Loan Characteristics and Prepayment Rate Analysis Documentation

Objective

The objective of this dashboard is to analyze loan characteristics and their impact on prepayment rates within a mortgage securities dataset. The analysis aims to provide insights into how various loan attributes influence prepayment behaviors.

Data Preparation

The dataset was imported into Power BI, where initial data cleaning and transformation processes were conducted to ensure data quality and readiness for analysis.

Key Analysis and Visualizations

- Average Original Interest Rate:

A DAX measure was created to compute the average original interest rate, which was then displayed using a card visualization.

- Average Original Loan Term:

A DAX measure was created to calculate the average original loan term, and this was also presented in a card visualization.

- Scatter Plot Matrix:

A scatter plot matrix was created with loan characteristics such as Original UPB, LTV, and DTI on the axes, and prepayment rates represented as data points. This visualization highlights the relationships between different loan attributes and prepayment rates.

- Box Plot of Prepayment Rates by Credit Range:

A box plot was used to represent prepayment rates across various credit score ranges, allowing for comparison and analysis of prepayment behavior by credit score.

- Geographic Filters:

Geographic filters were applied to the dataset, enabling analysis of how prepayment rates vary by location.

- Interactive Slicers:

Interactive slicers were incorporated into the dashboard, to filter data dynamically based on year, month, and a custom 'Repay_range'.