LENDING CLUB CASE STUDY

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Lending Club

Lending Club is a marketplace for personal loans that matches borrowers who are seeking a loan with investors looking to lend money and make a return.

The company has to approve loans for the applications received, considering the fact that the invested amount doesn't go in vain.

Purpose of analysis

To identify the variables that have more chances of a loan default.

With this Lending club could identify the potential risks involved when a loan is applied and utilise that to showcase their portfolio.

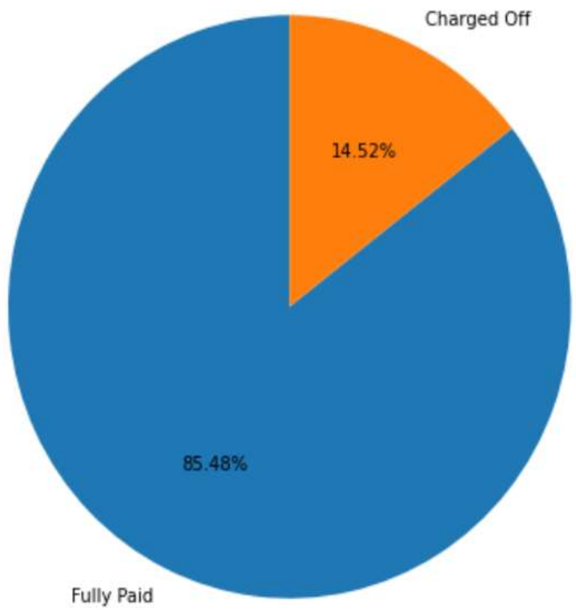
Features considered for this analysis

- Loan status – Fully paid or Charged off
- Interest rate – The amount of interest applied for each loan (devised into categories)
- Purpose – The purpose for which the loan was taken
- Annual income – Annual income of borrowers (devised into categories)
- Amount Invested – The loan amount invested by the lender to borrower based on the loan application.
- Grades – Lending Club assigned loan grades
- DTI ratio - borrower's total monthly debt payments on the total debt obligations, excluding mortgage and the requested LC loan
- Home ownership - The home ownership status provided by the borrower during registration. Values are: RENT, OWN, MORTGAGE, OTHER

Loan status

From the data provided there is approximately 14.5 percentage of loans that are charged off, rest 85 percentage is fully paid.

Therefore, we need to get to the crux of what may be the possible driving factors for this 15 percentage loan defaults

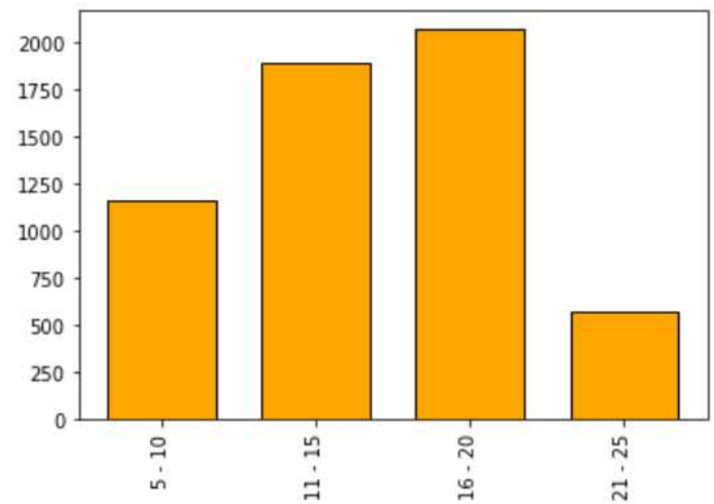


Interest rates distribution over loan purpose

- The Interest rates are categorized into following five slabs:

5% to 10%, 11% to 15%, 16% to 20%, 20% to 25%, 25% to 30%

- Most number of loans lent are in 16% to 20% slab.

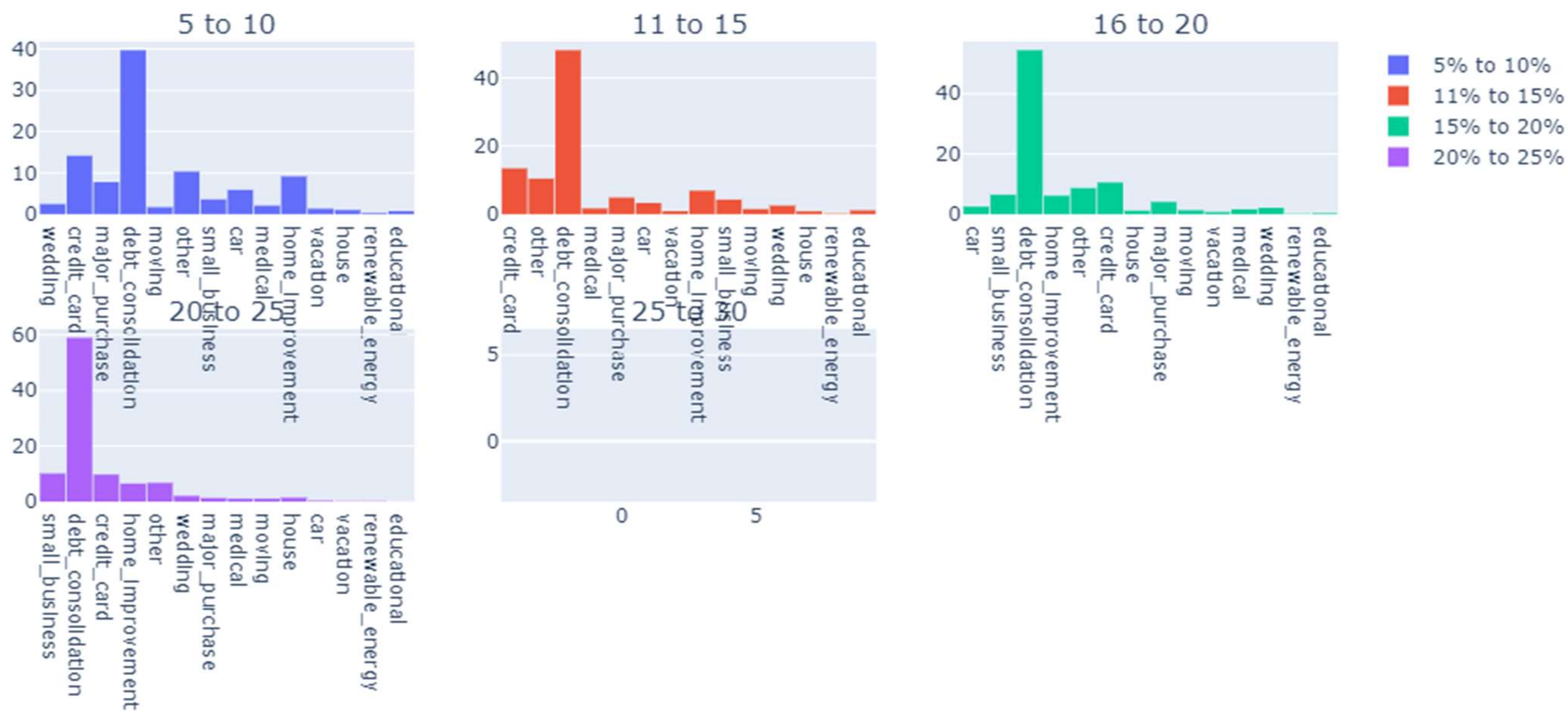


Interest rates distribution over loan purpose

- In every interest rate slab the most loans are lent for debt consolidations.

This means majority borrowers of the Lending Club are those who have other loan obligations.

Intrest rates effect on loan purpose



Interest rate slabs with most loan defaults

The Interest rate slab - 20% to 25 % is the one with most loan defaults.

That is when the interest amount is above 20% the chances of loan default increases.

Here, 38% of loans in 20% to 25% slab are 'Charged Off' loans

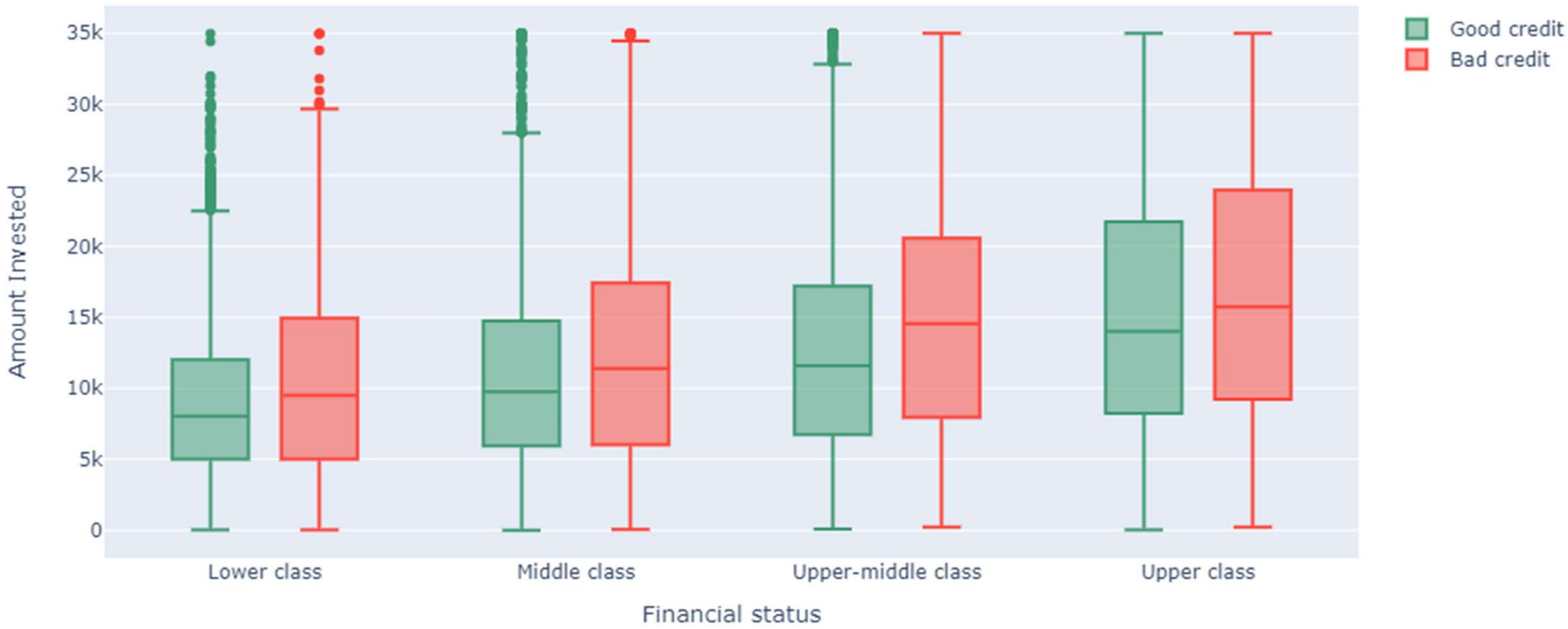
High interest rate effect on various income groups

So when the intrest levied on lower income goups is more than 20% then their chances of defaults are more. The borrowers whose annual income is below 59000 tend to default 49%, when the intrest on loan amount is between 20% to 25 %. The more the intrest rate greater becomes the chances of default.

Annual Income

Categorizing borrowers based on their annual income:

- below 59000: low class
- between 59000 to 75000 : middle class
- between 75000 to 115172: upper-middle class
- above 115172: upper class



Good credit
Bad credit
Amount Invested
35k
30k
25k
20k
15k
10k
5k
0
Lower class
Middle class
Upper-middle class
Upper class
Financial status

Amount invested vs Annual Inc..

On analysing the amount of loan invested across various income groups – it is found that people who have income above 115172 are the most who default loans and also they are the ones who have higher chances of getting loans.

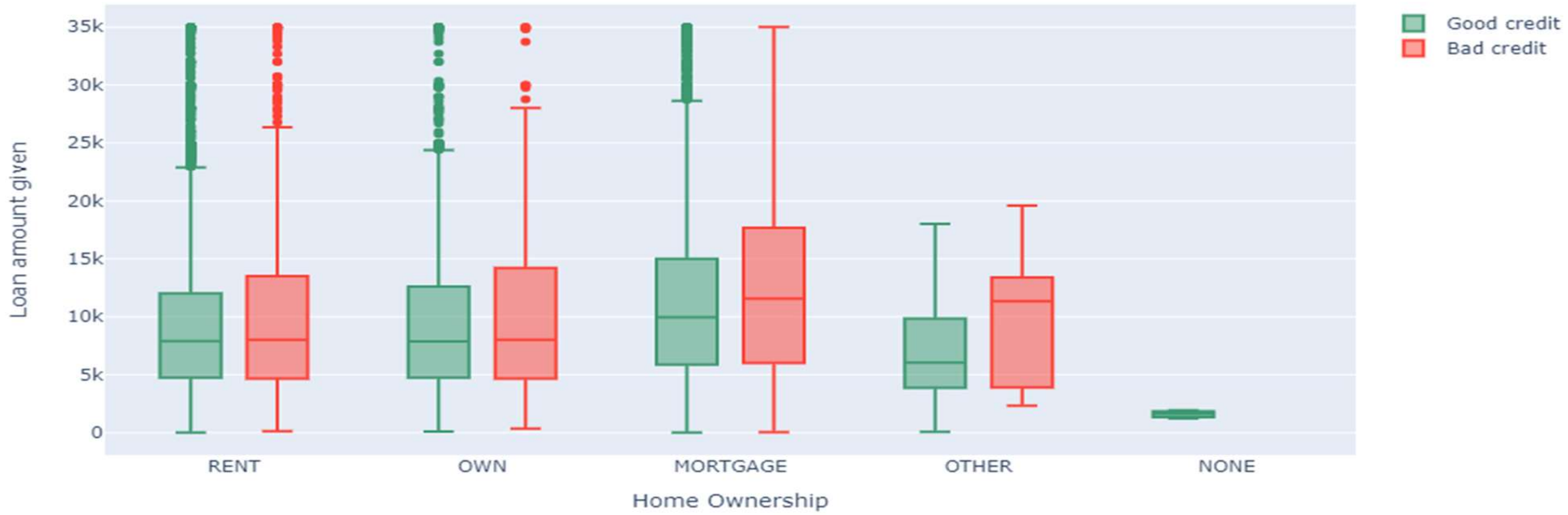
This is bizarre so, we will investigate further on this matter that, why people with high income are the most with loan defaults.

Most of the people (approx. 45%) with higher income take loans to cover up other loans that is debt consolidations, and that ends up in bad loans

This distribution explains why the highest income are amongst the most who default loans. Almost 70% of highest income category have mortgaged their homes and are probably taking loans to repay the same and are ending up in loan defaulters.

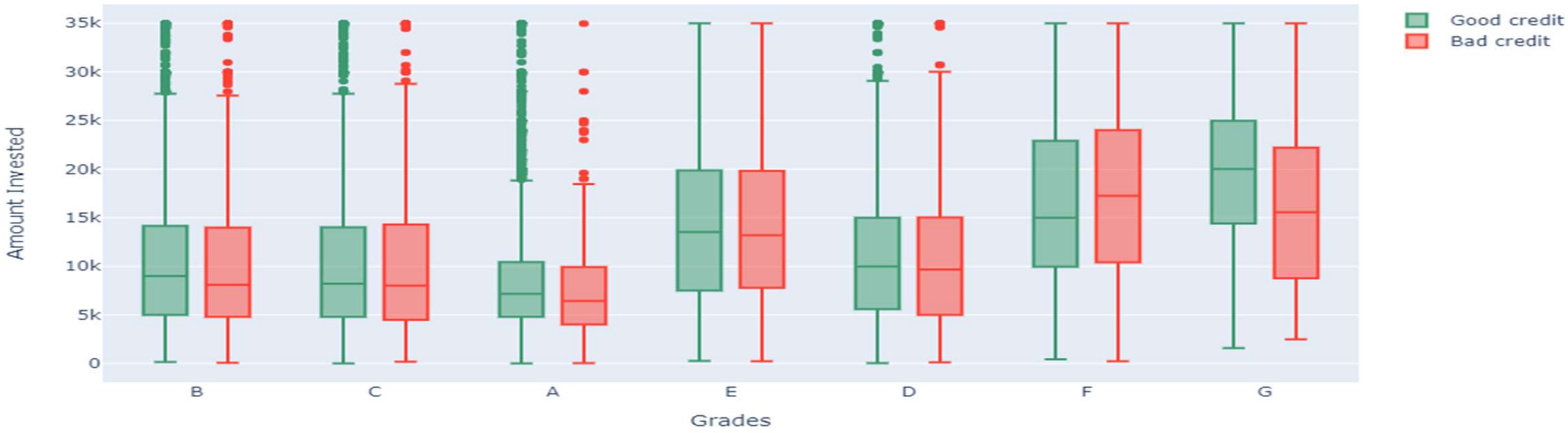
Home ownership impact on loan

People taking loans whose home ownership is mortgaged are most likely to default.



Impact of Grades on loan

The amount invested on various grade categories shows that, being the riskiest category for loan default, G category is the most funded one. As we go from grades A,B C,D,E,F,G the percentage of loan repaid becomes less and the percentage of loans being charged off increases



DTI distribution

The more the DTI ratio, more are the chances of loan default. That is DTI between 20 and 25 has the higher chances to loan defaults.

Verification status

15 to 20 % loans are charged off even if they are verified by LC, or not verified, or even if they are source verified. This means a new verification method or measures should be put in place to curb more charge offs, as these two verification strategies have no much impact when compared to not verified.

SUMMARY

The main driving factors for loan defaults are listed as follows:

- The borrowers annual income greater than 115000 and who have mortgaged their living space and are applying for the purpose debt consolidation, are more prone to be the defaulters
- Interest rates between 20 to 25 percentage levied on small income groups.
- Investing loan amount on borrowers with lower grades, such as 'F' and 'G' .
- Investing loan amount on borrowers with DTI range between 20 and 25 percentage.
- More stringent measures to verify borrowers and to do the background check is required, as there is marginal difference even if the application is LC verified , Source verified or Not verified