CREDIT EDA CASE STUDY

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PROBLEM STATEMENT

- **Current State** :
  The company is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface. Like most other lending companies, lending loans to 'risky' applicants is the largest source of financial loss (called credit loss). Credit loss is the amount of money lost by the lender when the borrower refuses to pay or runs away with the money owed

- **Gap** :
  The company wants to understand the driving factors (or driver variables) behind loan default, i.e. the variables which are strong indicators of default. The company can utilise this knowledge for its portfolio and risk assessment.

- **Desired Future State** :

  The aim is to identify patterns which indicate if a person is likely to default, which may be used for taking actions such as denying the loan, reducing the amount of loan etc
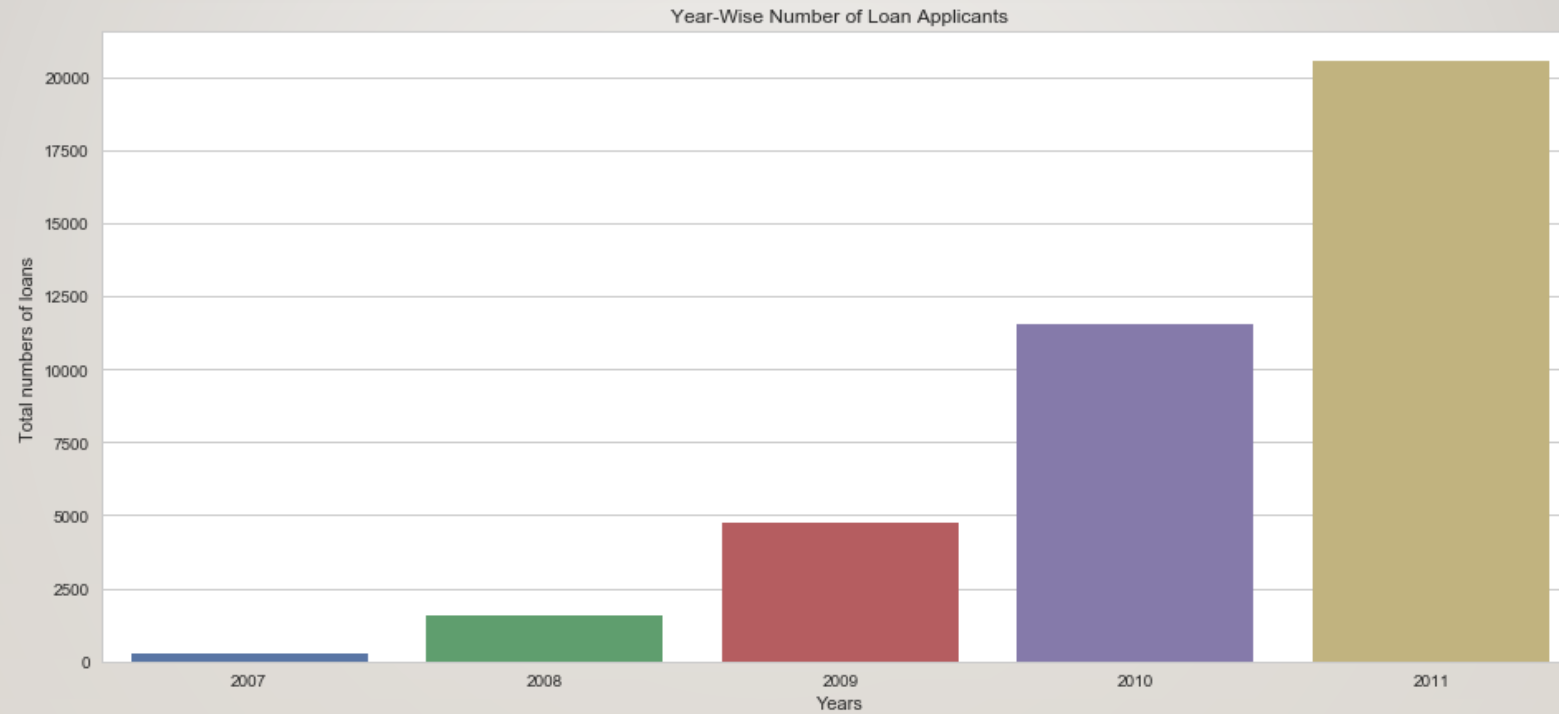
SOLUTION APPROACH

- Data Cleaning

- Analyse Data

- Derive Key Factors for loan defaulters
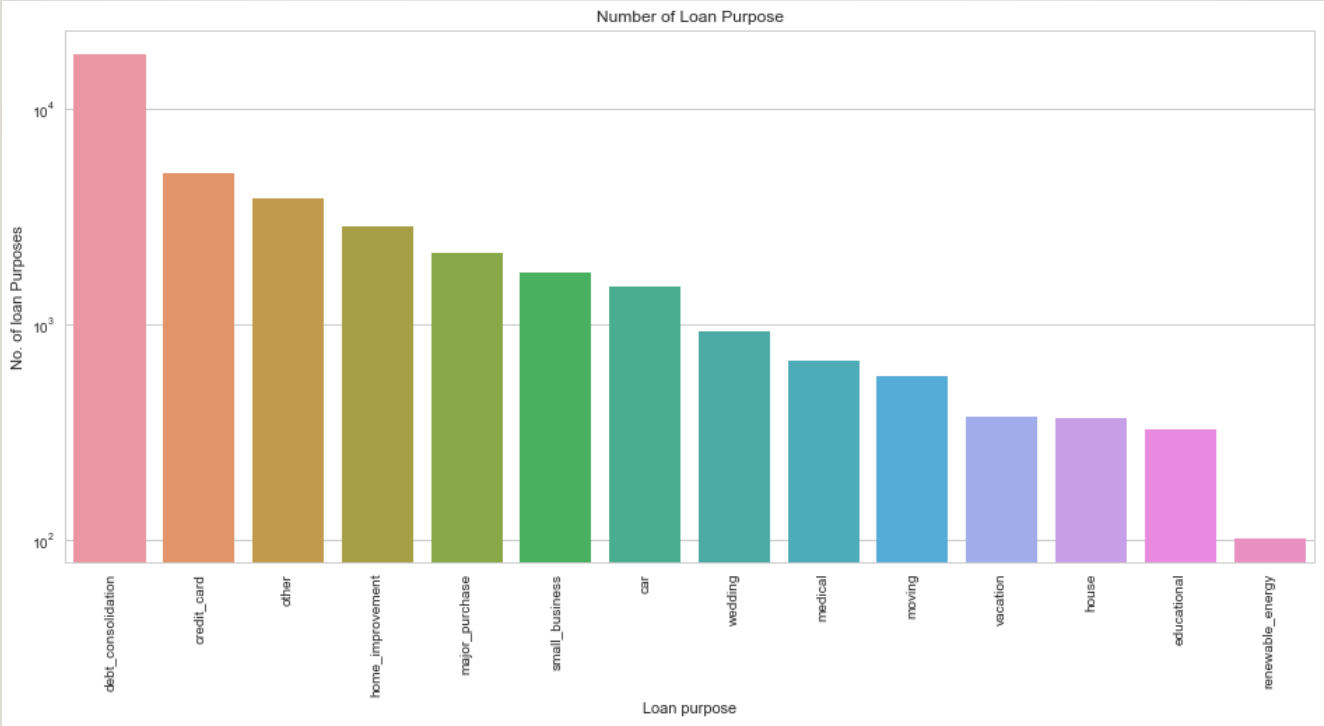
- Recommended actions based on Insights

KEY INSIGHTS

SUBSTANTIAL GROWTH BETWEEN 2007-2011 IN THE NUMBER OF LOAN APPLICANTS
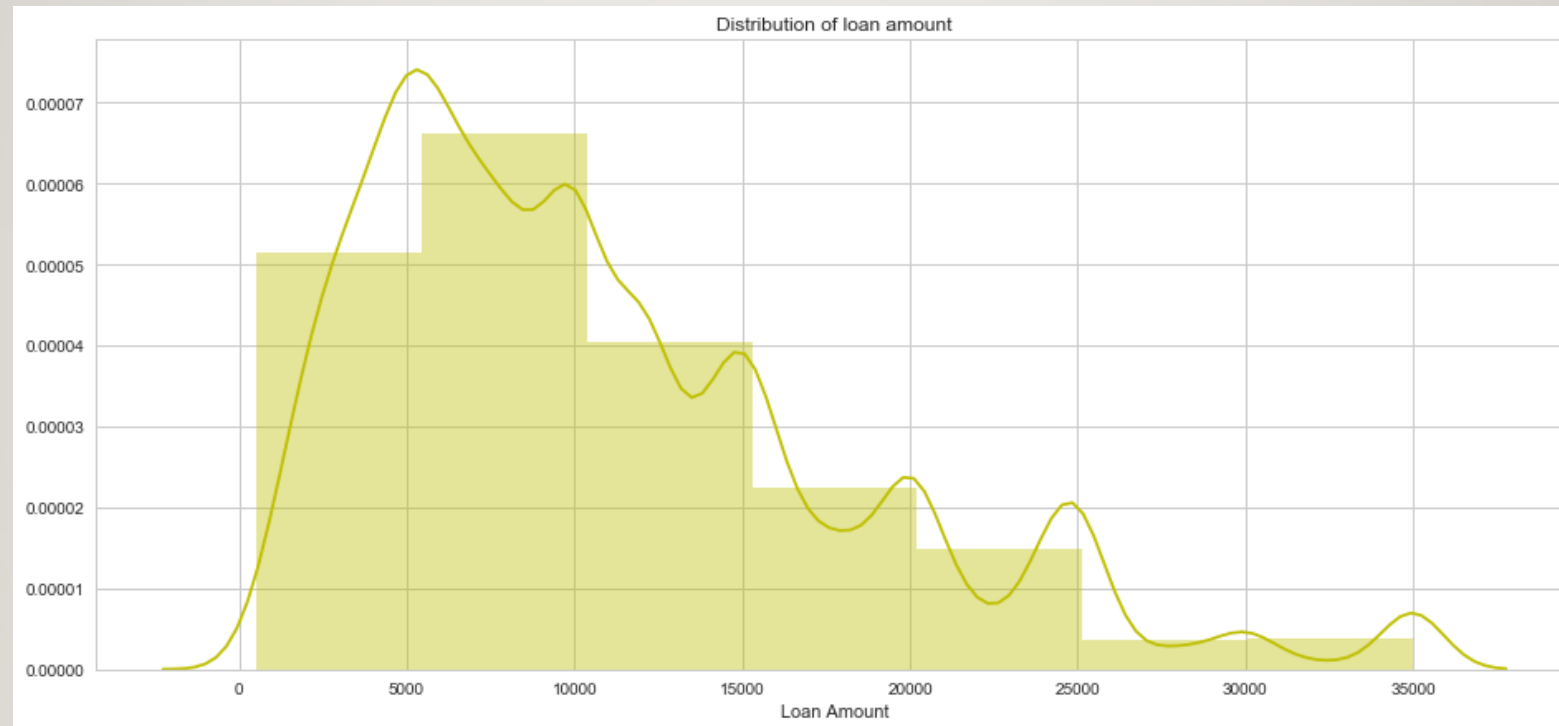

Year-Wise Number of Loan Applicants

MAJOR PURPOSES OF LOAN APPLICATIONS

- The five major purposes of Loan applications are :

- debt_consolidation'

- 'credit_card'
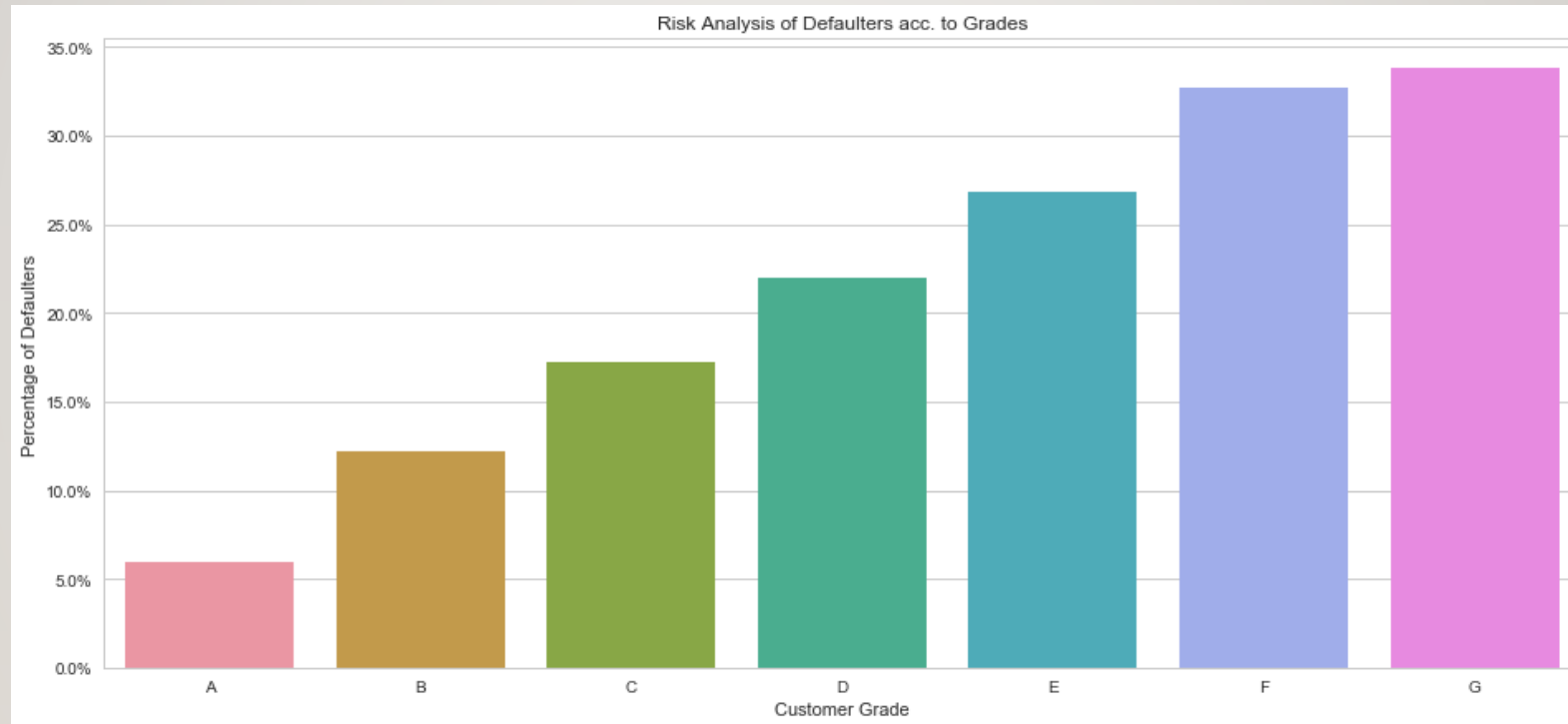
- 'other'

- 'home_improvement'

- 'major_purchase

MAJOR PURPOSES OF LOAN APPLICATIONS

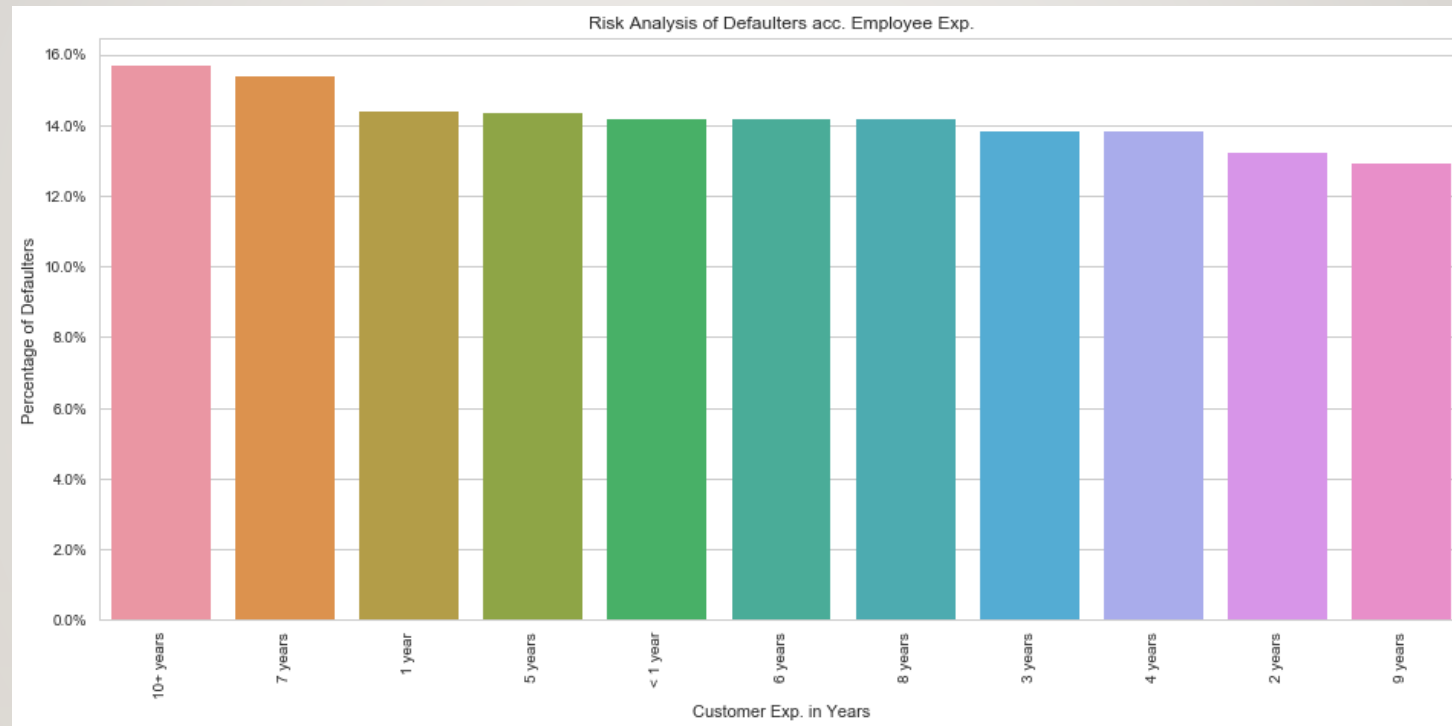# IT HAS BEEN OBSERVED THAT THE MAXIMUM LOAN RANGE AMOUNT IS BETWEEN 5000-10000

# THE PERCENTAGE OF DEFAULTERS IS THE HIGHEST IN GRADE G GROUP

Risk Analysis of Defaulters acc. to Grades

THE PERCENTAGE OF RISK OF DEFAULTERS IS THE LARGEST IN THE LOAN PURPOSE – 'SMALL_BUSINESS'.

Risk Analysis of Defaulters acc. to Purpose
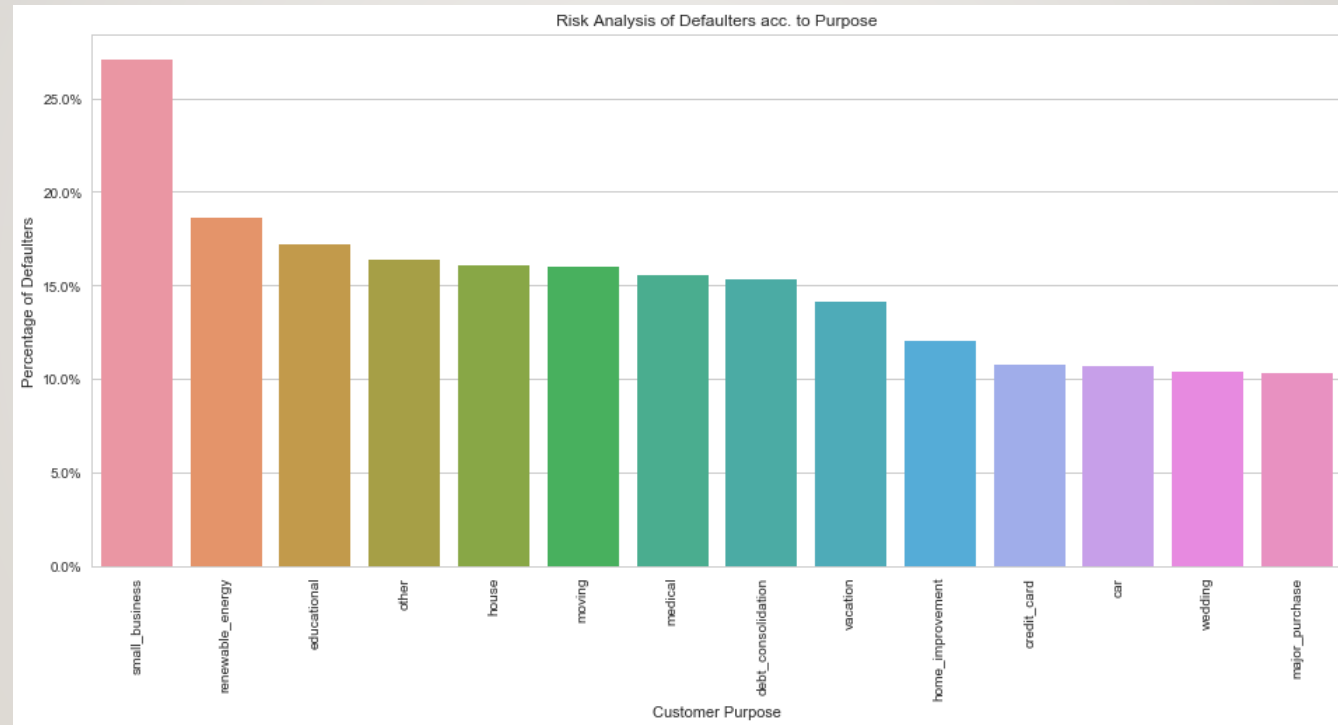
THE PERCENTAGE OF RISK OF DEFAULTERS IS MAXIMUM FOR CUSTOMER EXPERIENCE - 10+ YEARS & MINIMUM FOR 9 YEAR'S EXPERIENCE

# RISK ANALYSIS AS PER HOME OWNERSHIP
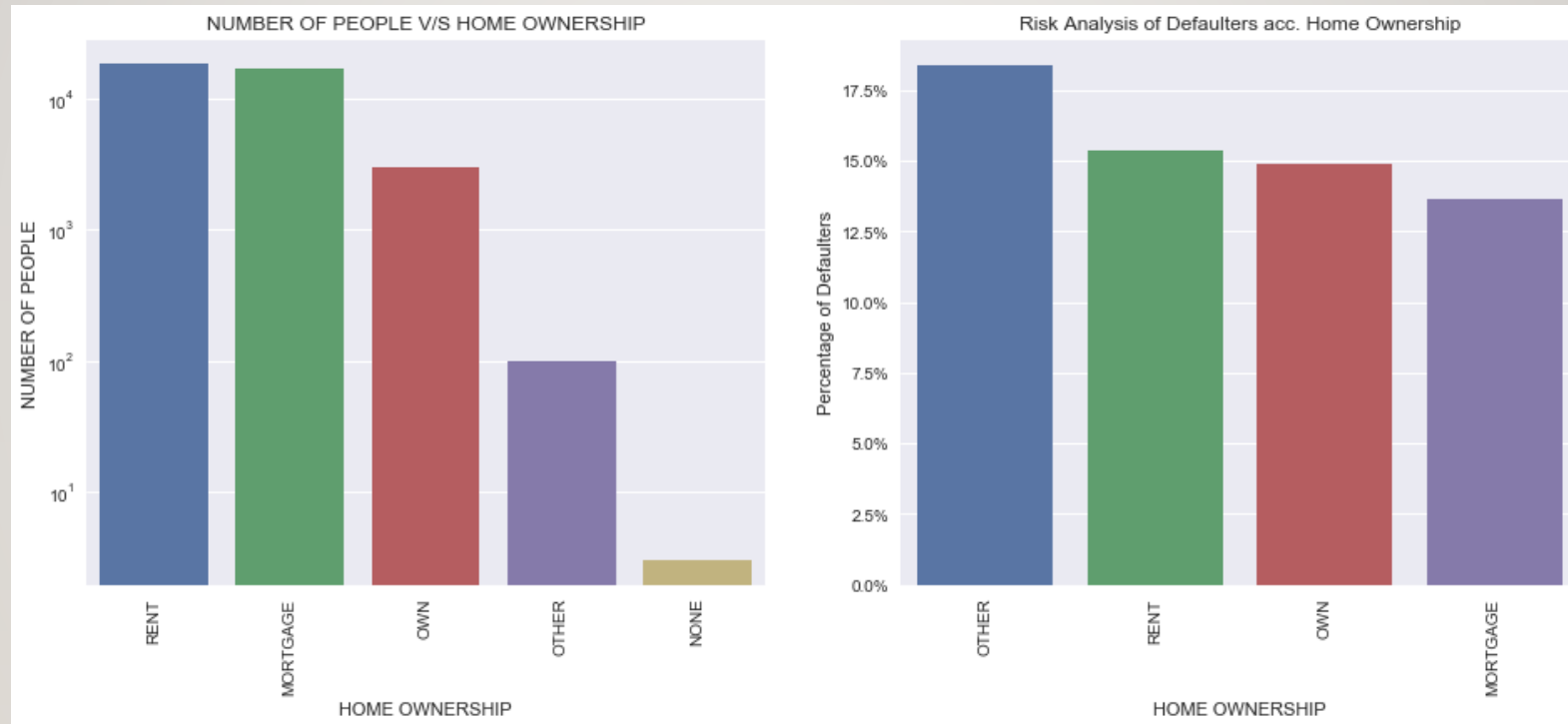
BY DOING BIVARIATE ANALYSIS IT HAS BEEN OBSERVED THAT 10+ YEARS OF EMPLOYEE EXP. IS HAVING DEBT TO INCOME IN MAXIMUM RANGE APART FROM THAT REST YEAR OF EMPLOYEE EXP. ARE MORE OR LESS IN SAME RANGE
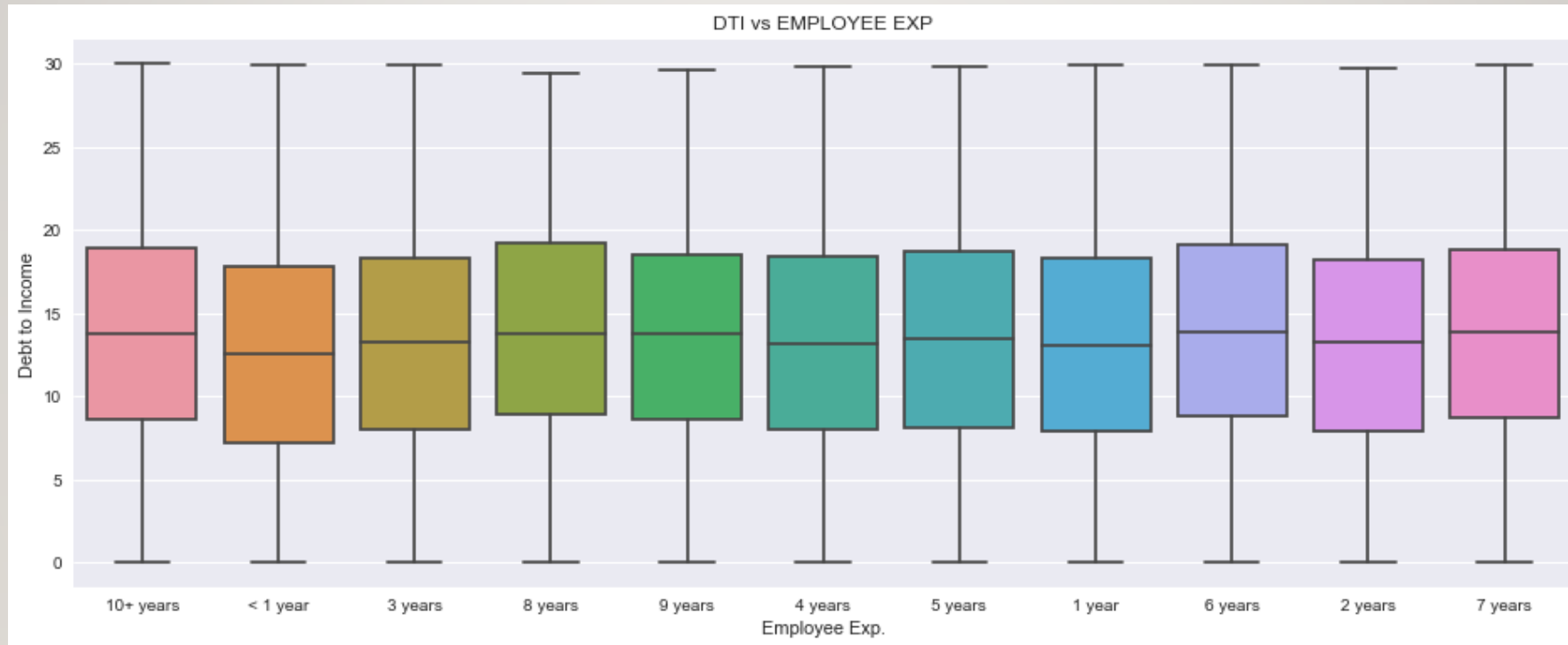

DTI vs EMPLOYEE EXP

BY DOING BIVARIATE ANALYSIS IT HAS BEEN OBSERVED THAT THE EMPLOYEE EXP. WITH 10+ YEARS IS TAKING MORE AMOUNT OF LOAN AND THOSE WHO ARE LESS THAN 1 YEAR IS TAKEN LESS AMOUNT OF LOAN

Loan Amount vs EMPLOYEE EXP
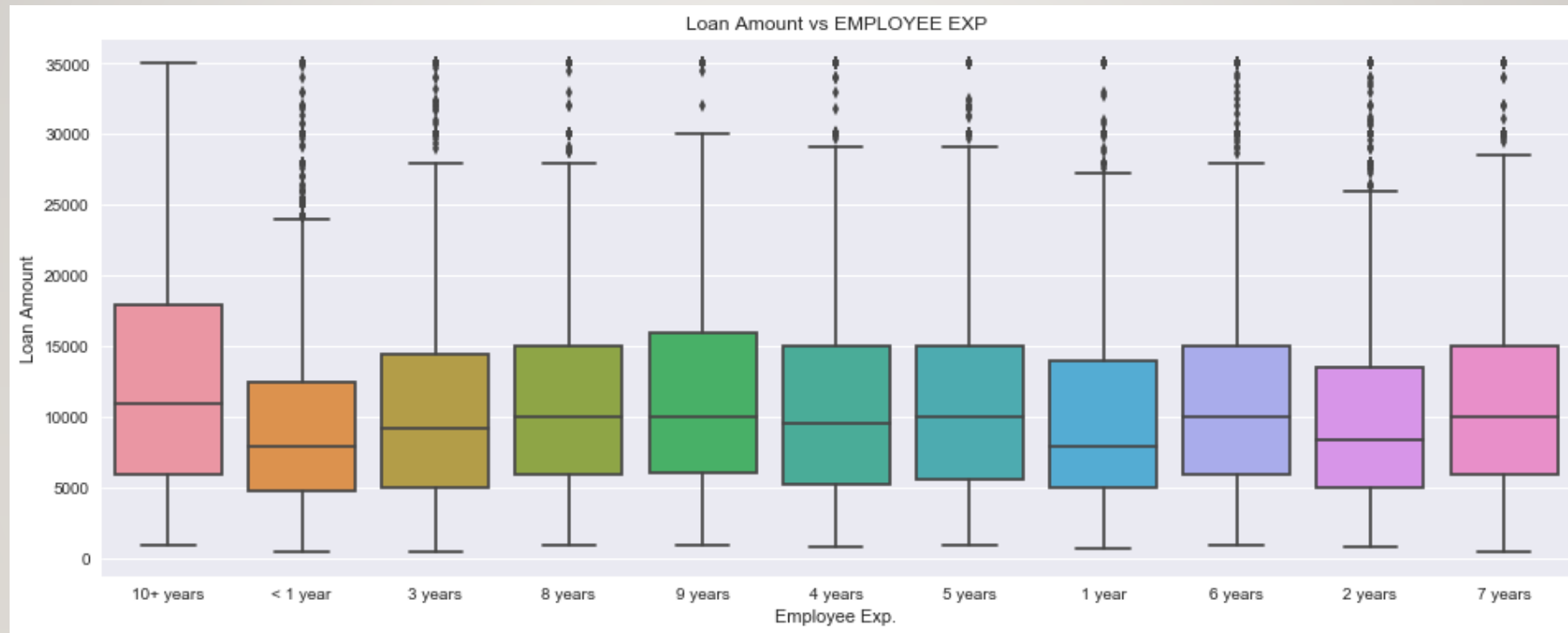
THE PERCENTAGE OF DEFAULTERS IS MAXIMUM FROM NE (ADDRESS) WHICH IS 60%

Risk Analysis of Defaulters acc. Employee State (TOP 10)
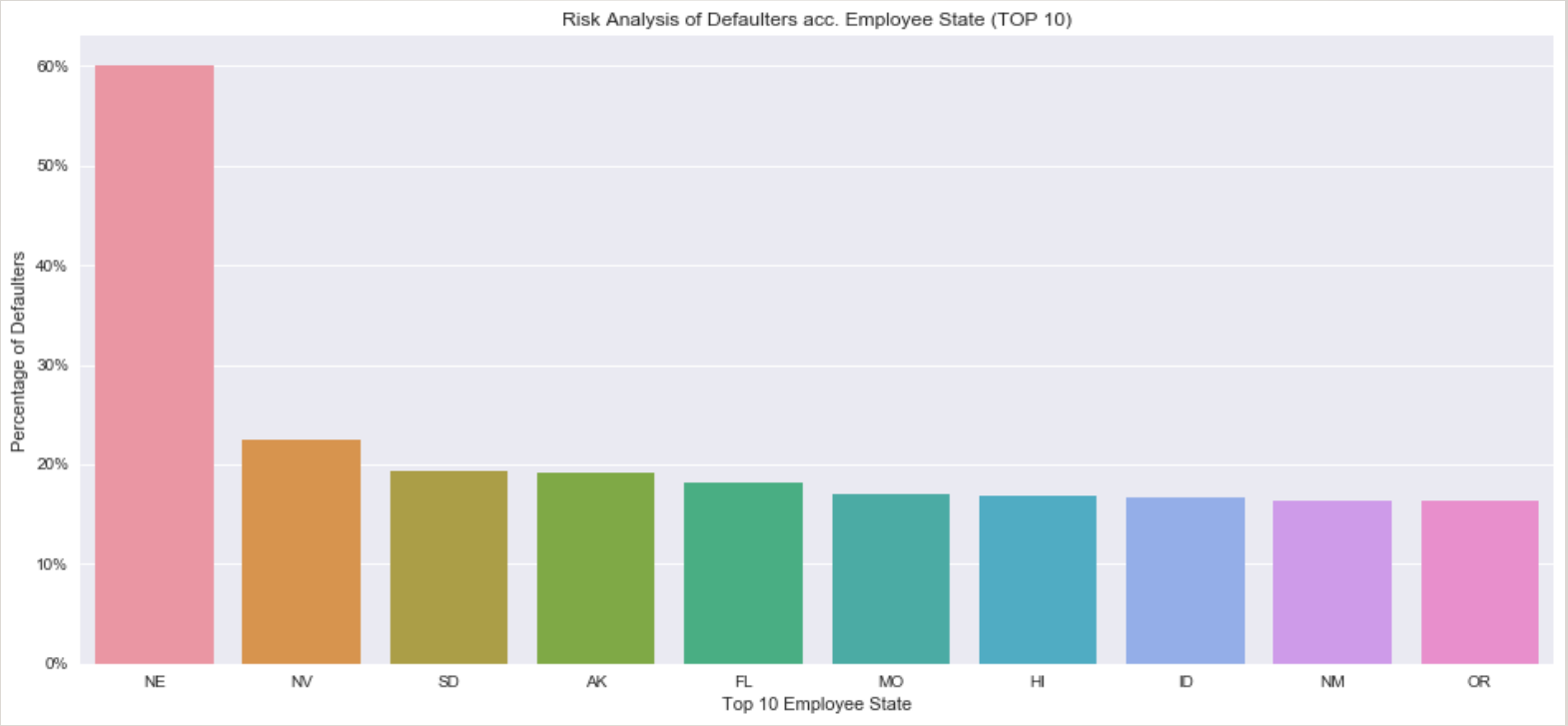
THE PERCENTAGE OF DEFAULTERS IS FOUND IN 60 MONTHS AS COMPARED TO 36 MONTHS – LOAN TERM
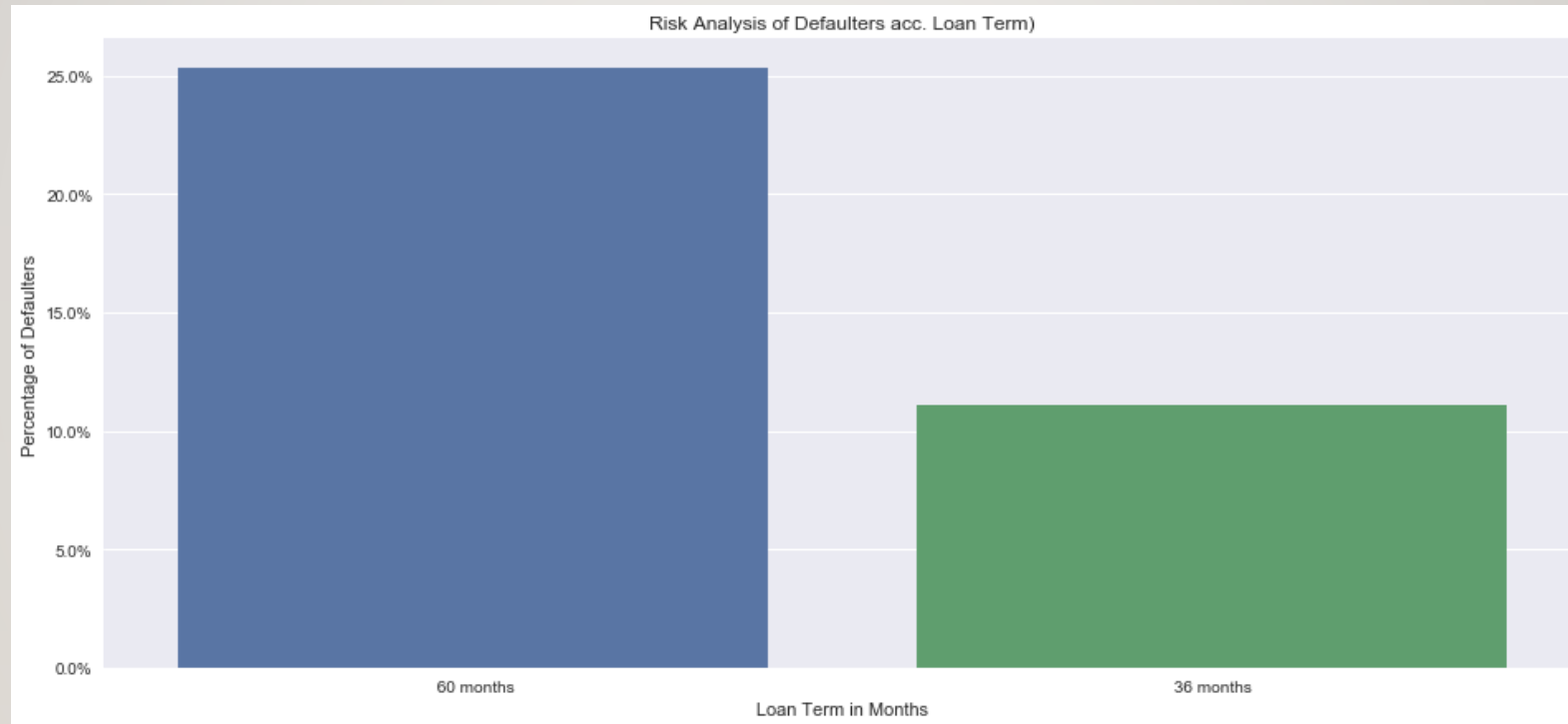
CONCLUSION

- We have identified key factors for Loan Defaulters

- Bank should take proper precaution while giving loan to people with these characteristics