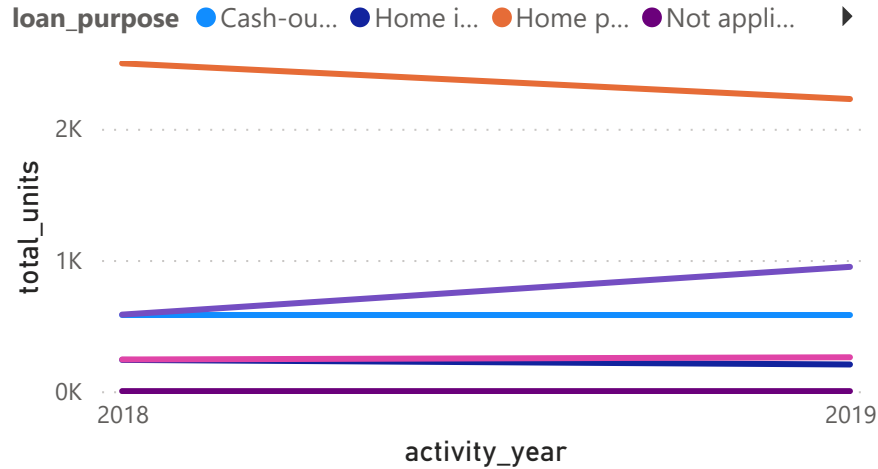


action_taken	Count of action_taken
Loan originated	7134
Application denied	1232
Total	8366

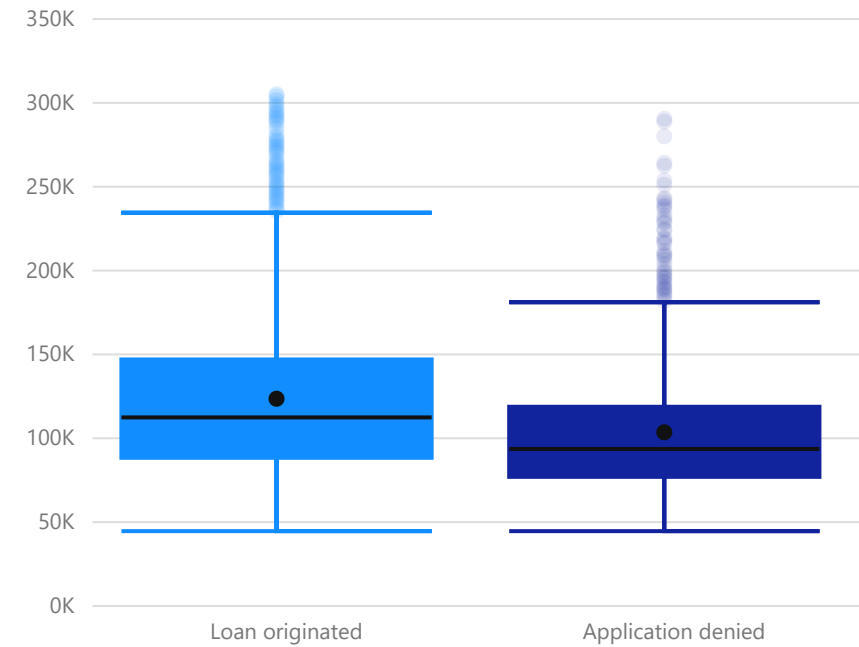
loan_purpose by activity_year and loan_purpose



Loan Purpose Line Chart Takeaways

- Home Purchase and Refinancing were negatively correlated between the time period of 2018 to 2019. Meaning Home Purchase had gone down (over -8%) where as Refinancing almost doubled during the same period.
- No significant changes were observed for other loan purpose such as Home Improvements and Other Purposes

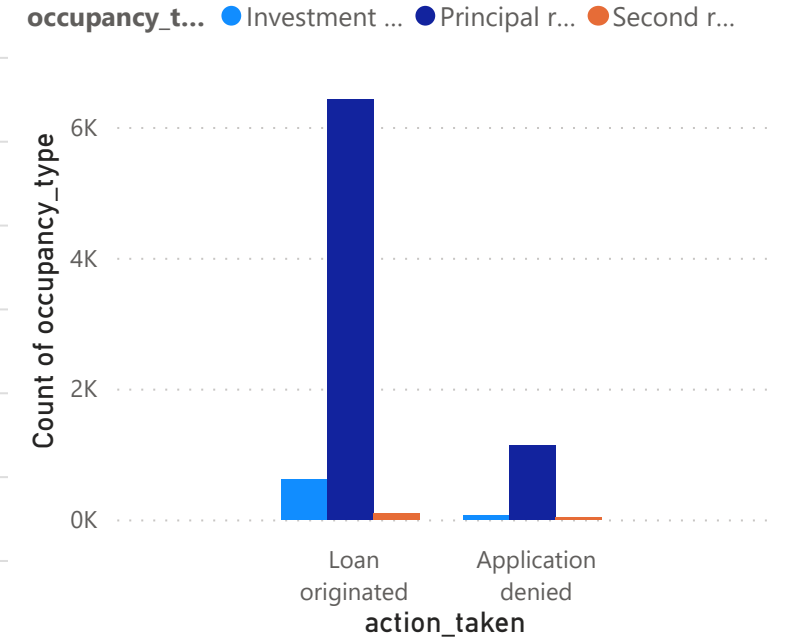
income by action_taken



Income by Action Taken

- The average/median income of the Loan Originated is about \$10,000 higher than Application Denied data points.
- This plot is consistent with my expectations because loans originated need to meet certain standards of the lenders or banks. We can observe the relationship between income and action taken therefore validating the point.

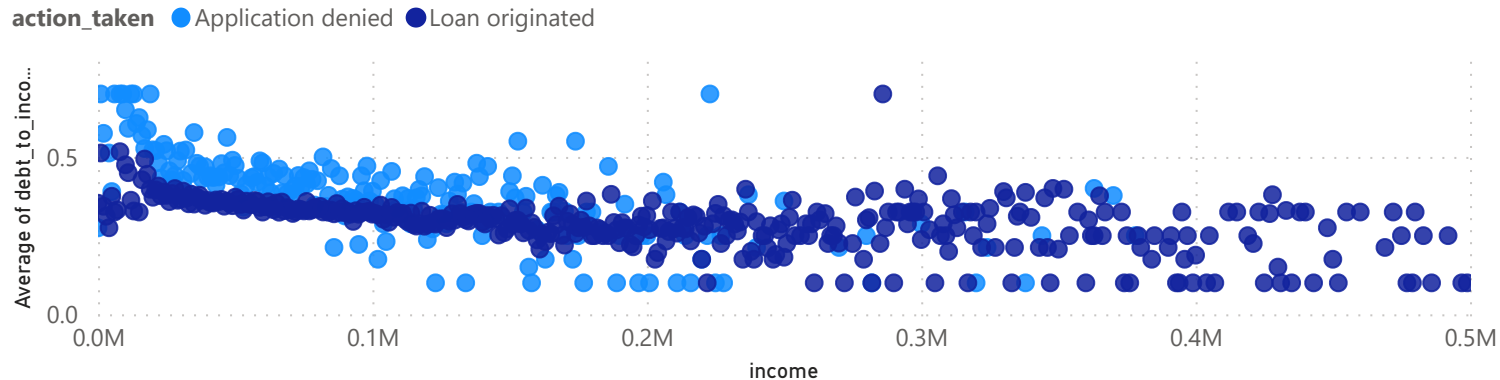
occupancy_type by action_taken



Occupancy Type by Action Taken

- The occupancy type and the action taken were not directly related. Both Loan originated and application denied had majority being the principal residence.

Average of debt_to_income_ratio by action_taken and income



Average of Debt to Income Ratio by Action Taken and Income

1. There seems to be downward relationship between income and debt to income ratio minus some outliers.
2. This makes sense because it's less likely for people with higher income to take out large loans compared to their income than those with less income to finance the same property.
3. However, that relationship seems to be less obvious for applications that were denied than loans originated. From income \$150,000 and less indicate the similar relationship of the income and debt to income ratio for both Action Taken Names. This may be due to limited observable data points from the Application Denied status with higher income.