

Lending Club Case Study

-Submitted By
Bindiya R (Group Facilitator)
Alok Khare

SYNOPSIS OF THE PROJECT

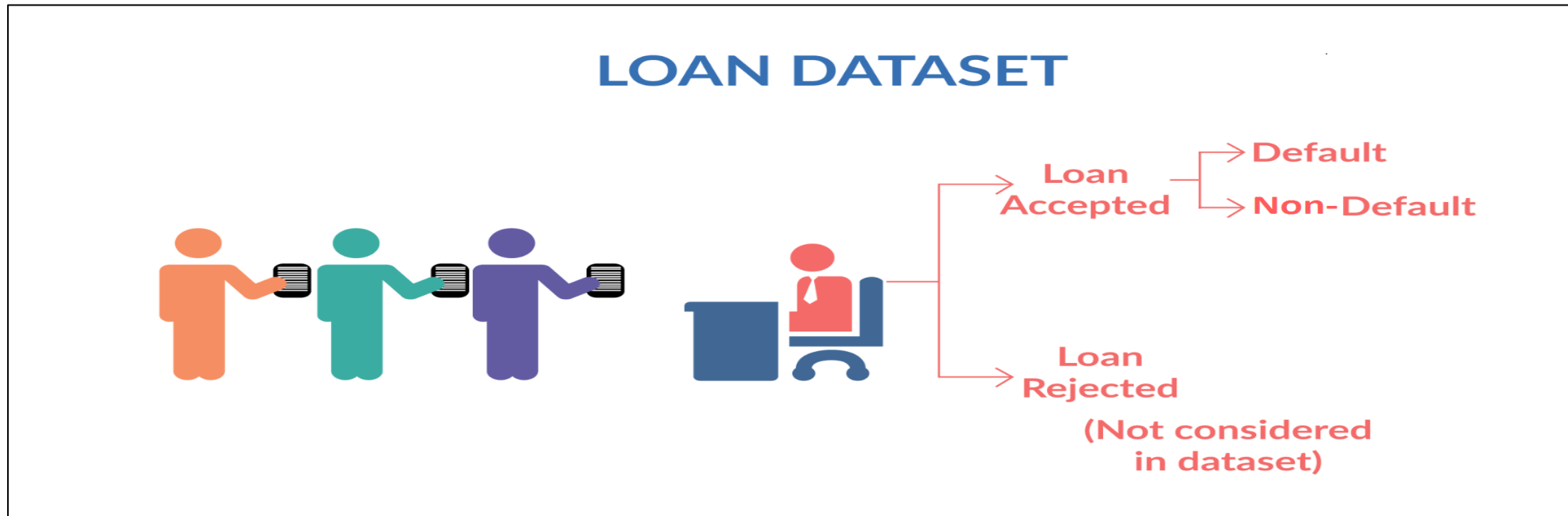
❑ Background

Lending Club is the largest peer-to-peer marketplace connecting borrowers with lenders. Borrowers apply through an online platform where they are assigned an internal score. Lenders decide 1) whether to lend and 2) the terms of loan such as interest rate, monthly instalment, tenure etc.

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

❑ Business and Data Understanding

To identify variables which are strong indicators of default and potentially use the insights in approval / rejection decision making. The scenario if the applicant is a defaulter or not can be seen in the figure below.



Data Understanding

Types of variables

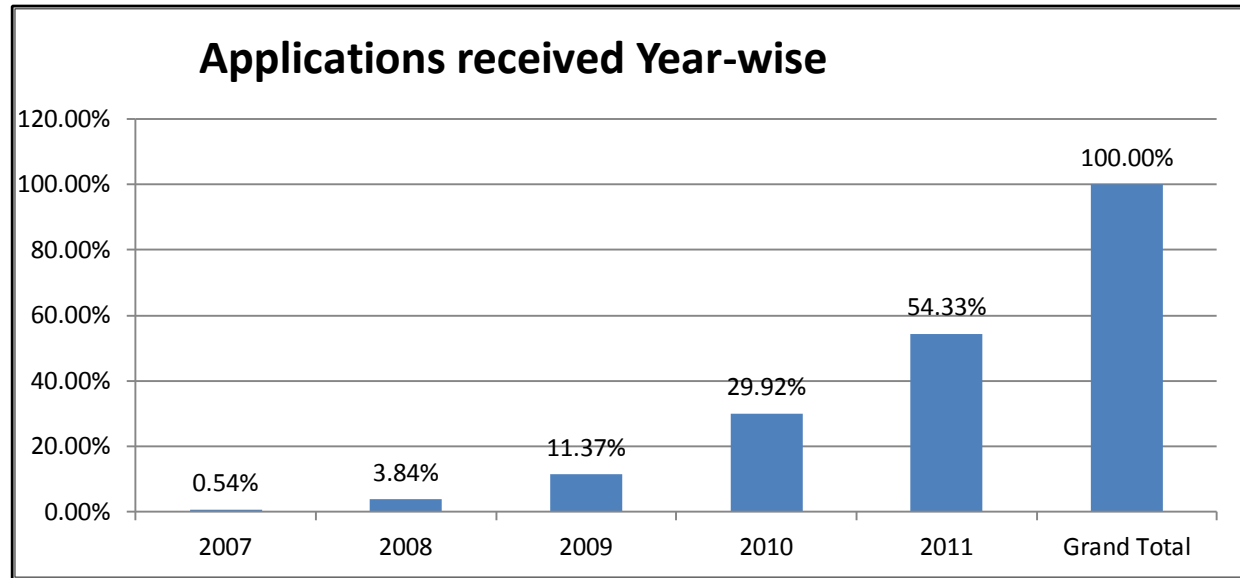
- Customer's demographic
- Loan related information
- Customer behaviour (if the loan is granted)

Customer's Demographics
Employement Length
Employement title
Annual Income
Zip Code
Description

Loan Information & Characteristics
Loan Amount
Funded Amount
Funded Amount Investment
Interest Rate
Loan Status
Laon Grade

Customer Behaviour variables
Delinquency year -2
earliest credit line
Revolving balance
Recoveries
Application type
Loan purpose

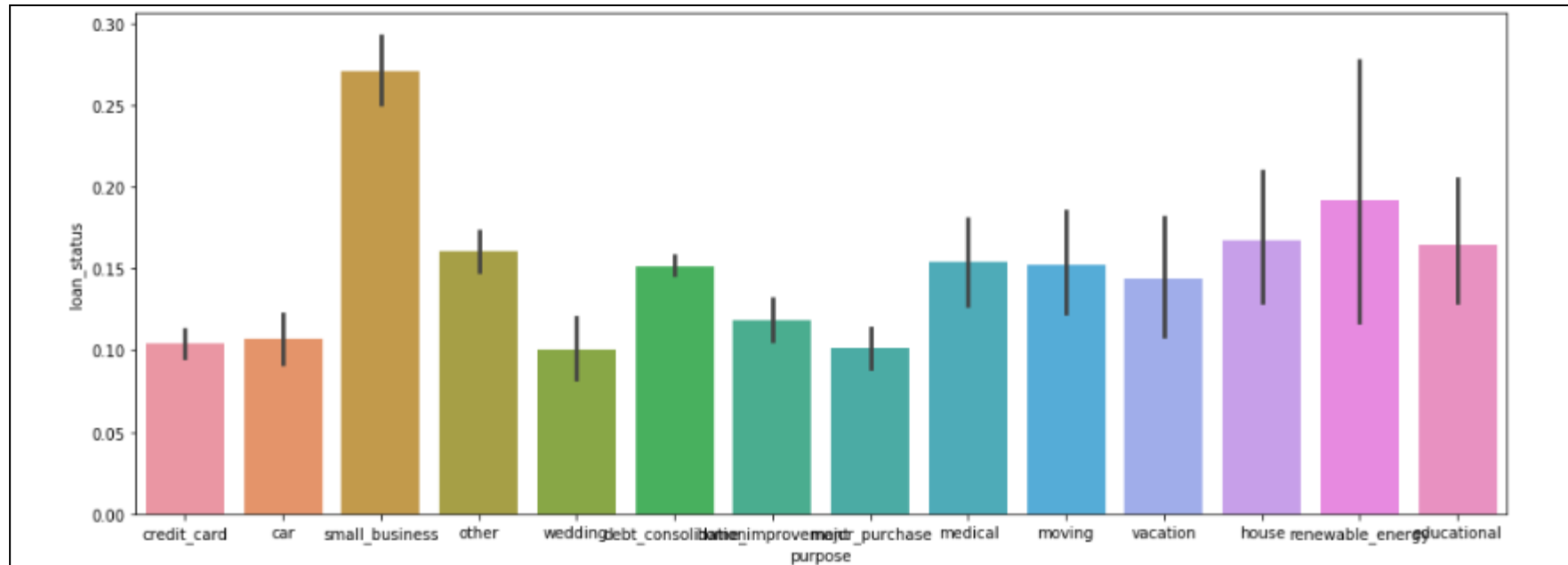
Applications Growth across Years – Univariate Analysis



We observe that there is a constant increase in the loan applications from the historical data.

- ❖ 145% increase from the year 2009 to 2010
- ❖ 75% increase from the year 2010 to 2011

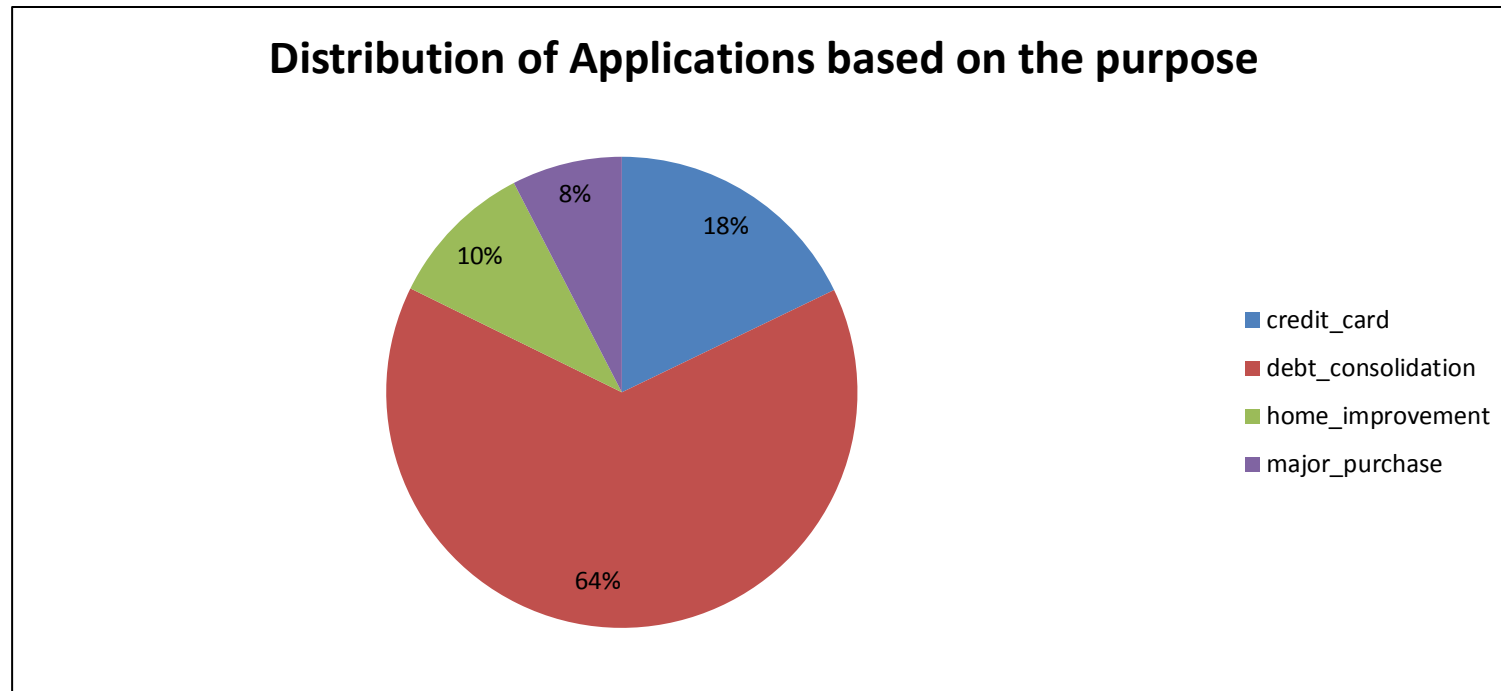
Distribution of the applications according to the purpose of the applicant.



We Observe that the 4 major type of applications received are

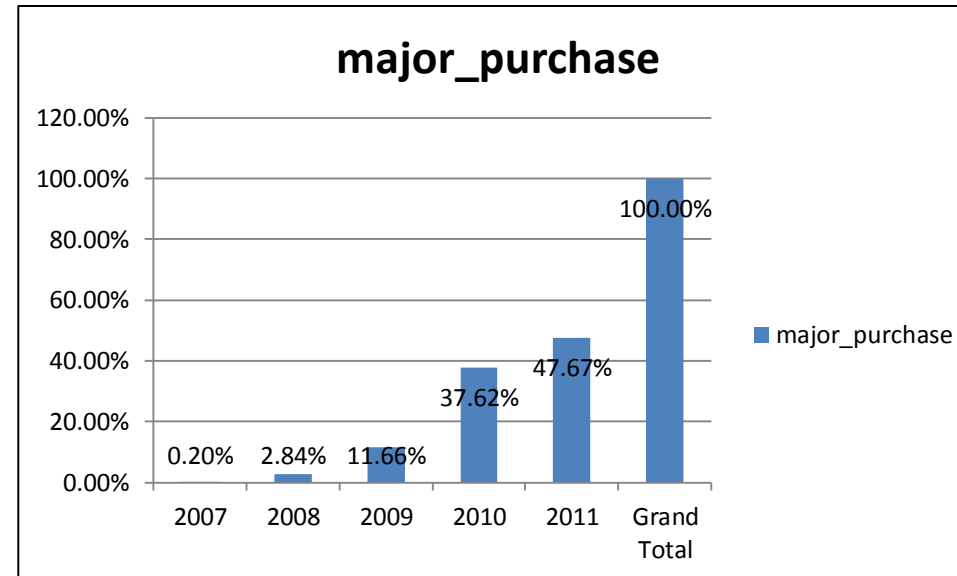
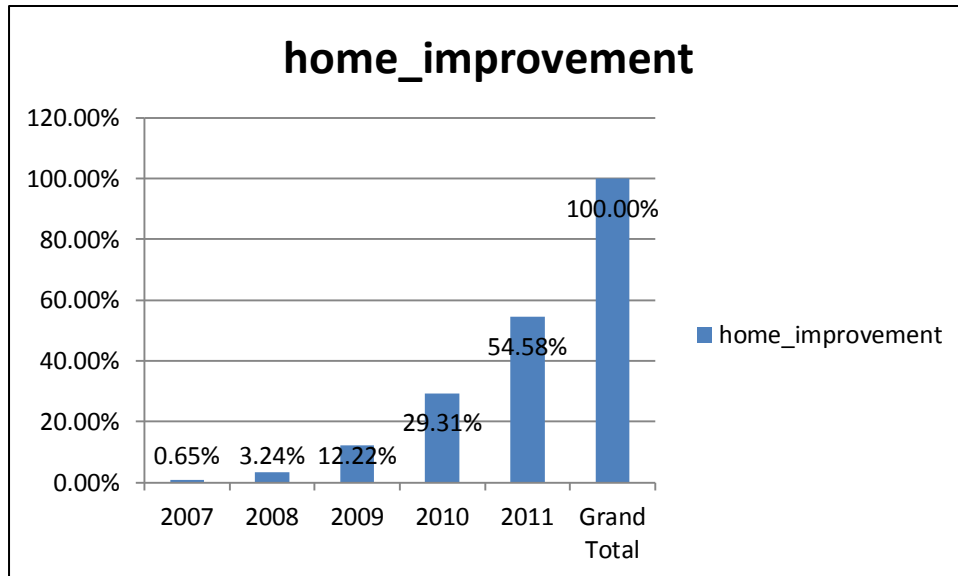
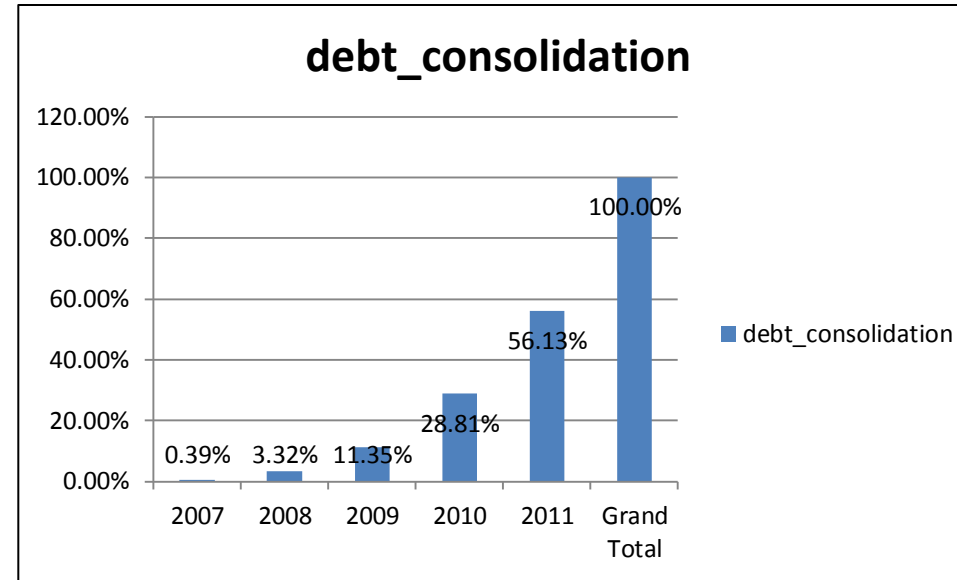
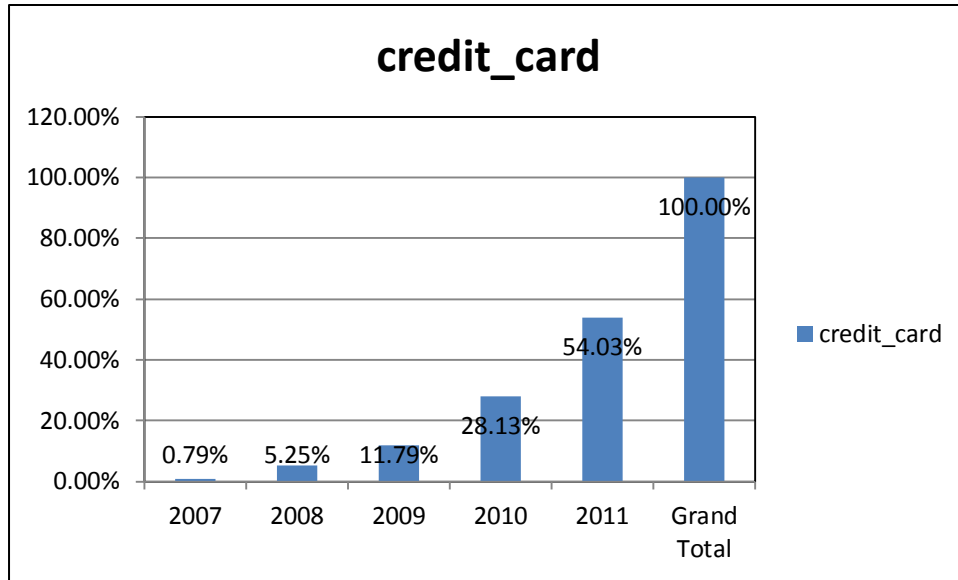
- ❖ Debt Consolidation
- ❖ Credit Card
- ❖ Home Improvement
- ❖ Major Purposes

Distribution of the 4 major applications category

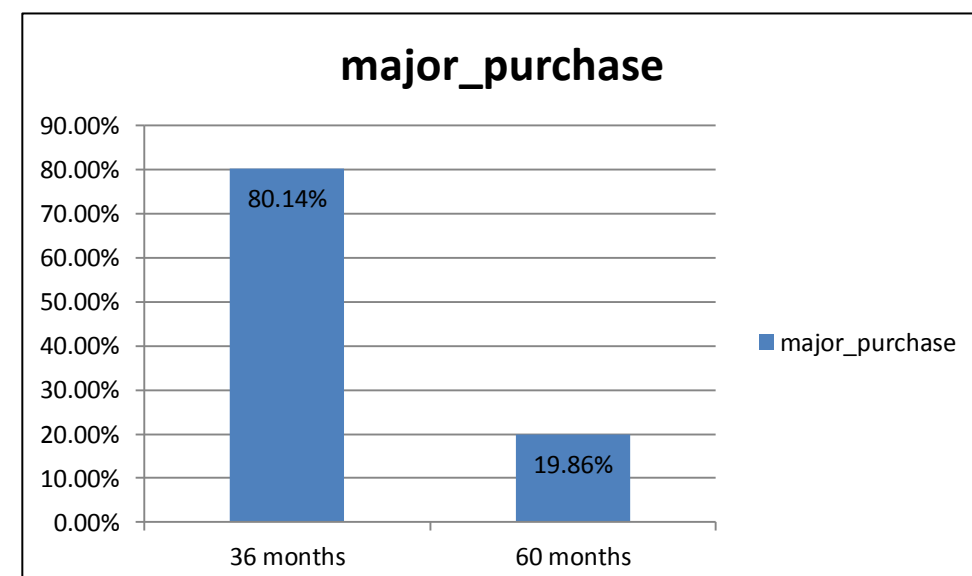
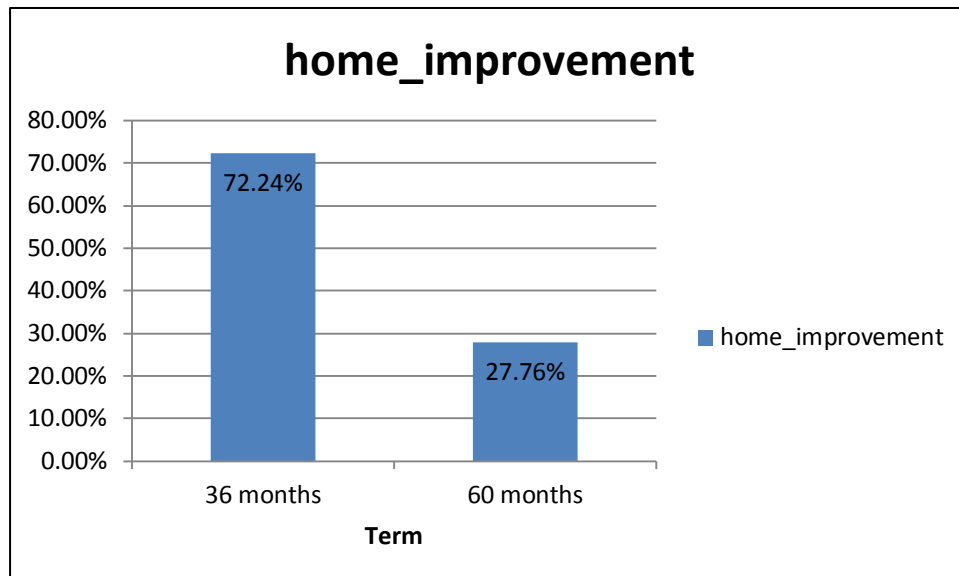
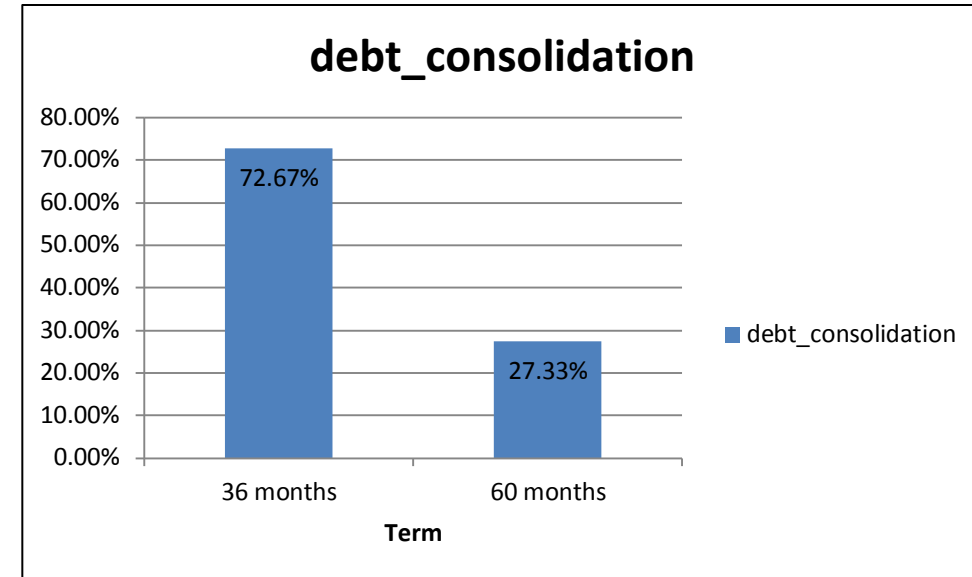
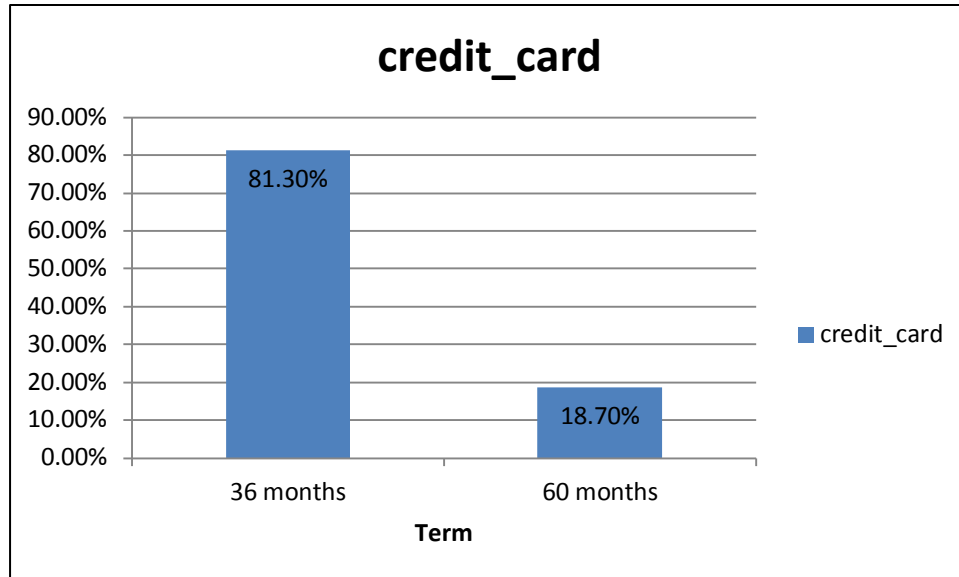


We Observe that the applications for debt consolidation cover the major segment of the over all applications, next being for the purpose of credit card clearances followed by home improvement purpose and lastly for major purposes.

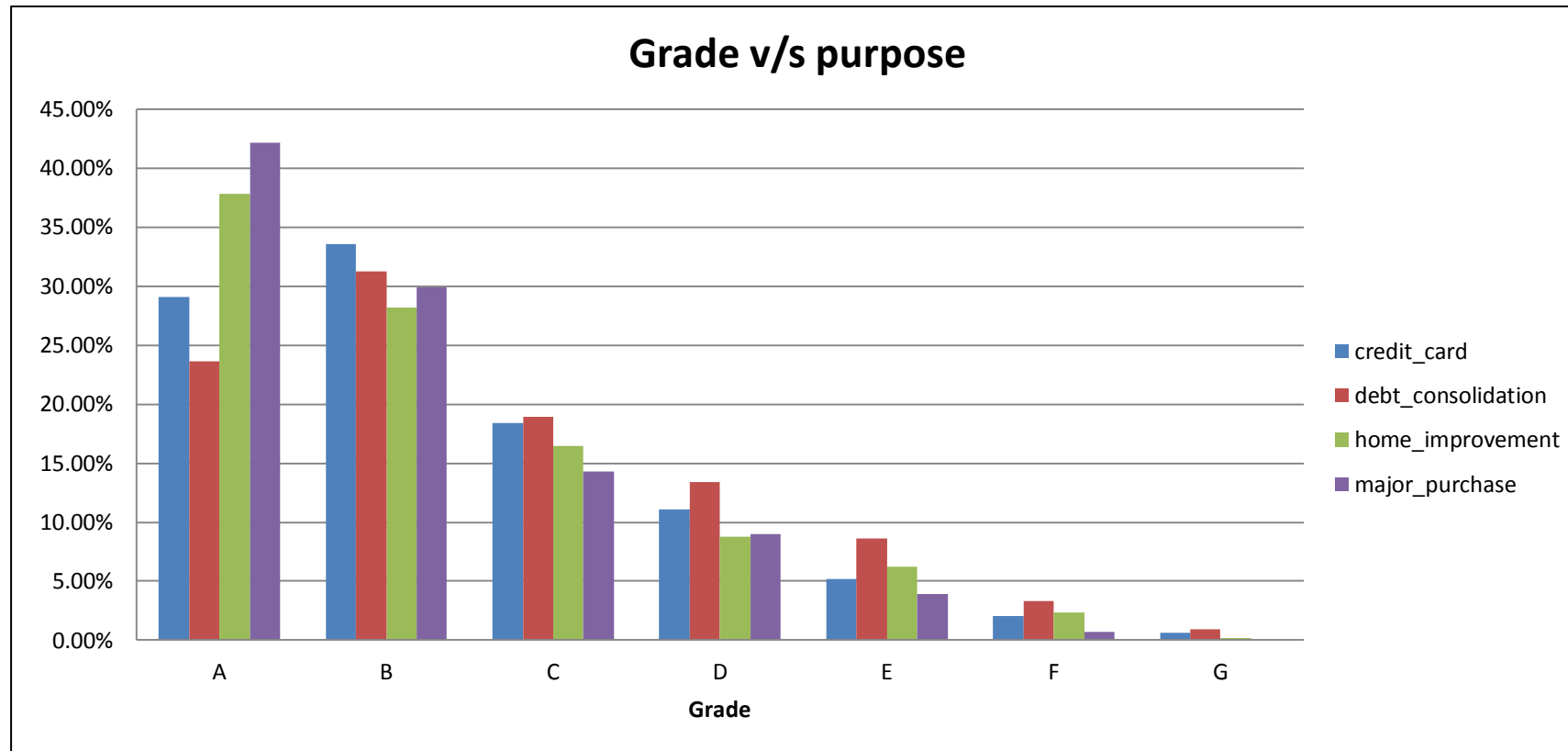
Product wise distribution of the applications over time – Bivariate Analysis



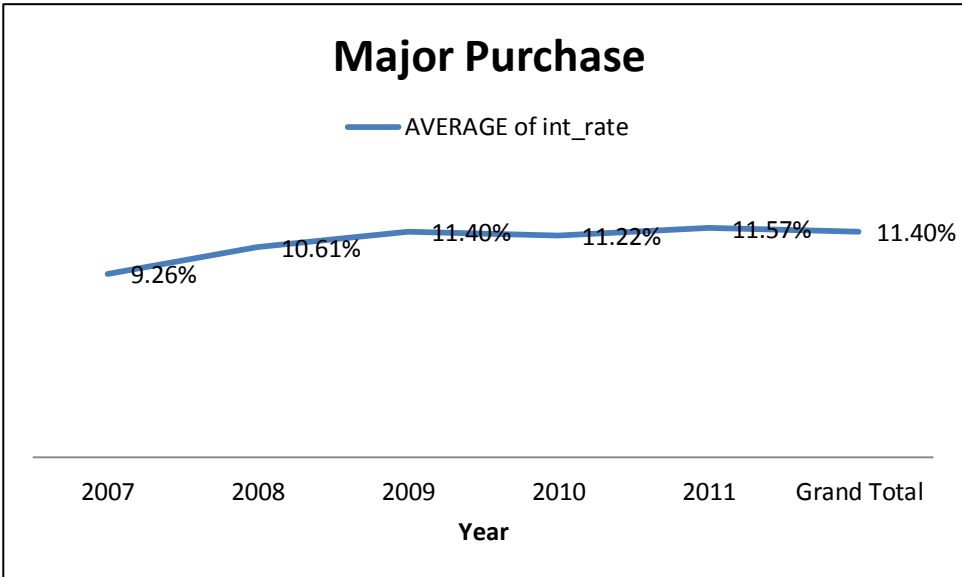
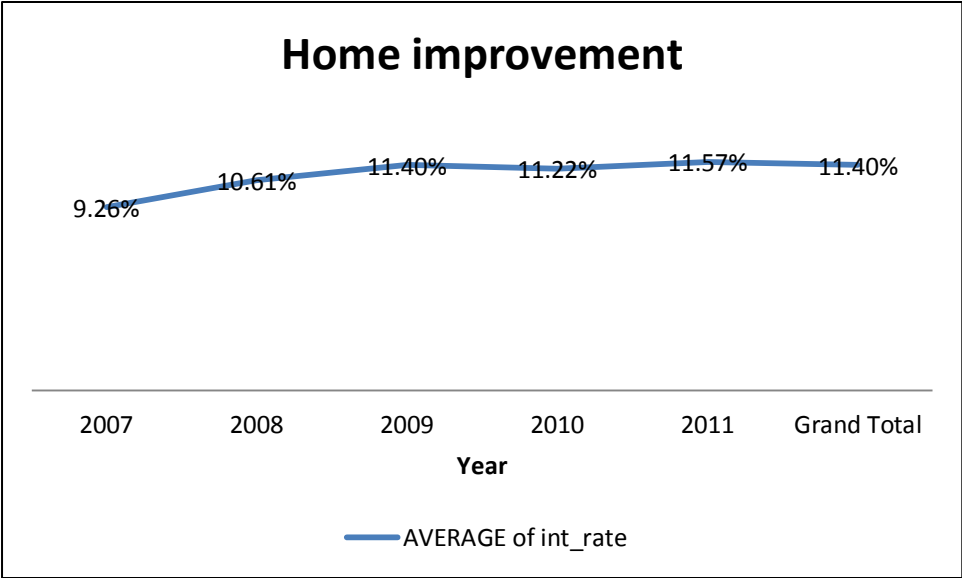
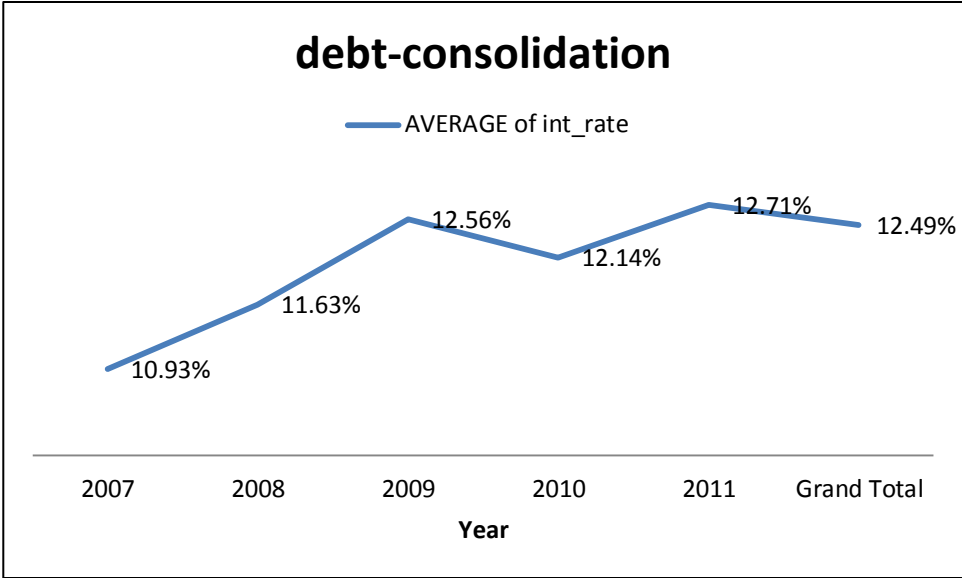
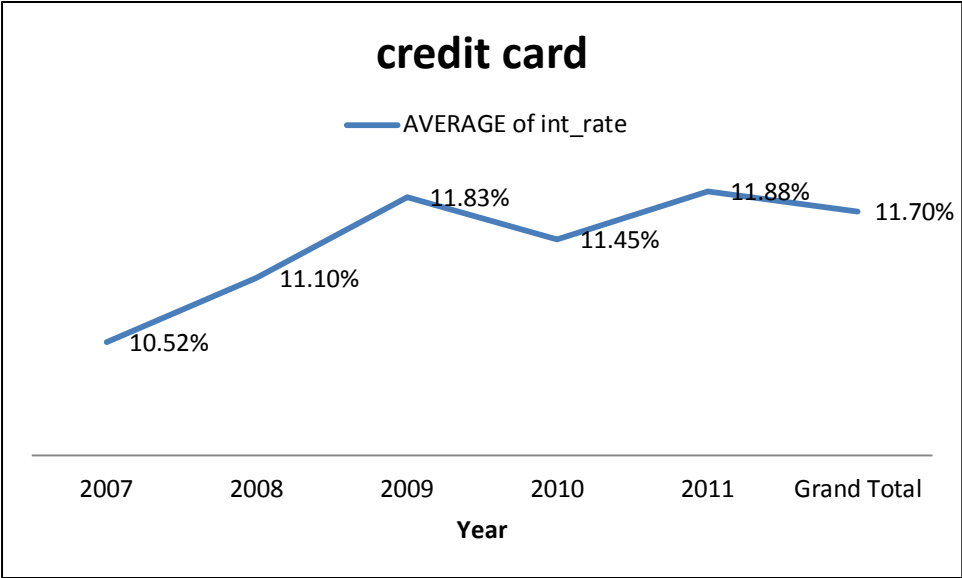
Product-wise applications v/s Loan term



Cumulative Grade distribution v/s purpose – Segmented Univariate Analysis

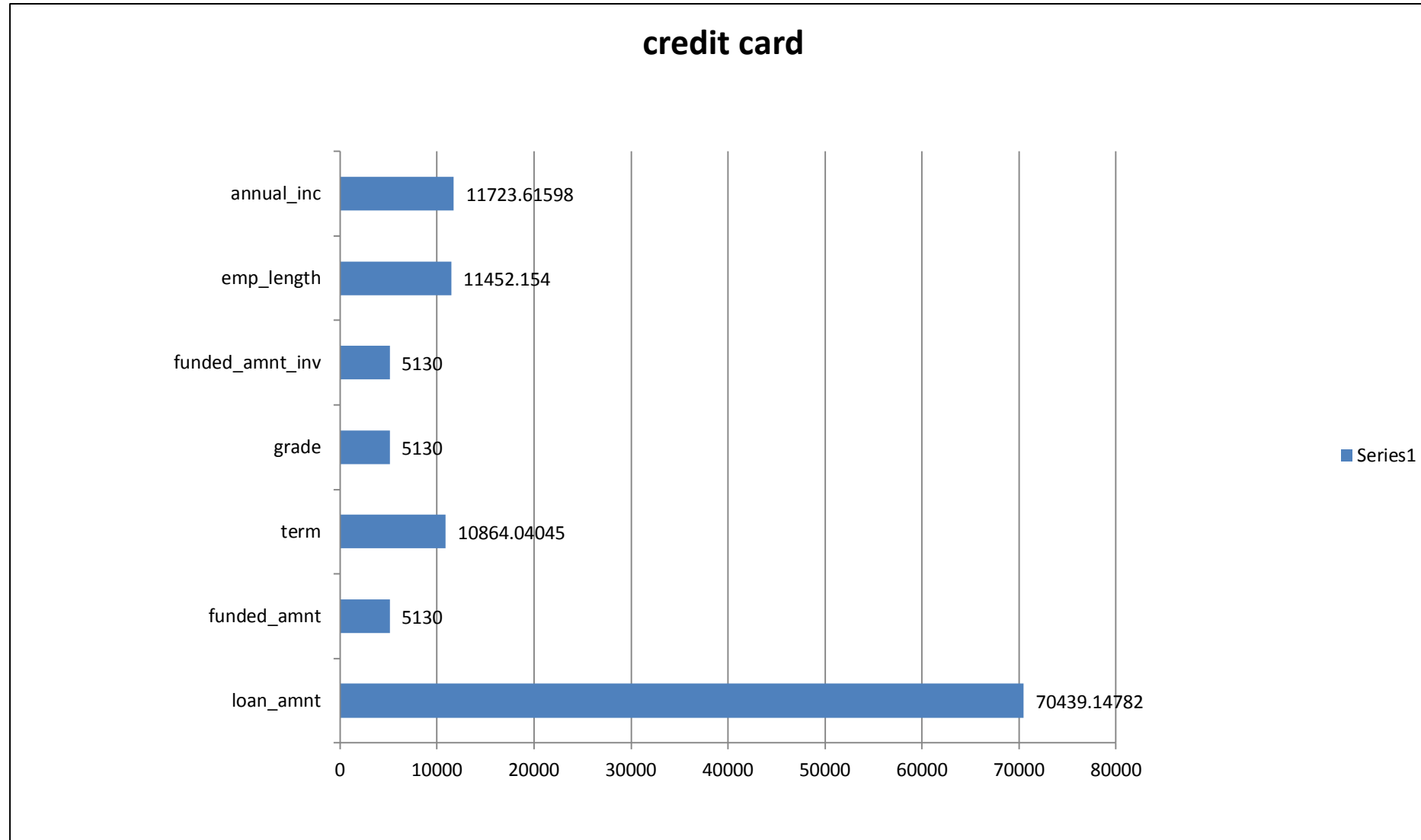


Average Interest Rates – Segmented Univariate Analysis

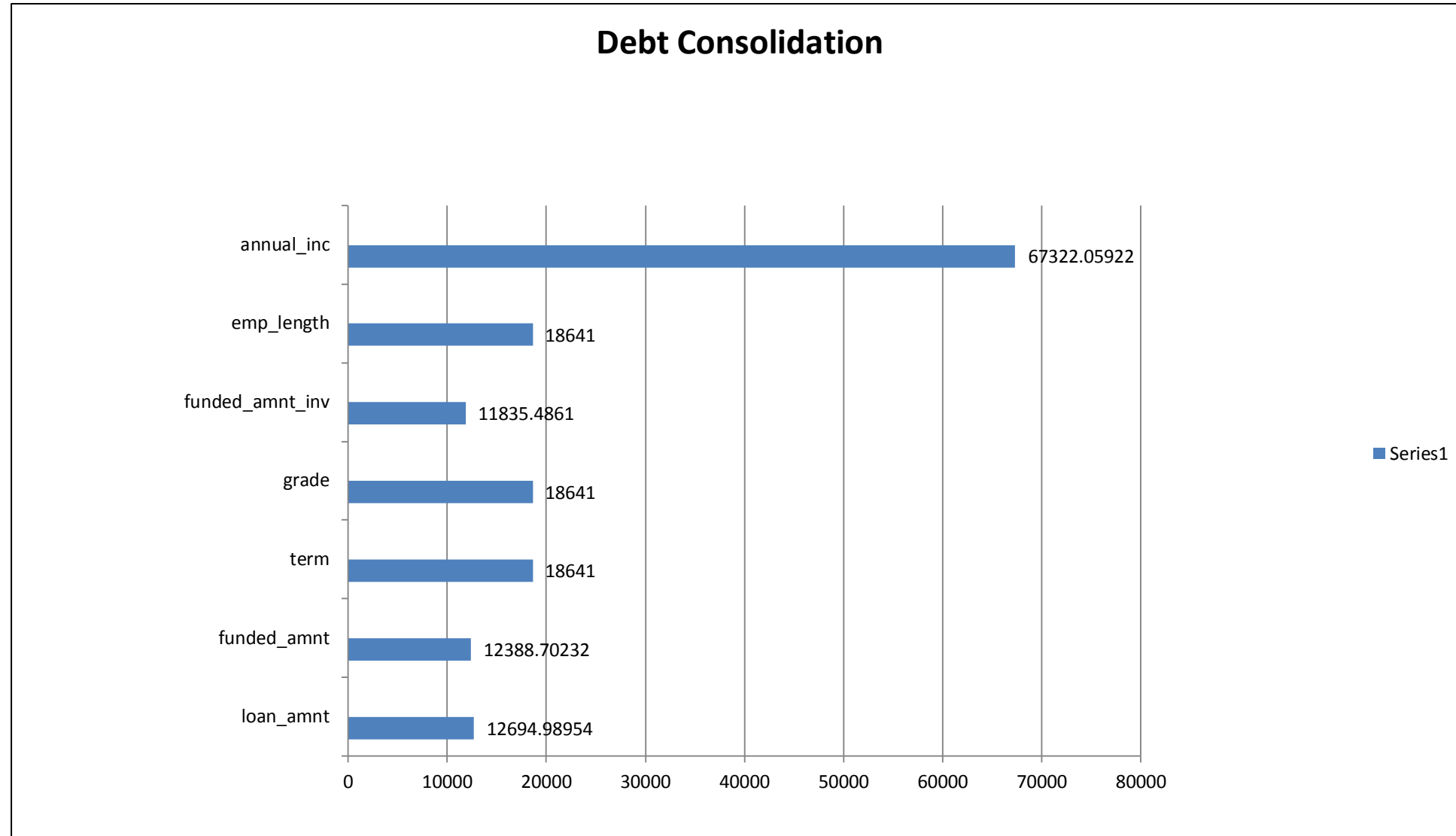


Credit card-11.7%
Debt-12.5%
Home-11.4%
Major- 11.4%

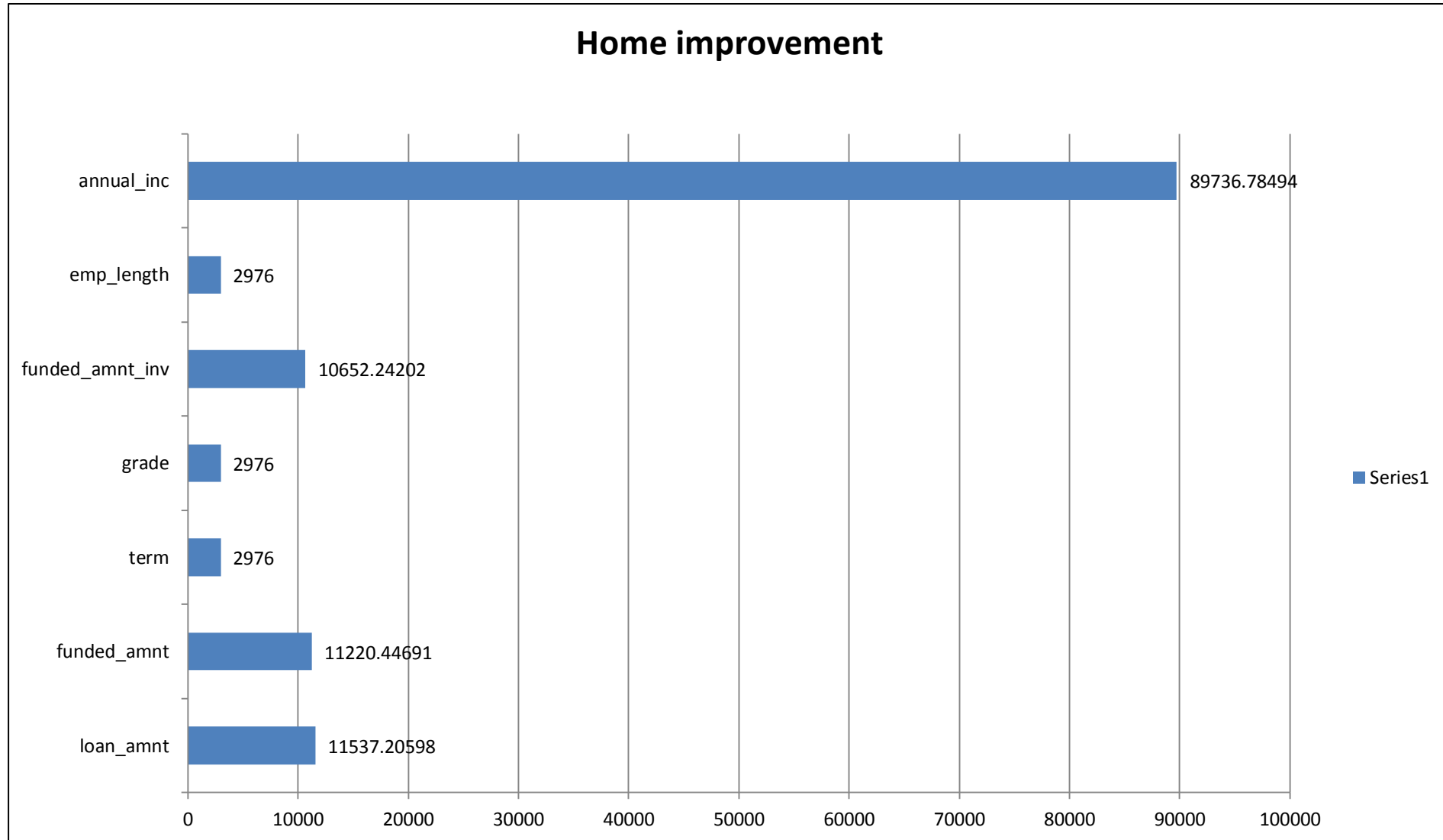
Important Parameters



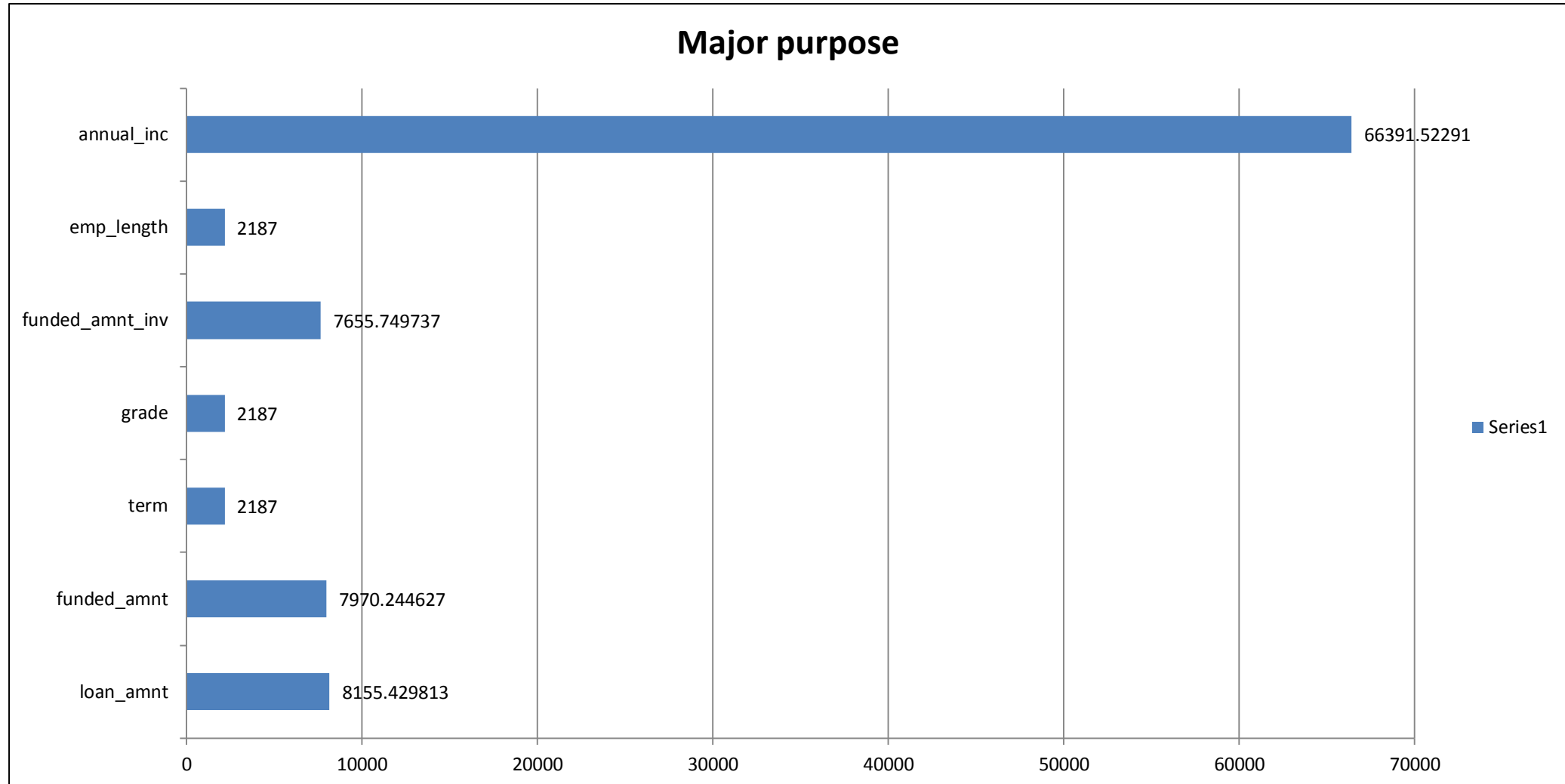
Important Parameters



Important Parameters



Important Parameters



Conclusion

We observe that the annual income, the home_ownership, purpose, loan amount and grade are a few factors that can help us to determine if the applicant can be a defaulter or not.