**Columns with Null Values and Their Counts:**

 **Gross Income**: 50458 (completely null)

 **Sales Officer Name**: 1795

 **Last Payment Date**: 2897

 **Last Payment Amount**: 2897

 **Adjusted DPD**: 45008

 **Final DPD**: 50458 (completely null)

1. **Month on Month Disbursement (Company – State – Region – Branch – Officer)**

* Since “Branch” Coumn is not available in the provided dataset, we will focus on the **"Center Name"** column for analysis.
* It is also noted that the **"Sales Officer"** column contains null values, which may impact the reliability of any analysis dependent on this field.
* Additionally, the **"Officer Name"** column is formatted inconsistently (e.g., "Vcm-E-02071"). This non-standard format could affect data processing and analysis, and standardization of this field will be necessary to ensure accurate insights.
* “Interest Outstanding” contains negative values so it will affect on final interest outstanding amount .

1. **Portfolio Growth (Company – State – Region – Branch – Officer):**

* Since “Branch” column is not available in the provided dataset, we will use the **"Center Name"** column for analysis.
* The **"Sales Officer"** column contains null values, which may limit the completeness of analysis involving this field.
* The **"Officer Name"** column is provided in a non-standardized format (e.g., "Vcm-E-02071"), which could impact the accuracy of processing and analysis. Standardization will be required to derive meaningful insights.
* Furthermore, the **"Gross Income"** column, which is essential for portfolio growth analysis, is entirely empty.

1. **Regular v/s Delinquent (Company – State – Region – Branch – Officer)**

* Since “Branch” column is not available in the provided dataset, we will use the **"Center Name"** column for analysis.
* The **"Sales Officer"** column contains null values, which may impact the completeness and reliability of any analysis involving this field.
* The **"Officer Name"** column is provided in a non-standardized format (e.g., "Vcm-E-02071"), which could affect the accuracy of processing and analysis. Standardization will be necessary to ensure meaningful insights.
* we will focus on the **"DPD"** column for the analysis.

1. **Buckets 1-30, 31-60, 61-90 & so on**

* Please specify the column you would like to use for visualizing the **Bucket** analysis. This will help ensure the visualization aligns with your requirements and provides meaningful insights.

1. **Can we see some early delinquency triggers.**

* Yes, but the **"Final DPD"** column contains null values. Therefore, we will proceed with the **"DPD"** column for analysis.
* On which column you want early delinquency triggers because there are various ways.  
    
  **1. Loan Performance Data:**
  + **Overdue Days**: Indicates how many days a loan is overdue, helping to identify early delinquency.
  + **Customer DPD**: Tracks the borrower's days past due.
  + **Adjusted DPD**: Refines delinquency tracking (if applicable).
  + **Principal Overdue**: Shows the overdue principal amount.
  + **Interest Overdue**: Indicates unpaid interest, which may point to early repayment issues.
  + **Loan Status**: Helps filter active and delinquent loans.

1. **Loan Details:**
   * **Loan Amount**: Larger loans may carry a higher risk of delinquency.
   * **Loan Tenure**: Shorter or longer tenure can impact repayment behavior.
   * **Installment Amount (First Slab)**: Higher installments may lead to early defaults.
   * **Disbursement Date**: To assess delinquency within a certain timeframe after loan disbursement.