

## PROBLEM STATEMENT

### DASHBOARD 1: SUMMARY

#### Key Performance Indicators (KPIs) 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.

**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's

##### Good Loan:

1. **Good Loan Application Percentage**
2. **Good Loan Applications**
3. **Good Loan Funded Amount**
4. **Good Loan Total Received Amount**

##### Bad Loan

1. **Bad Loan Application Percentage**
2. **Bad Loan Applications**
3. **Bad Loan Funded Amount**
4. **Bad Loan Total Received Amount**
5. **Loan Status Grid View**
6. In order to gain a comprehensive overview of our lending operations and monitor the performance of loans, we aim to create a grid view report categorized by 'Loan Status.' By providing insights into metrics such as 'Total Loan Applications,' 'Total Funded Amount,' 'Total Amount Received,' 'Month-to-Date (MTD) Funded Amount,' 'MTD Amount Received,' 'Average Interest Rate,' and 'Average Debt-to-Income Ratio (DTI),' this grid view will empower us to make data-driven decisions and assess the health of our loan portfolio.

## DASHBOARD 2: OVERVIEW

### CHARTS

1. **Monthly Trends by Issue Date (Line Chart):** To identify seasonality and long-term trends in lending activities
2. **Regional Analysis by State (Filled Map):** To identify regions with significant lending activity and assess regional disparities
3. **Loan Term Analysis (Donut Chart):** To allow the client to understand the distribution of loans across various term lengths.
4. **Employee Length Analysis (Bar Chart):** 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):** 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):** For a hierarchical view of how home ownership impacts loan applications and disbursements.

**Metrics to be shown: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'**

### DASHBOARD 2: DETAILS

#### GRID

**Need for a comprehensive 'Details Dashboard' that provides a consolidated view of all the essential information within our loan data. This Details Dashboard aims to offer a holistic snapshot of key loan-related metrics and data points, enabling users to access critical information efficiently.**

#### **Objective:**

**The primary objective of the Details Dashboard is to provide a comprehensive and user-friendly interface for accessing vital loan data. It will serve as a one-stop solution for users seeking detailed insights into our loan portfolio, borrower profiles, and loan performance**