bad Loan KPIs:**

1. **Bad Loan Application Percentage:** Calculating the percentage of loan applications categorized as 'Bad Loans.' This category specifically includes loans with a loan status of 'Charged Off.'
2. **Bad Loan Applications:** Identifying the total number of loan applications categorized as 'Bad Loans,' which consists of loans with a loan status of 'Charged Off.'
3. **Bad Loan Funded Amount:** Determining the total amount of funds disbursed as 'Bad Loans.' This comprises the principal amounts of loans with a loan status of 'Charged Off.'
4. **Bad Loan Total Received Amount:** Tracking the total amount received from borrowers for 'Bad Loans,' which includes all payments made on loans with a loan status of 'Charged Off.'

**Loan Status Grid View:**

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

*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. Loan Term Analysis (Donut Chart):**

*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.*

**3. Employee Length Analysis (Bar Chart):**

*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.*

**4. Loan Purpose Breakdown (Bar Chart):**

*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.*

**5. Home Ownership Analysis (Tree Map):**

*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.*