Lending Club Case Study

Leading Club Case Study-

Background:

Landing club is the largest peer-to-peer marketplace connecting borrowers to learners. Borrowers apply through an online platform where they assigned and internal score and basis on that Landers decide:

1. Weather to Land or not?
2. The term of loan such as interest rate, monthly instalment, tenure etc.

- Some popular objects are credit card loans, debt consolidation, house loans, car loans etc.

Business Objective:

To identify the variables which are strong indicators of default potentially use the insights in approval/ rejection decision making.

Data Understanding:

Types of Variables-

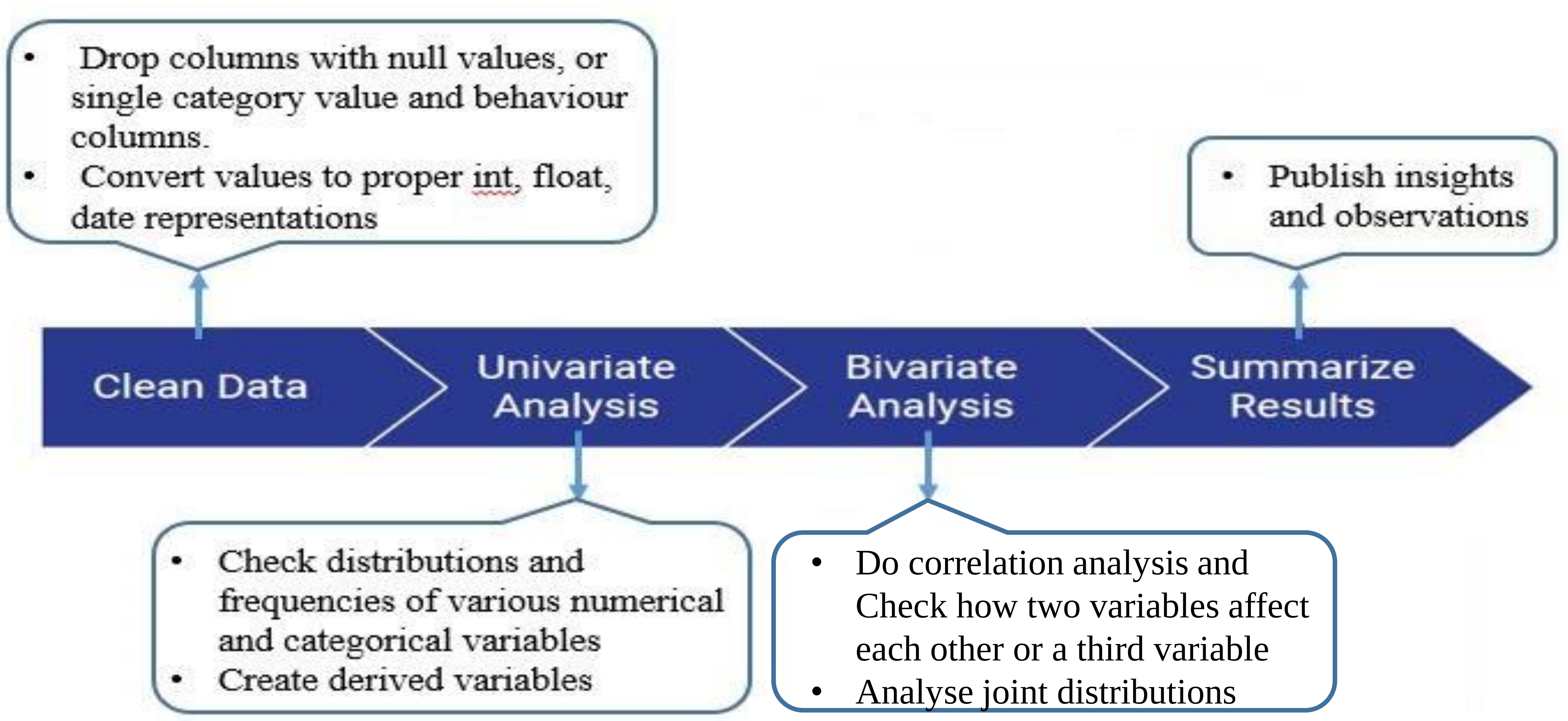
- Customer’s(applicant) demographic
- Loan related information and characteristics
- Customer Behaviour(If loan is granted)

Customer’s Demographics
Employment Length
Employment Title
Annual Income
Description

Customer Behaviour Variable
Delinquency year -2
Earliest credit line
Revolving balance
Recoveries

Loan Information & Characteristics
Loan Amount
Funded Amount
Funded Investment Amount
Interest Rate

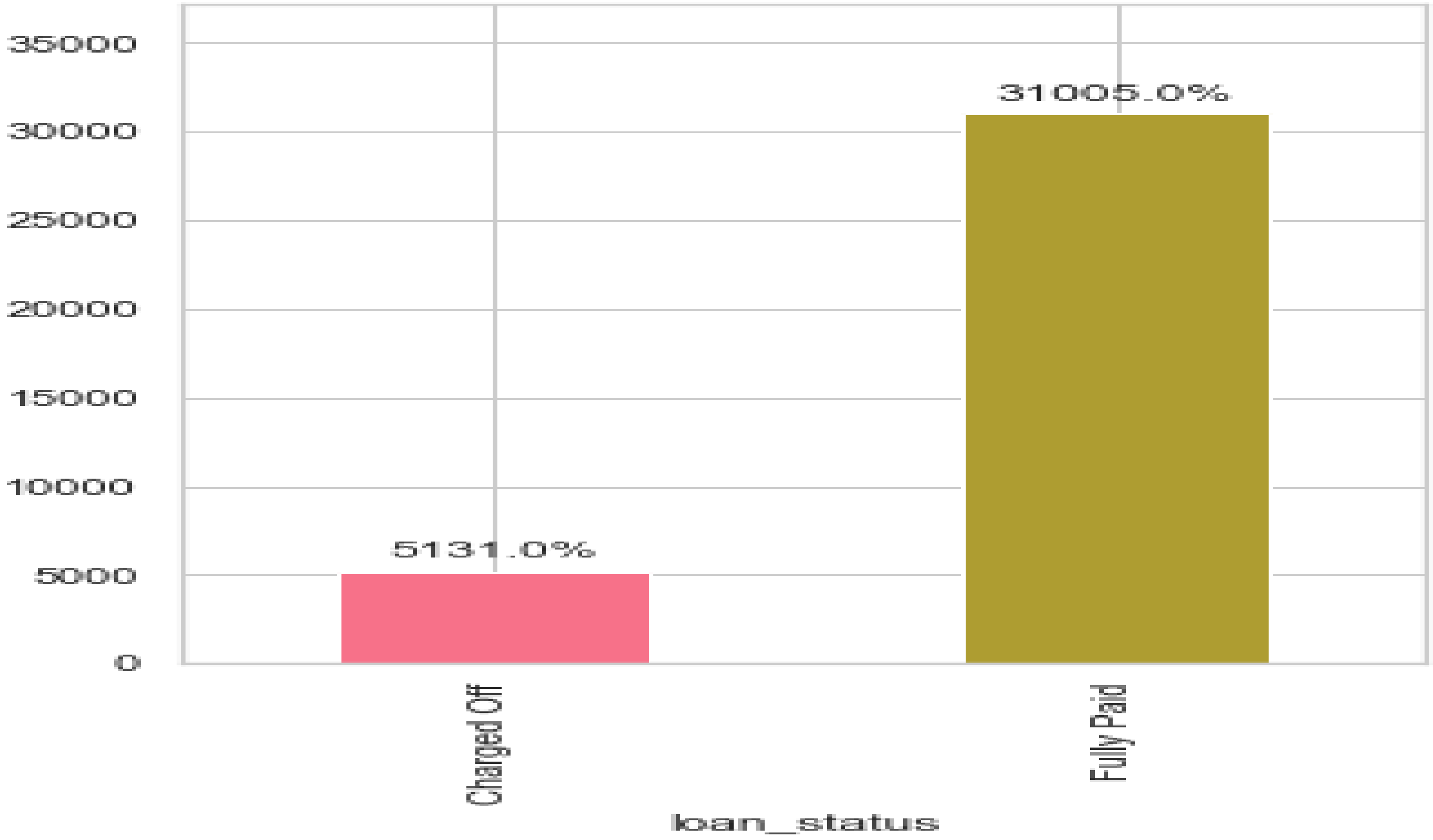
Analysis Approach



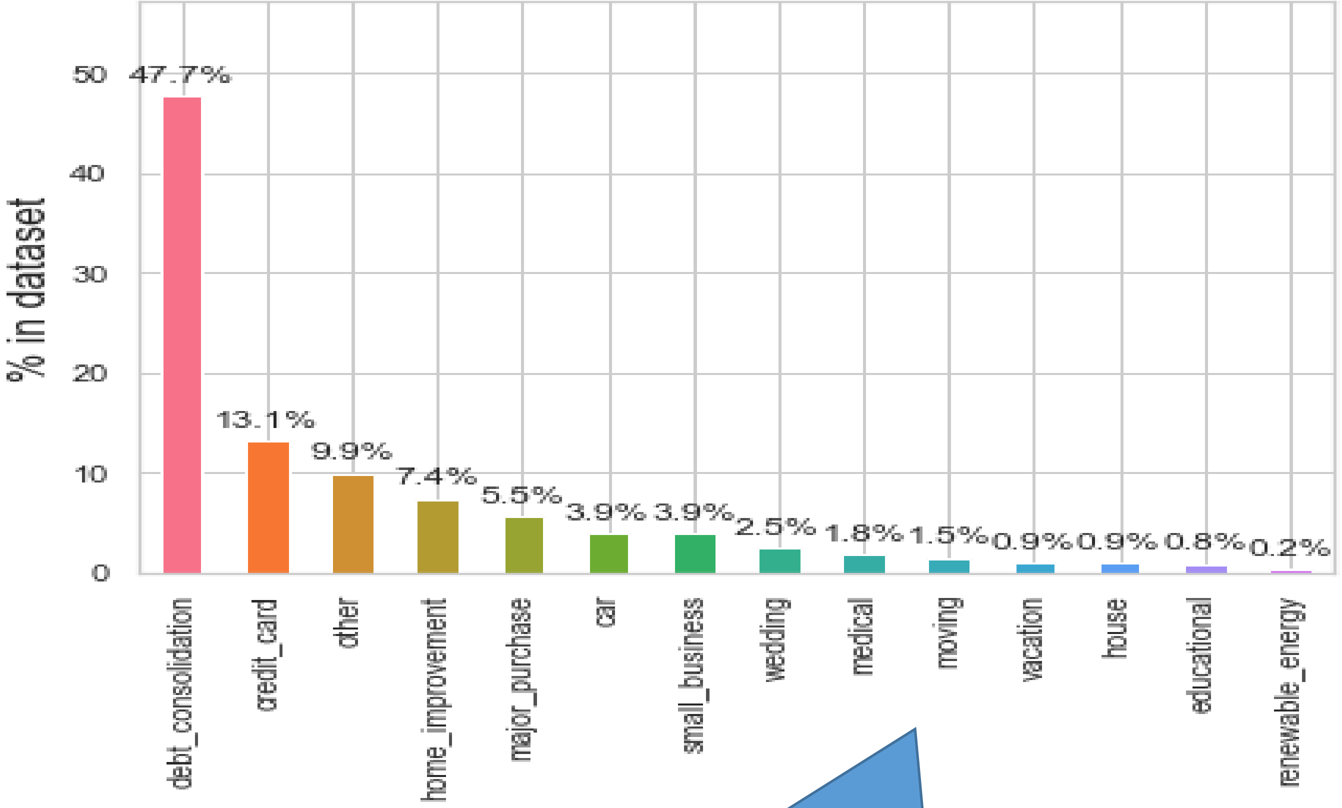
<u>Analysis</u>: <u>Overall Loan Status</u>

<u>Total Loans</u>

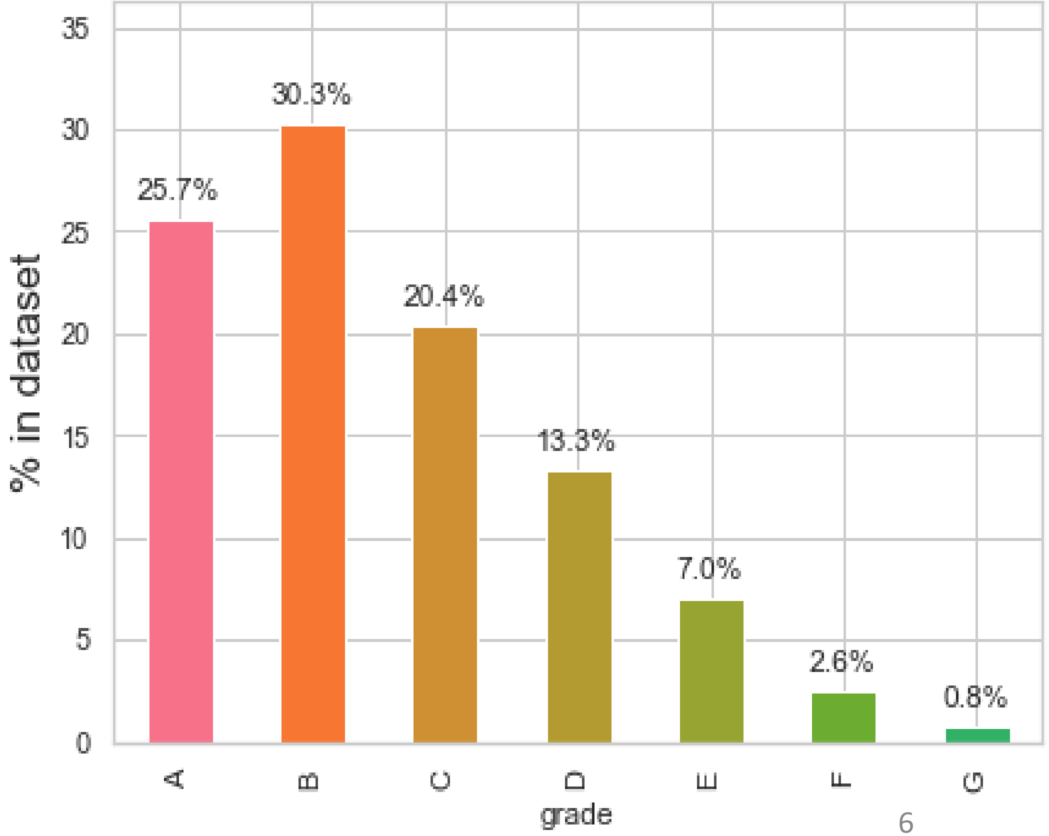
- Approximately 14% of loans are defaulted
- Any variable that Increases percentage of default to higher than 18% should be considered a business risk.



Analysis: Understanding the Loans



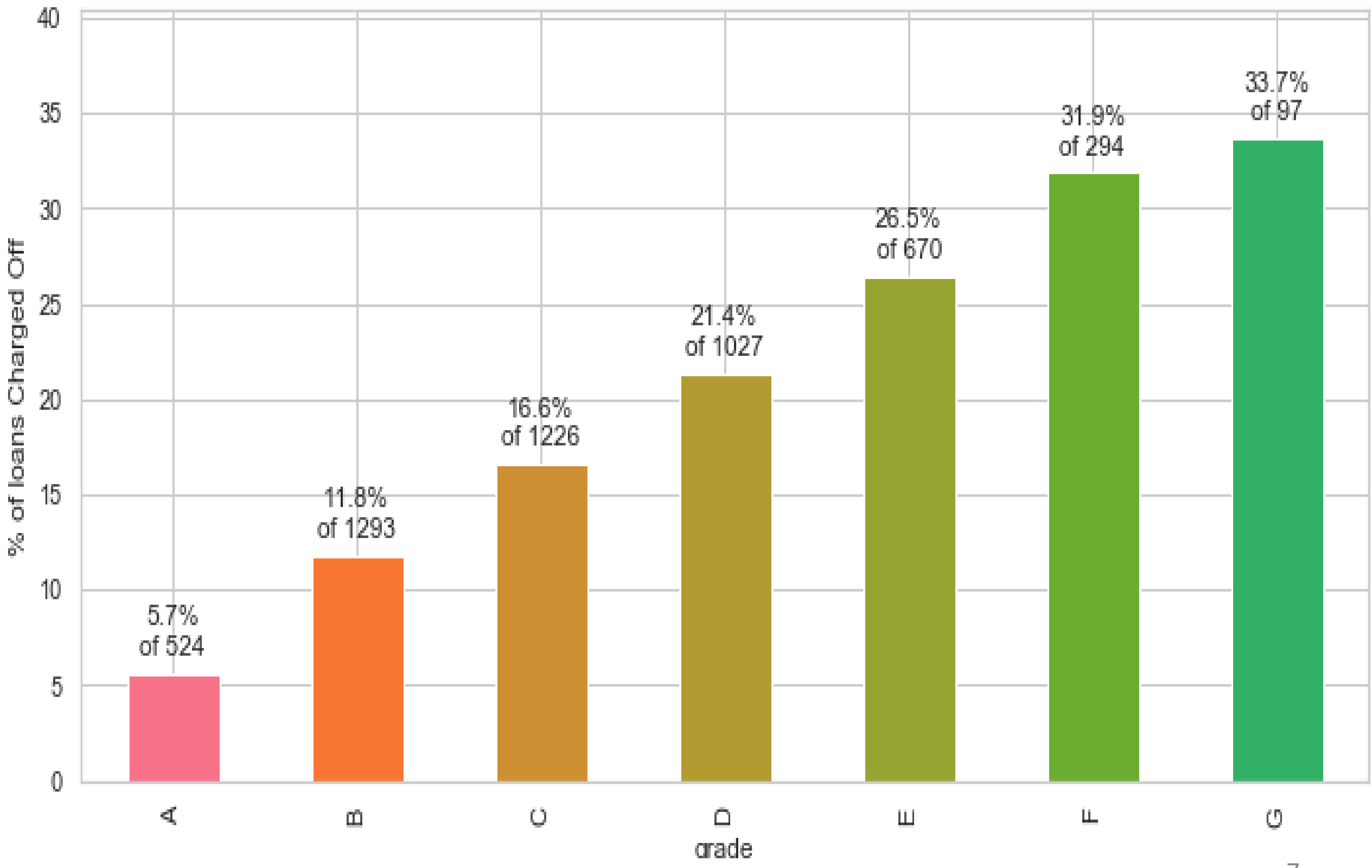
Most of the loans are from high grades i.e. A and B.



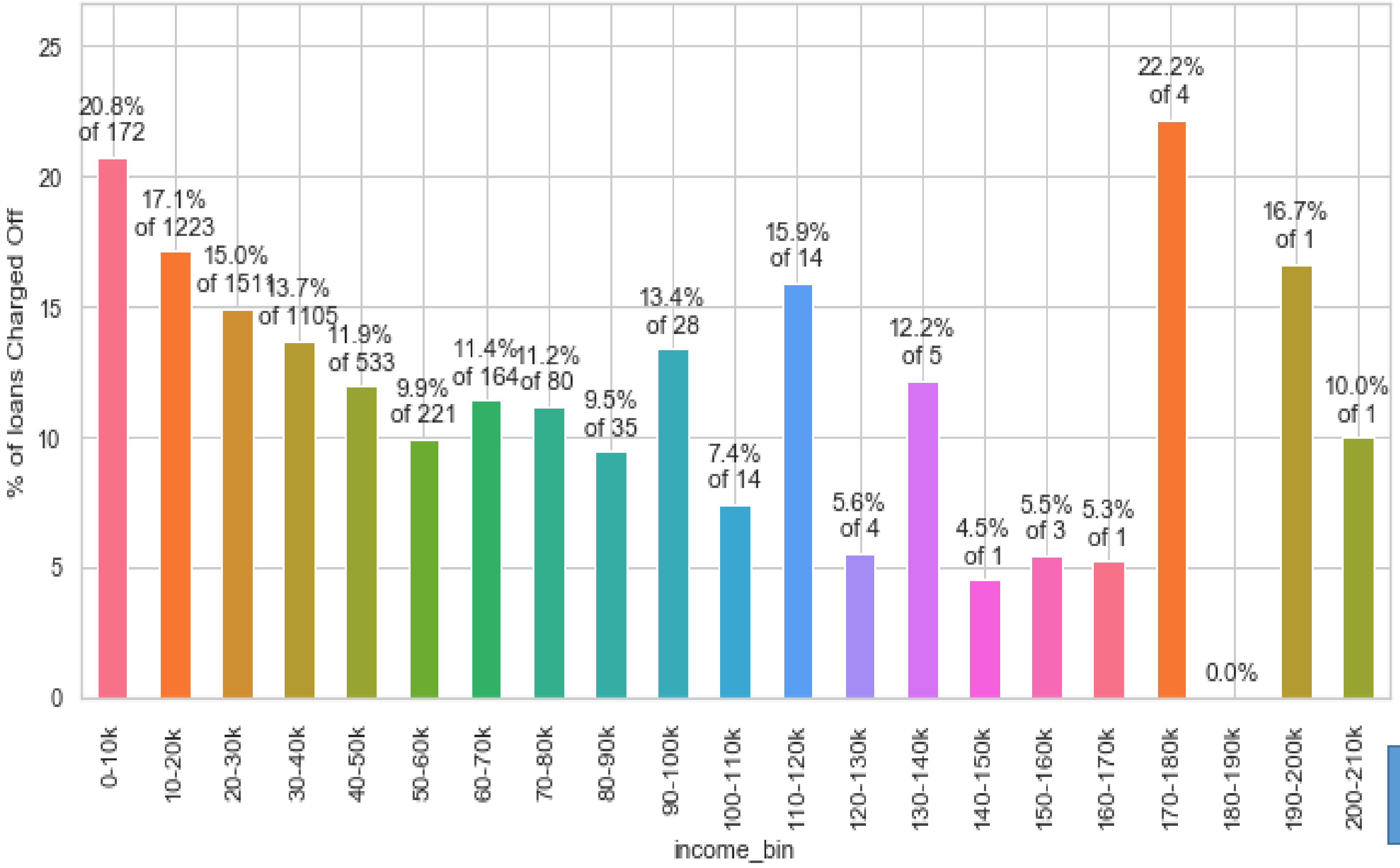
Maximum number of loans are for debt consolidation followed by credit card.

Analysis: Default Case

- Lower grades have higher incidence of defaults on loans.
- Lending Club charges higher interest rates as the grade of loan becomes worse.
- However, as we will see on next slide - the driving variable for defaults is the higher interest rate.



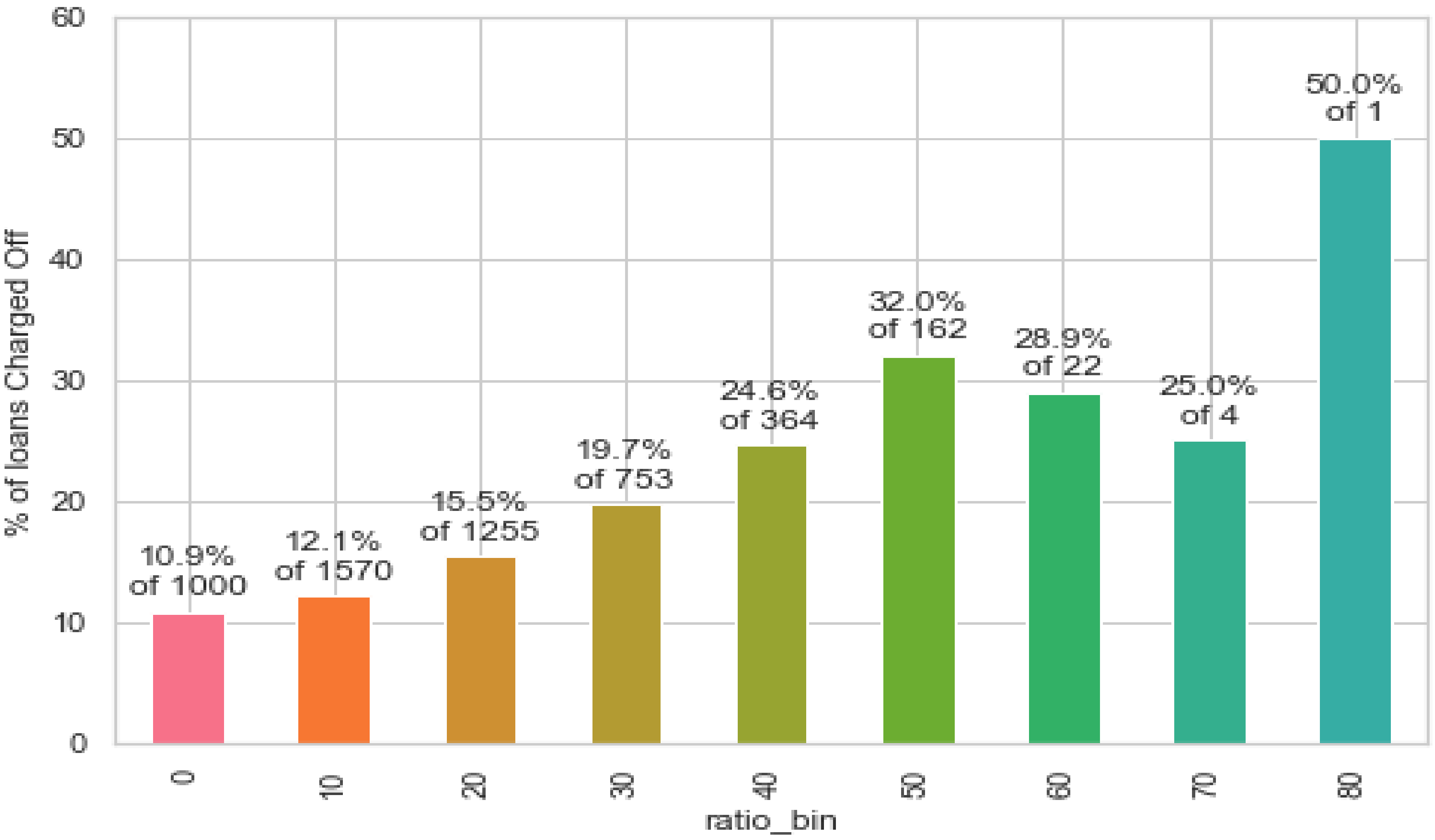
Analysis: Defaults by Borrower’s Income



- Borrowers having annual income less than 20000 default on their loans at much higher rates.
- Loan default decreases with higher annual income.

Note: Income is divided into Ranges

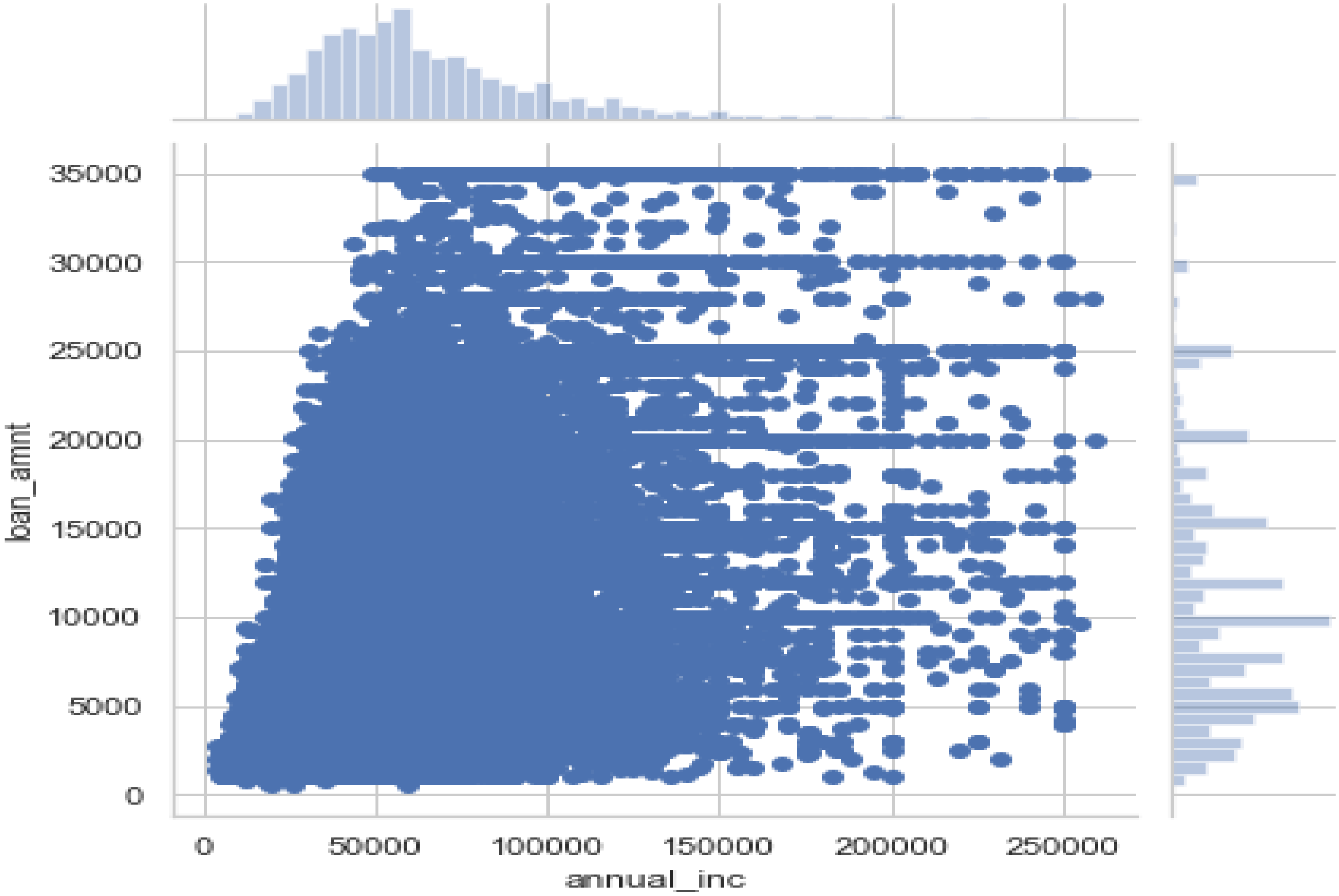
Analysis: Defaults by ratio of amount to income



- As long as loan amount is less than 20% of annual income, defaults are low.
- Loan amounts of 30% of annual income or higher see a high rate of default.

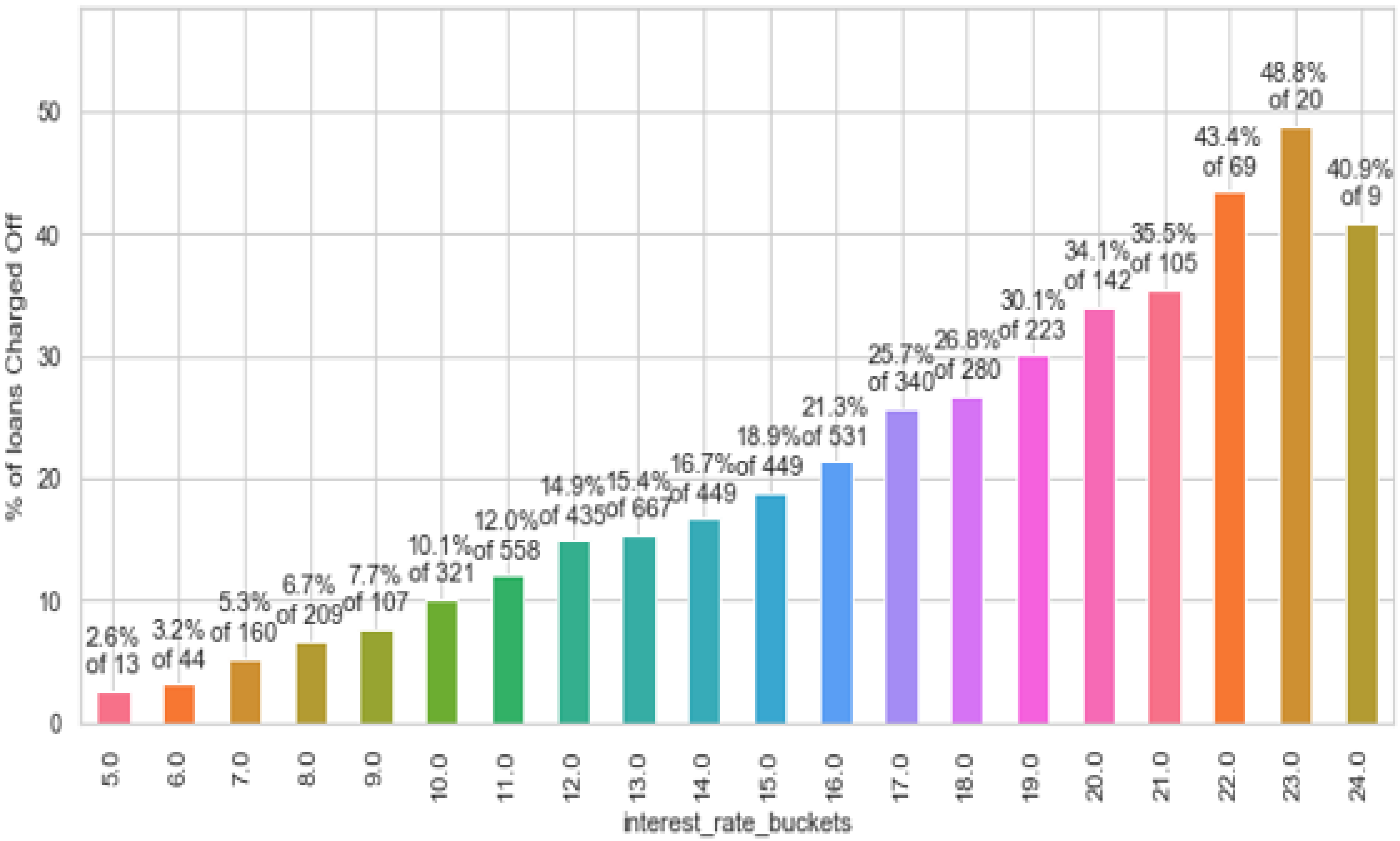
X-axis is the % of loan amount versus annual income

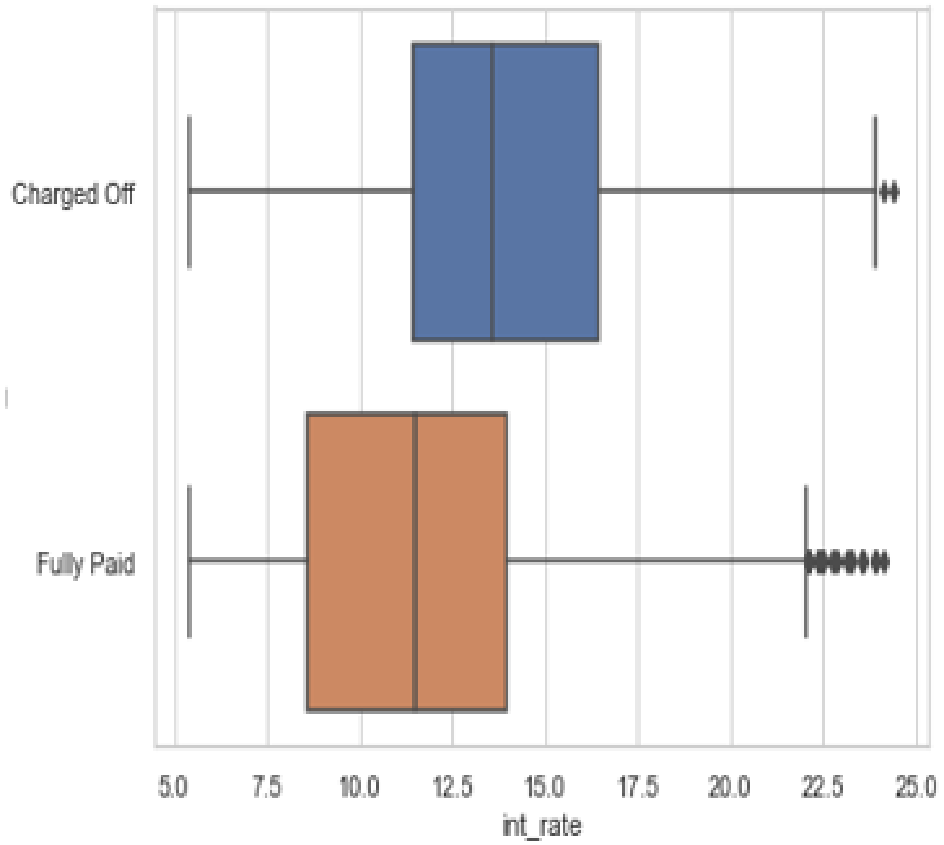
Analysis: Defaults by ratio Continued



- As we can see the Lending Club has extended high-value loans to people with low income.
- There are many cases of people with income 50000 or less getting loans of 25000 or more.
- This practice should be curtailed.

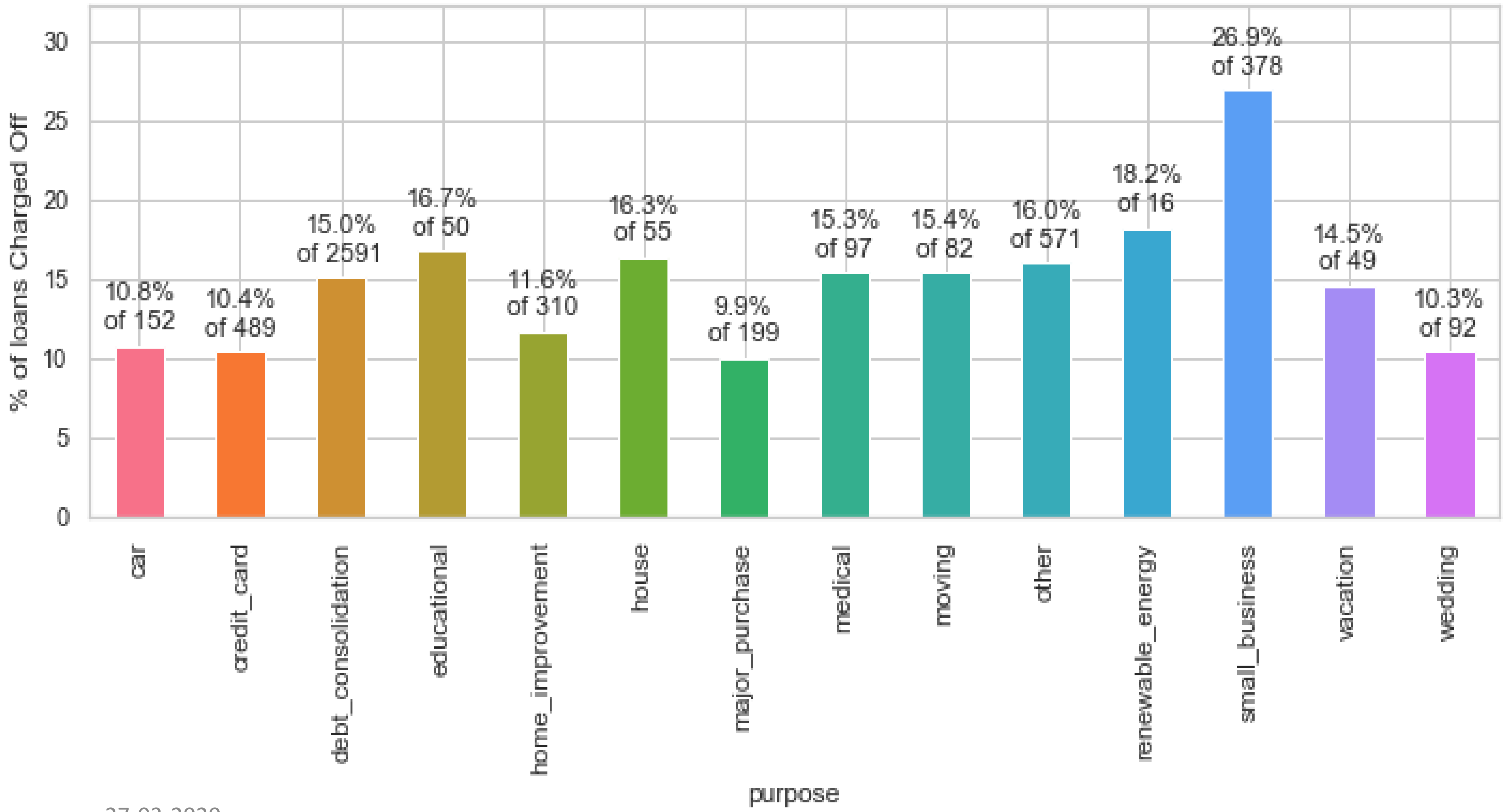
Analysis: Defaults by Interest Rate





- Percentage of Defaults increases monotonically with higher interest rates. At rates of 19% and above, more than 33% of loans are Charged Off.

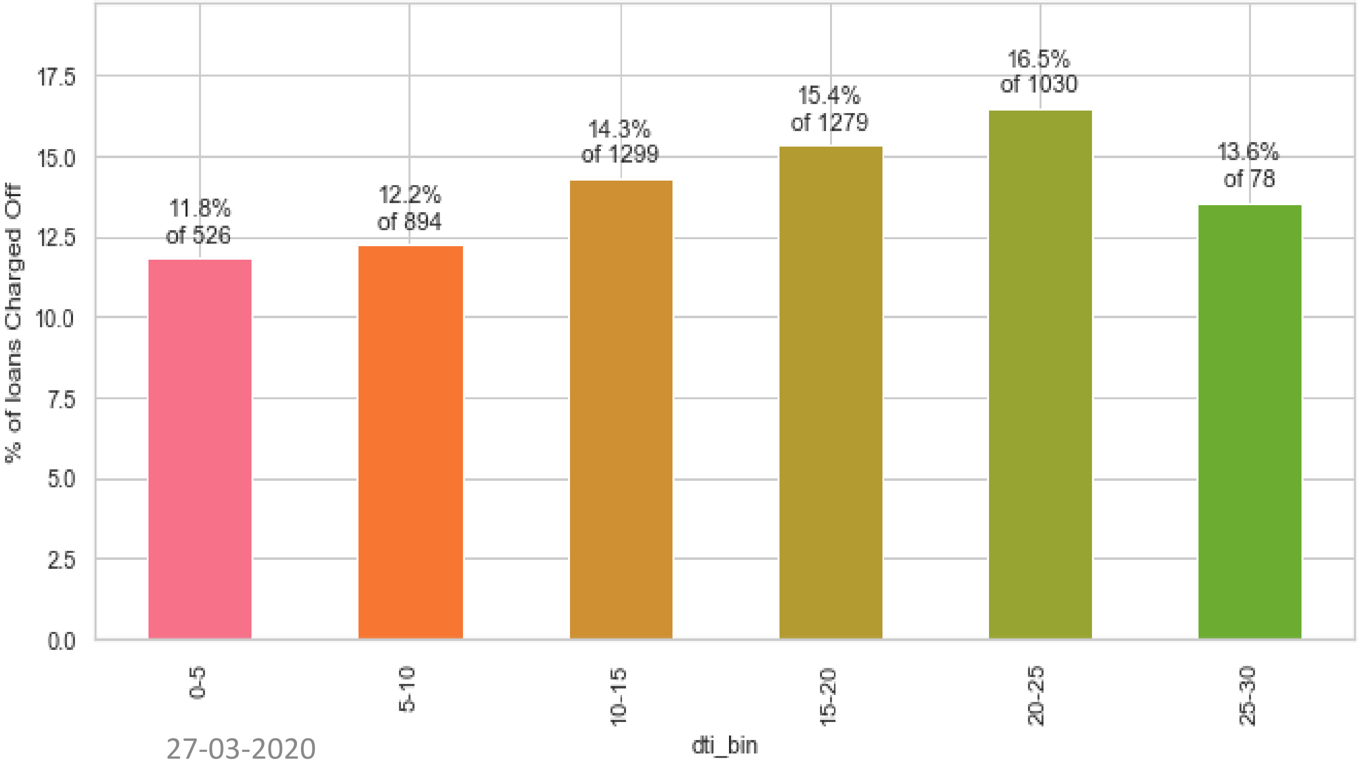
Analysis: Defaults by Purpose

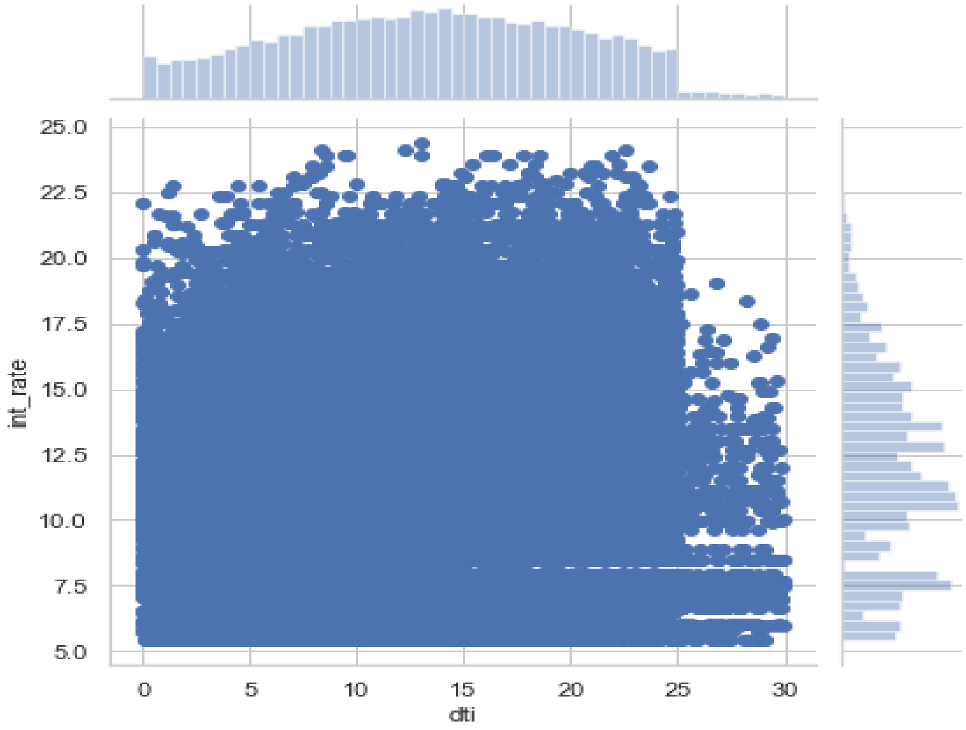


- More than a quarter of loans taken for the purpose of running a small business see defaults.

Analysis: Defaults by Debt to Income Ratio

Percentage of default rises with dti ratio.
As the dti ratio rises above 20, the loans become risky.





Higher interest rates should be charged for higher dti, but we see spread across all values

Recommendations:- To avoid Defaulters

- Stop – Approving loans where amount/income is higher than 30%.
- Reduce – Number of approvals where purpose is small business.
- Stop – Approving high-value loans when revolving line utilization rate greater than 75%.
- Start – Charging higher interest rates for loans with dti greater than 20.

---XXX--- THE END ---XXX---

Questions?