IST 719: Ally Bank Auto Securitization

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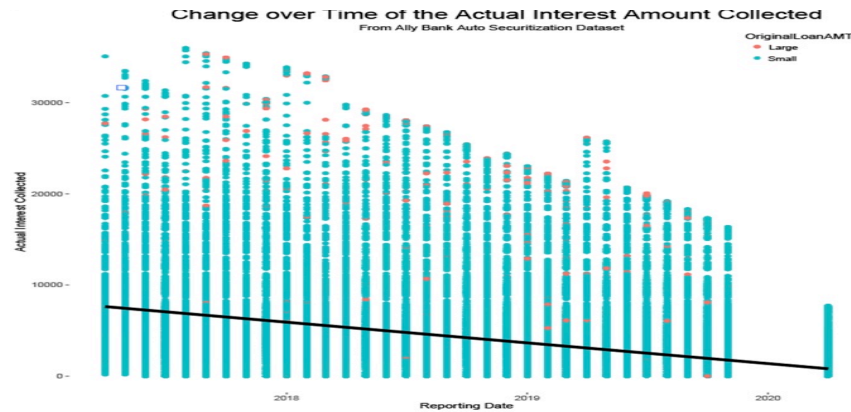
Goal: *Assess loan pool traits and profit/loss conditional correlations.*

Our Process: *Exploring loan features for each individual illustrated some interesting trends in the obligee issued loans, which could be useful for Ally and other banks. The data itself is 110,664 rows and 22 columns after cleaning. The original dataset had close to 2,000,000 rows and 74 columns before being parsed down using random sampling, removal of duplicates, and text matching for mismatched brands and dates in different reporting periods.*
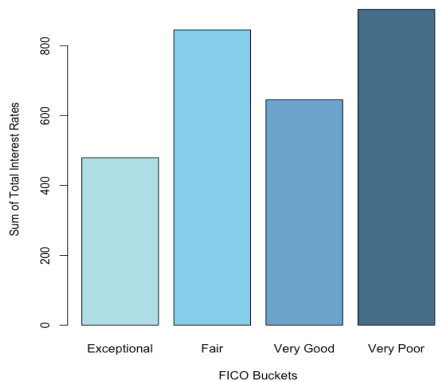
Questions We Are Looking to Answer

1. *Over time, what occurs to total interest collected as obligators pay more than the required principal amount? Effect on profit?*
2. *How does vehicle type vary by new/used car status and how could it determine risk and pooling of future securitizations?*
3. *Which regions are most prevalent in this pool and what could this reveal about buying patterns of top car brands in the pool?*
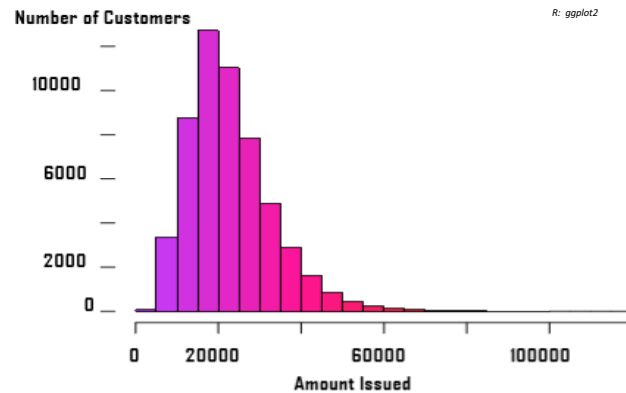4. *How do obligator rate buckets reflect on interest rates offered?*
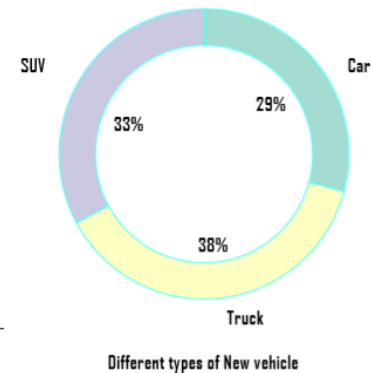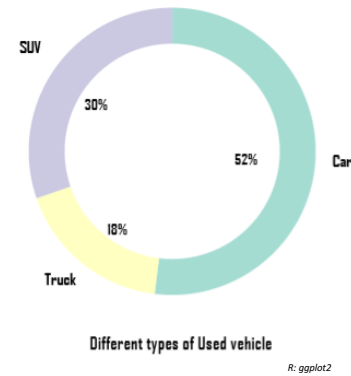
Realization of Lost Profit

Change over Time of the Actual Interest Amount Collected
From Ally Bank Auto Securitization Dataset

New/Used Vehicle Breakdown

Different types of Used vehicle

R: ggplot2

Loan Amount Totals by State

R: openintro, ggplot2, ggmap

Cumulative Rates by FICO Buckets

Loan amount Distribution

R: ggplot2

Different types of New vehicle

R: ggplot2

Distribution of loan amount

Top 10 Car Brands purchased by Customers

R: ggplot2,