LENDING CLUB CASE STUDY

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Lending Club Case Study

When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Two types of risks are associated with the bank's decision:

- If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company
- If the applicant is not likely to repay the loan, i.e. he/she is likely to default, then approving the loan may lead to a financial loss for the company

Business Objective:

Apply EDA to understand how consumer attributes and loan attributes influence the risk.

Observations:

Missing Values Observation:

- In the case study data set we found that we have 54 columns, which have 100% missing value, So we removed those columns for our analysis.

Correlation Analysis:

- Loan Amount,funded Amount and funded amount_inv are highly correlated with each other
- pub_rec and pub_rec_bankruptcies are also correlated with each other

Observations:

Univariate Analysis:

- Most of the people are Likely to take around 10K loan from Lending Club..
- We already saw that, Loan Amount and Funded amount are Highly correlated hence we found that lending club approves approx all the loan Amount
- 75% people have taken option of 36 months, for number of payments on the loan whereas 25% people has taken option of 25%
- Most of interest rate lies between 8.9 to 14.5%
- Average installment amount is 324 whereas highest installment amount is 1305.
- Highest LC assigned loan grade belongs to B
- Mostly loan borrowers are from Mortgage or Rented house.
- 86% loan borrowers have Loan Status as Fully Paid
- 47% people have taken loan for debt consolidaton purpose
- LC has approx 90% of people having 0 Number of derogatory public records

Observations:

Segmented Univariate Analysis

- Higher The Loan Amount, Higher The Loan tenure
- The Borrowers having grade G and H has taken highest loan amount whreas we can also see the count of loan increases when we have less Grade like B and A
- Mortgage have high Loan amount also have high number of borrowers
- verified source borrowers are getting highest loan amount, and the average verified loan amount exist between 9k to 13k range
- Small Business boroowers are getting highest loan amount whereas we have more borrowers from debt consolidation

Observations:

Bivariate Analysis

- Charged off is higher in 60 months compare to 36 months term becaues number of borrowers are less in 60 months hence we can state that Borrowers who have 60 months term have higher chances of charged off
- LC Grade B,C and D having highest charged off and we can also see that when the grade decreases the charged off increase
- debt_consolidation, other and Credit card have highest charged off

Thank You