

## **Data Preprocessing**

- 1) Removed unwanted (MSA which not given in the variable description document) column
- 2) Changed data type of date columns
- 3) Updated occupancy status to 9, where original value was 0 in the given dataset
- 4) Updated PPM status to 9, where original value was X in the given dataset
- 5) Updated First Time Home Buyer (FTHB) status to 9, where original value was X in the given dataset
- 6) Created dim\_payment table and dim\_maturity table

## **Data Modelling**

Established proper one-many relationships between the dimension and fact tables to analyze further

## **Dashboard**

### **KPI:**

#### **1) Total Loans**

Displayed in KPI card to compare the total loans every year.

Created total loans and previous year's loan count as measure and used it in KPI

#### **2) Avg. Months Delinquent**

Created average month delinquent measure and last year's average month delinquent to analyze the delinquency trends.

#### **3) Percentage of loans ever delinquent**

Created percentage of ever loans delinquent and previous year's ever loans delinquent to

### **SLICERS:**

Created two date dimension tables for payment and maturity.

Used year and month as slicers to interact with the reports as per user's need.

### **Histogram of Loan Delinquency: Months vs. Count**

Utilized clustered column chart to compare the total number of loans with delinquent loan count for each month.

#### **Insights:**

- 1) Over all, in the month of April has a greater number of loans.
- 2) Same like loan count, month of April has higher delinquent loans.

### **Trend of Delinquency rates over time**

Used line chart to analyze the trends of delinquency over a time period and line chart suits perfect to analyze the trend over a time.

#### **Insights:**

- 1) April month have high number of delinquents
- 2) May, August and July have only minimum delinquents

### **Percentage of Loans ever delinquent by credit range**

To know the credit range, created calculated column to determine the credit range as high, medium and low.

I chose simple stacked bar chart to show each credit range counts.

#### **Insights:**

- 1) Loans with medium-range credit scores have the highest delinquency rate, at 0.48%."