

Credit Risk Analysis



Karina Widya Ramadhani
Data Analyst Project

Problem



Dummy Bank is located in the United States and its currency is the dollar (\$).

Source of data: Kaggle

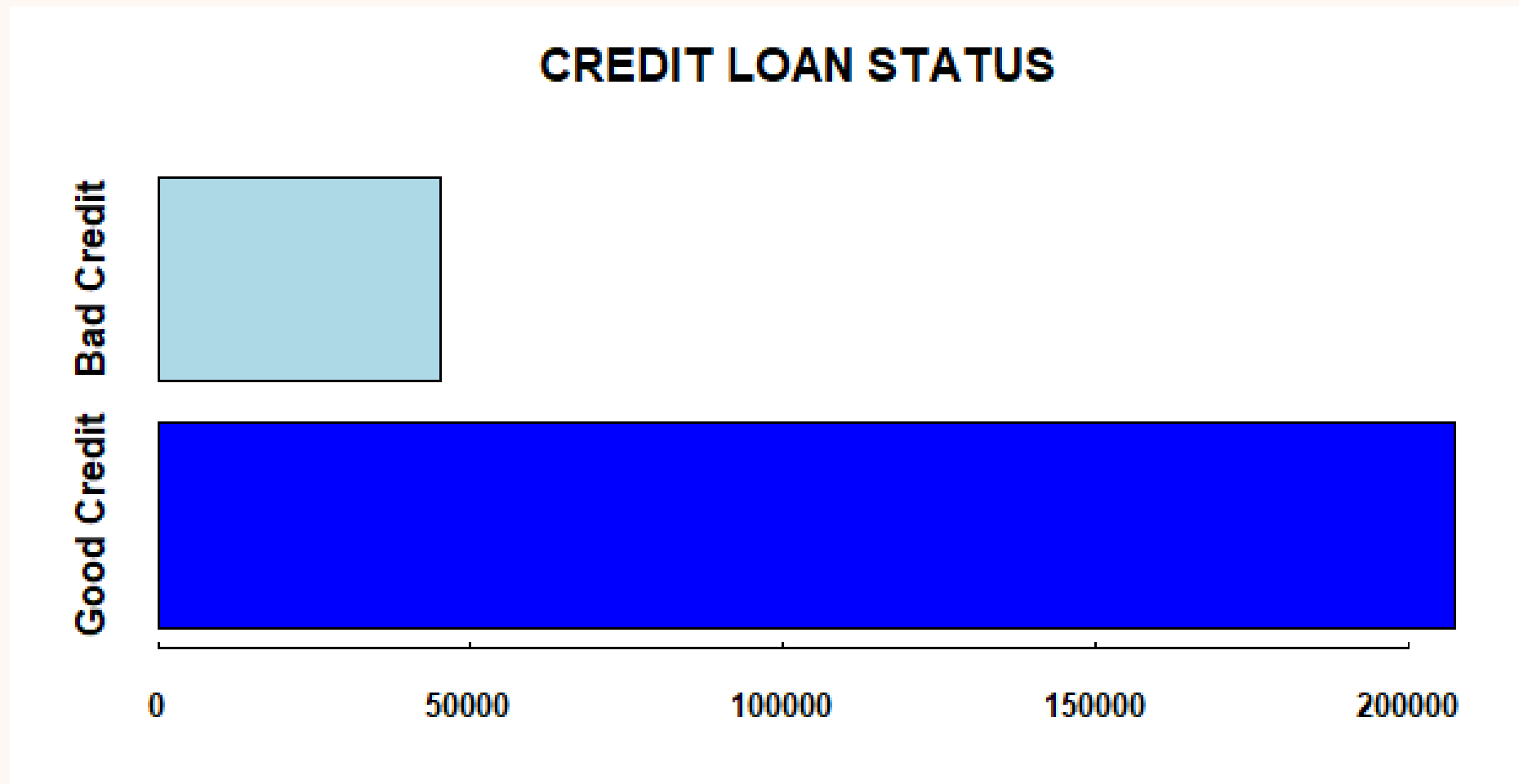
Many debt borrowers do not pay debts

Dummy Bank provides loan services. However, as many as 45248 borrowers (18% of the total data reviewed) did not repay their loans. Certainly, 18% is a significant percentage.

Data analysis will be carried out to examine:

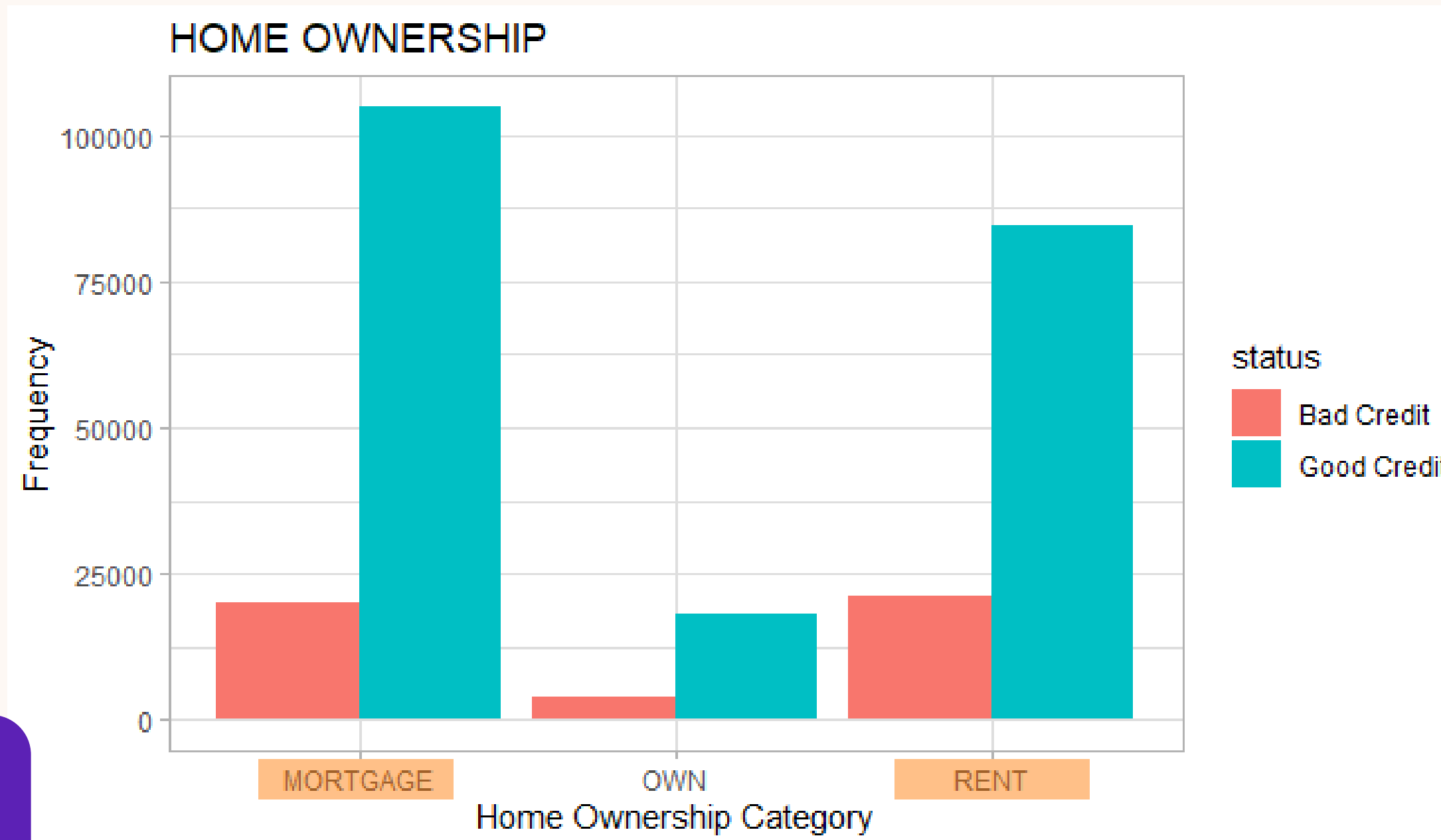
- Strategies to manage credit risk by reviewing variables related to borrower default.
- Credit requirement recommendations to avoid payment failure.

Data Understanding



- Users referred to as "Good Credit" are borrowers who have completed their loans.
- Users referred to as "Bad Credit" are borrowers who have not completed their loans.
- The variables to be examined are as follows:
 - 1.Home Ownership Status
 - 2.Loan Ammount
 - 3.Credit Lines
 - 4.Credit Term
 - 5.Interest Rate
 - 6.Employment Length

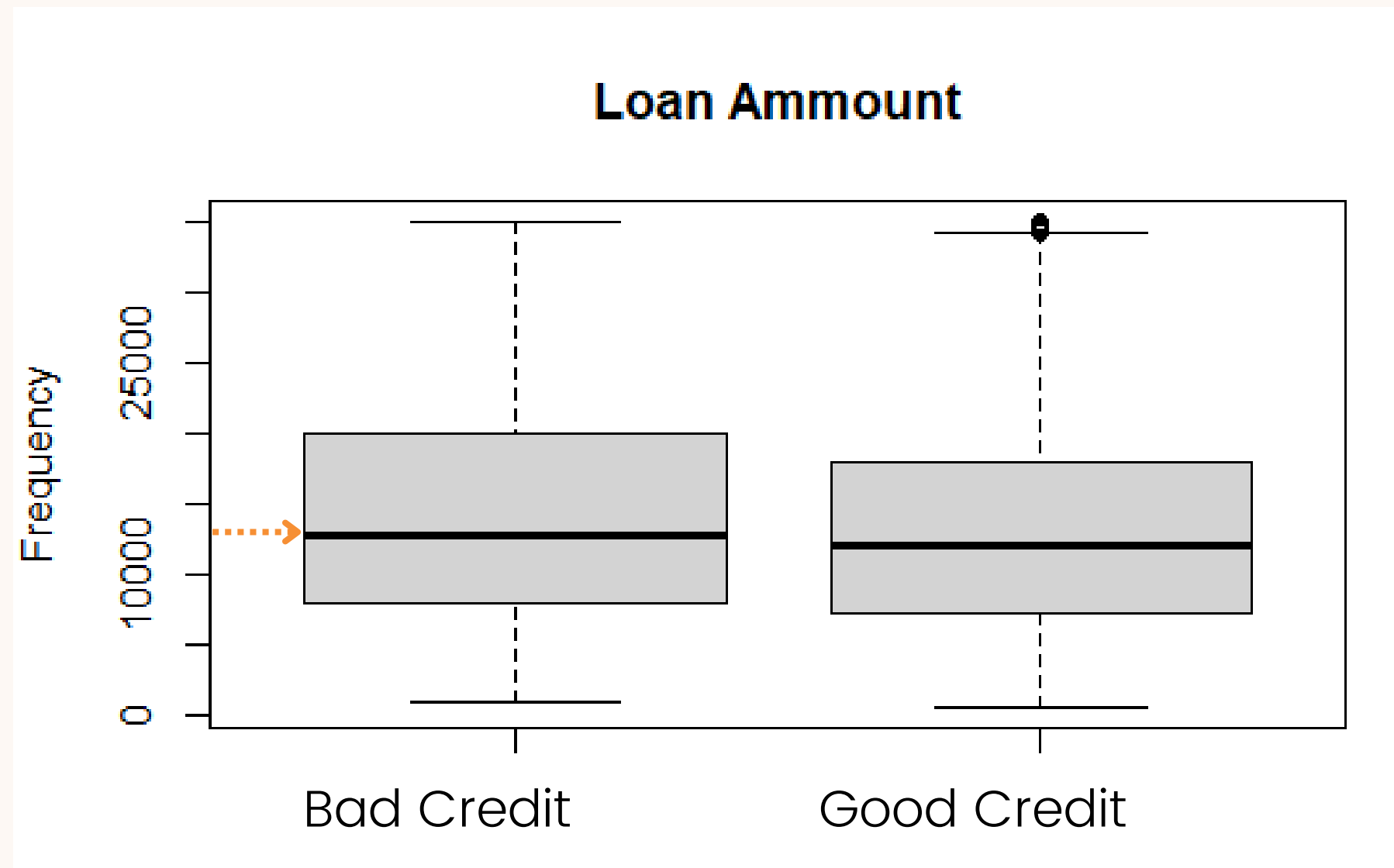
Home Ownership Status



From the data, it can be seen that:

- The majority of **bad credit borrowers** have home ownership status of **"Rent"** and **"Mortgage"**.

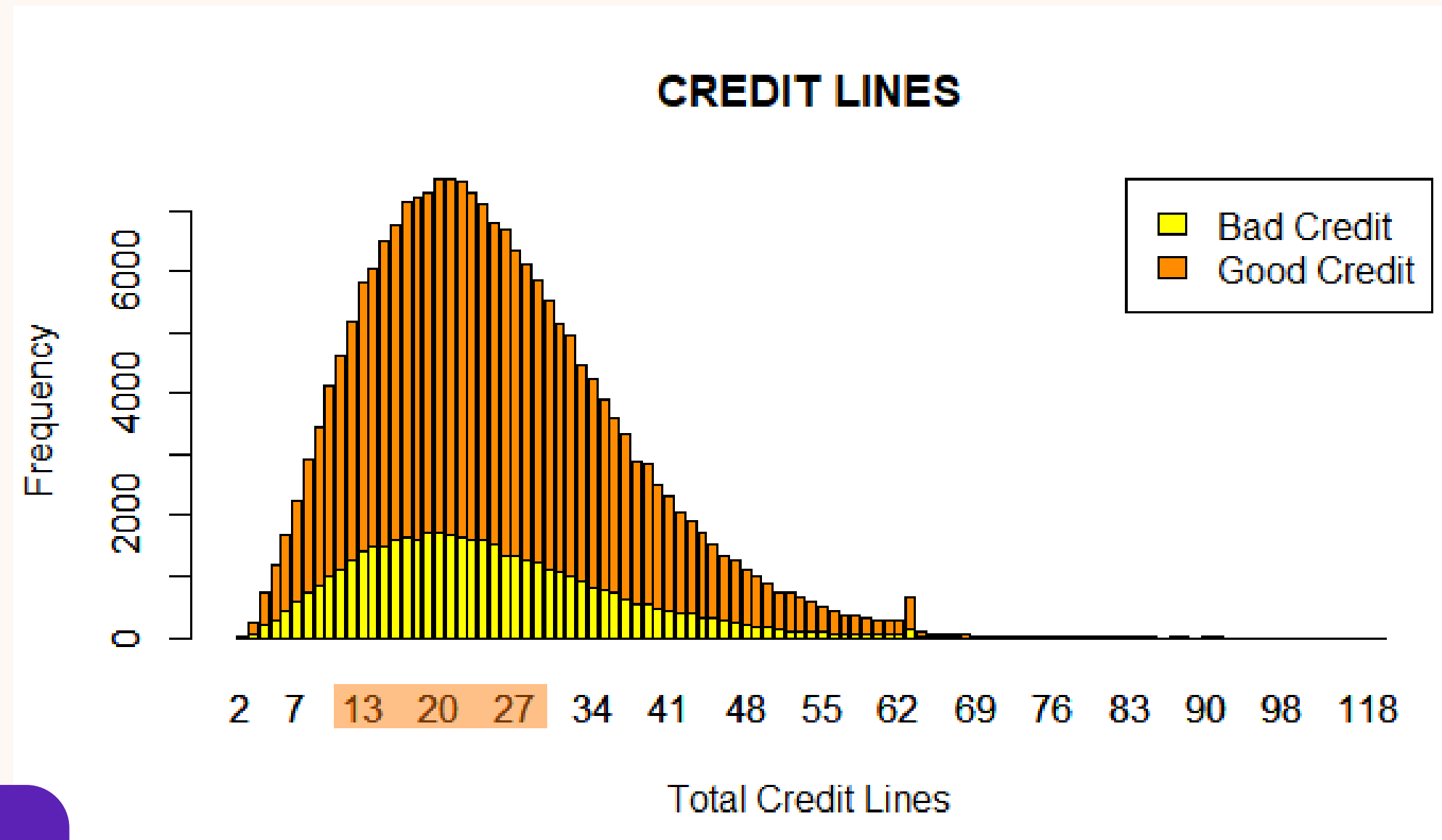
Loan Ammount



Borrowers with bad credit have a larger loan amount than borrowers with good credit.

- The median value of loan amount for bad credit is \$17,000.

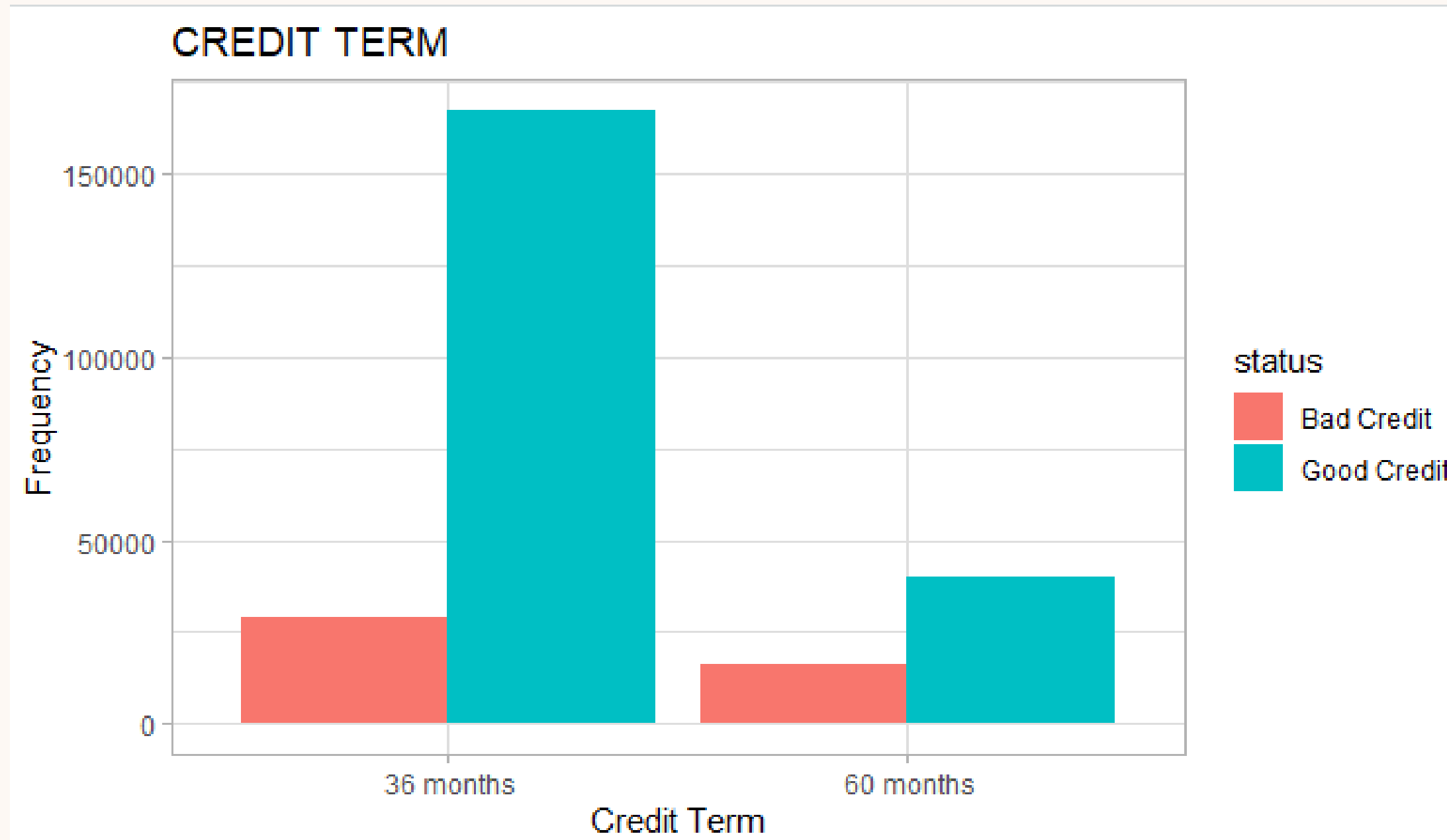
Credit Lines



"Credit Lines" refers to the number of open credit lines in the borrower's credit file. It appears that both Good

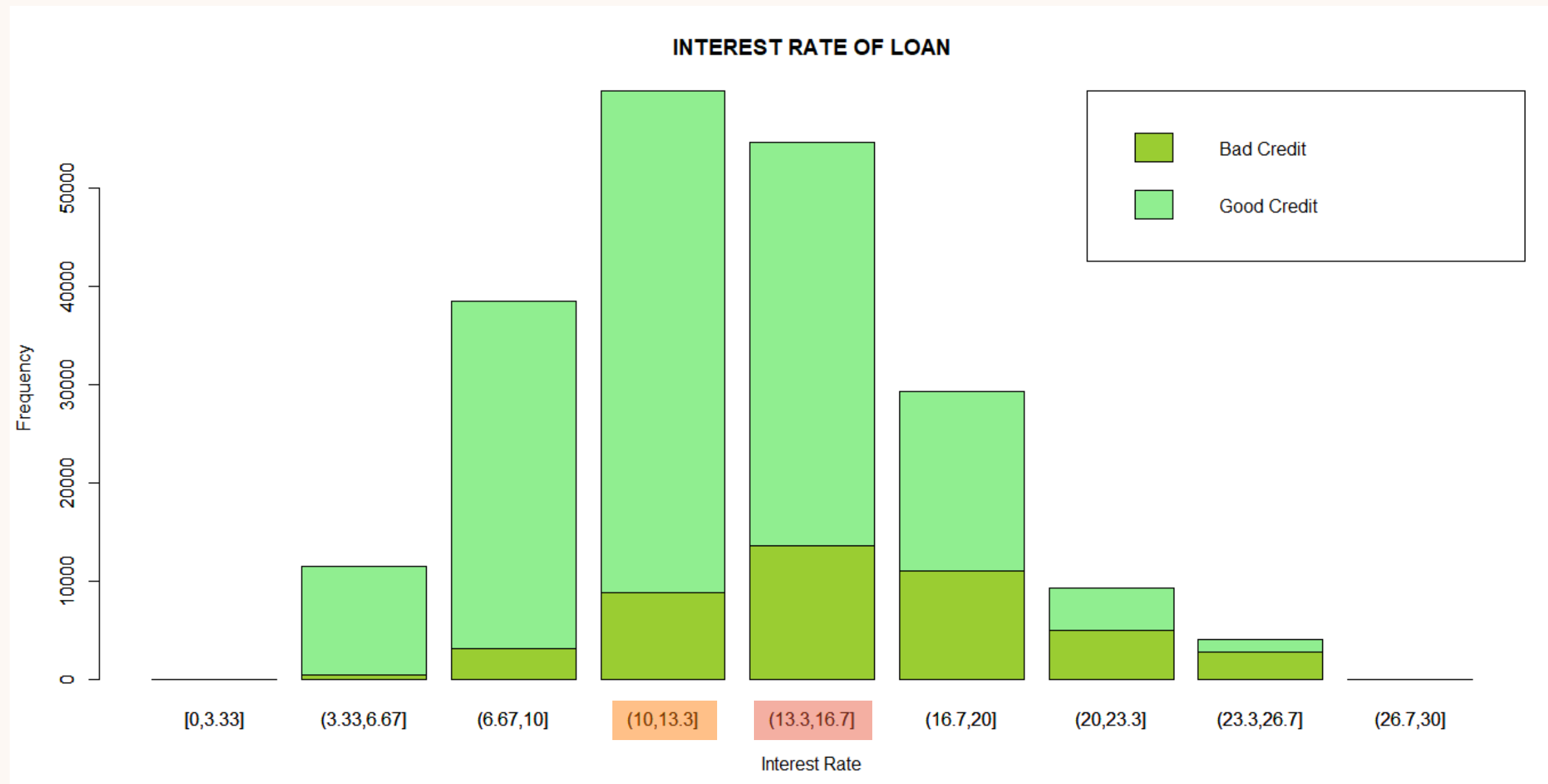
Good Credit and Bad Credit borrowers have a similar number of credit lines ranging between 13-27.

Credit Term



The credit term for both Good Credit and Bad Credit borrowers is the same. Therefore, the credit term variable does not have a significant effect.

Interest Rate

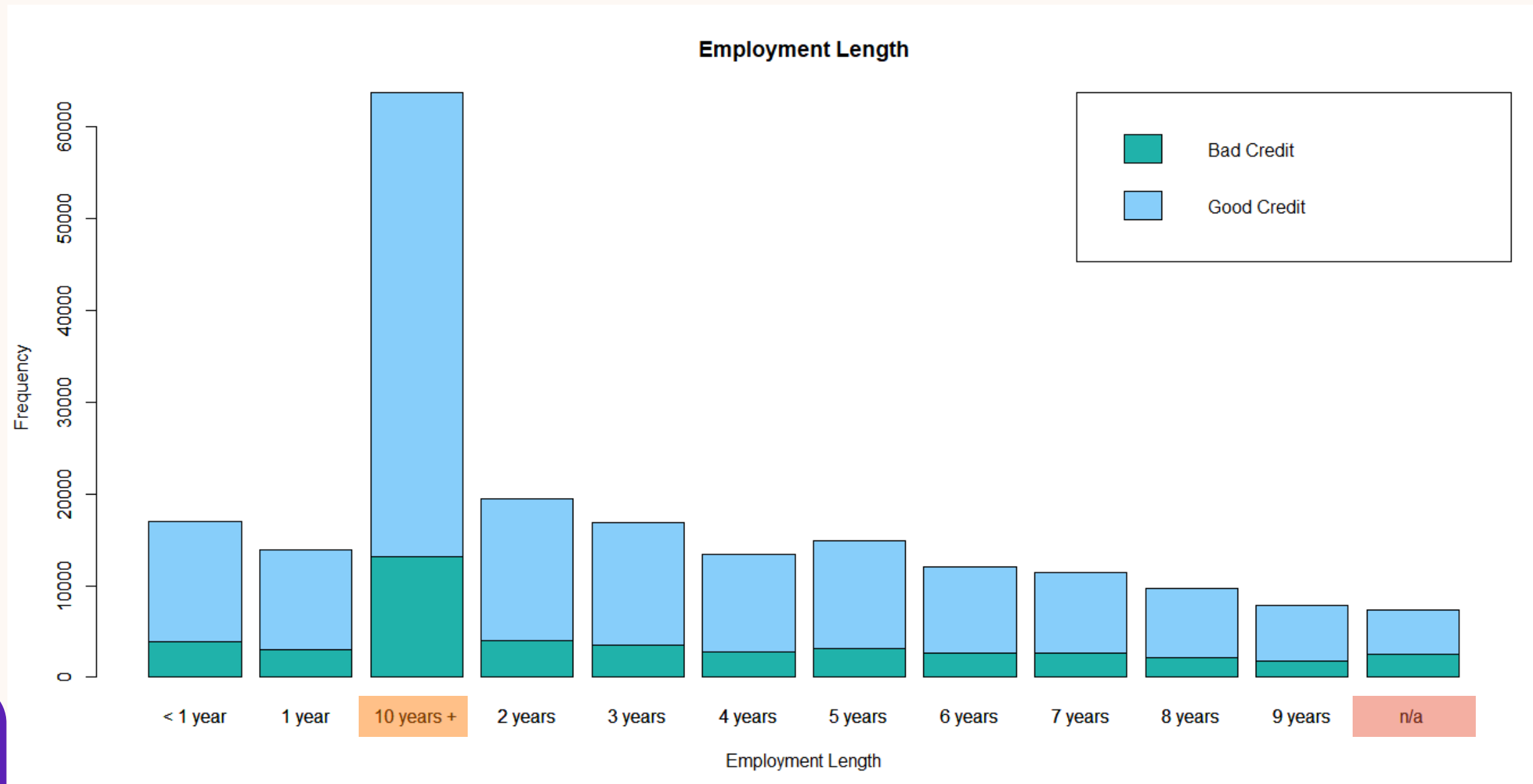


The **interest rate** for **bad credit** borrowers ranges from **13.3% to 16.7%**.

The **interest rate** for **good credit** borrowers ranges from **10% to 13.3%**.

This proves that **good credit** borrowers have a **lower interest rate**.

Employment Length



The majority of the "Good Credit" users have work experience of 10 years or more.

Interestingly, "Bad Credit" users also have work experience of 10 years or more.

However, it should be noted that the **second-highest distribution of "Bad Credit" is in the N/A column, meaning they do not have a job.**

Summary

- To **avoid borrowers with bad credit**, the bank must screen borrowers by taking into account the following factors:
 - Home ownership status: "Rent" is commonly held by borrowers with bad credit.
 - Borrowers who borrow a considerable amount of loans, around \$17,000, are more likely to be a bad credit borrower.
 - Unemployed borrowers are the second largest group of borrowers with bad credit status.
- By **reducing the interest rate of loans for bad credit** borrowers, it is hoped that they will be able to repay their loans.



Code Source:



<https://github.com/karinaara/DummyBankDataVisualization>

Data Source:



<https://www.kaggle.com/datasets/ranadeep/credit-risk-dataset>