Lending Club Case Study

Presentation to client

Data Analysis by Geraldine Bengsch and Beng Cheong Cheong

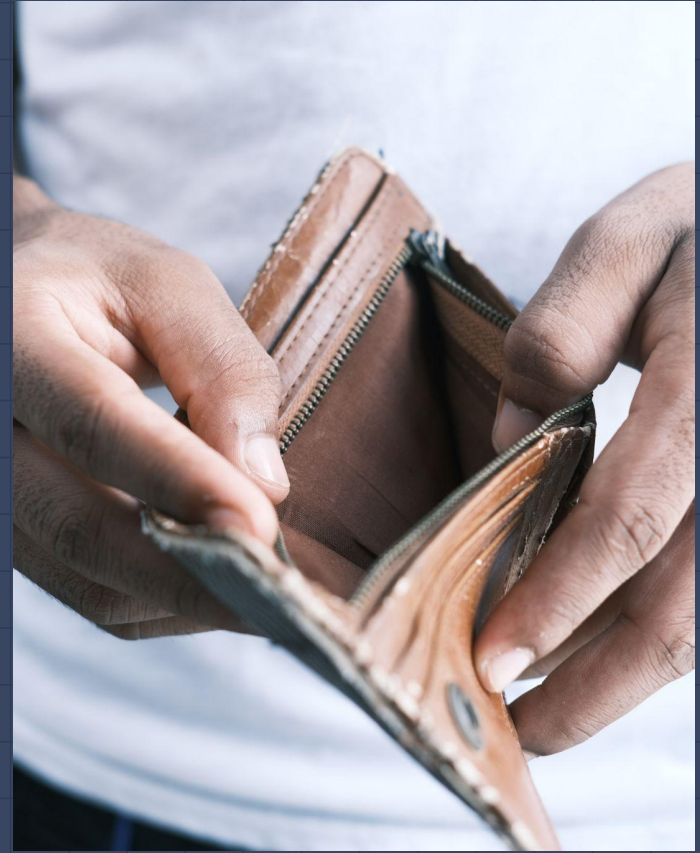# PRESENTATION STRUCTURE

PROBLEM STATEMENT

Risk analysis of lending requests:

- Not approving applicants who are likely to repay a loan will lead to a company loss
- Approving applicants who are not likely to repay a loan will lead to a company loss

What factors influence customer behaviour?

$61,234,661

Total of loans defaulted over time (15%)

What can be done to minimise the risk of loss?

DATA ANALYSIS APPROACH

Data was analysed based on the business problem

Based on understanding of loans defaulted vs. loans paid off	The magnitude of the problem in $	Individual impact of factors and correlations

Factors found to influence default on loans included:

Loan amount	Interest rate	DTI	Term	Grade

VISUALISATIONS

Visualisations broken down into different types

Descriptive charts
Purpose and status of loan
Interest rates
DTI
Grade
Term

Correlation charts
Strongest and weakest correlations between factors
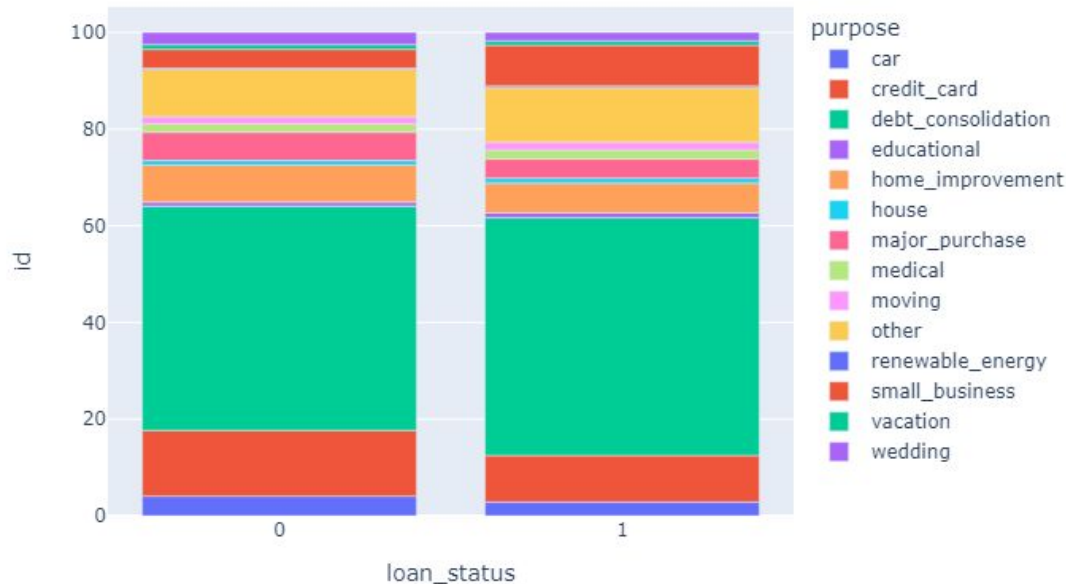
Infographics
Findings and recommendations

TYPES OF CLIENTS AND LOANS
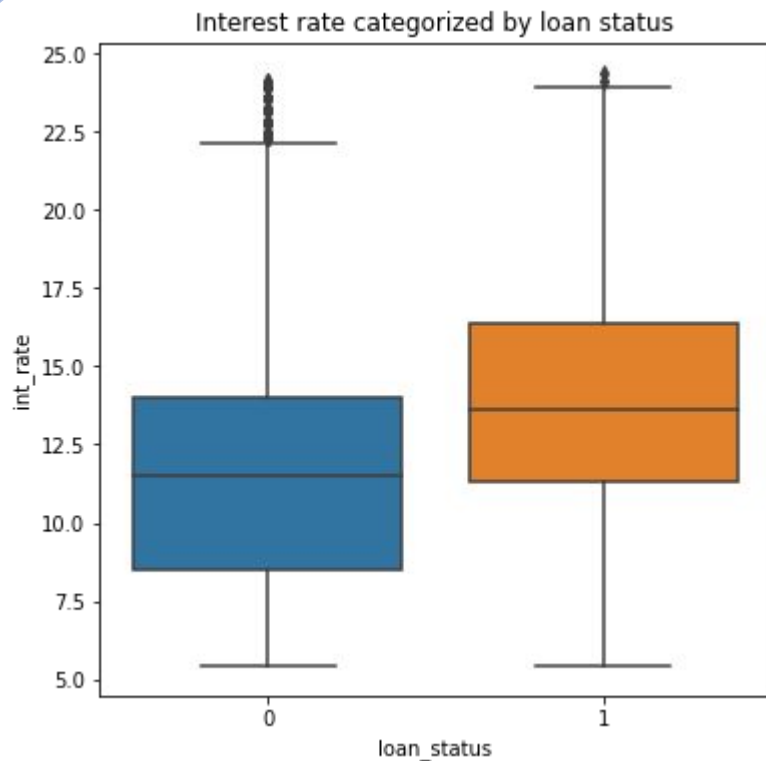

% of Loan Status categorized by purpose

Purpose of loans

- Clients mostly choose loan offers that is advertised by the company
- Trends of fully-paid, current and charged off loans remains the same
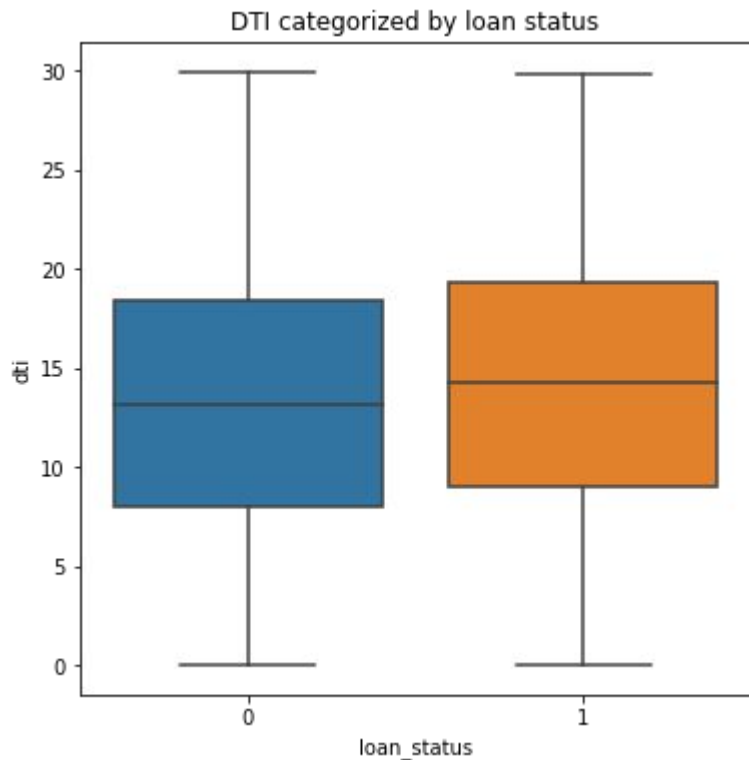
INTEREST RATE

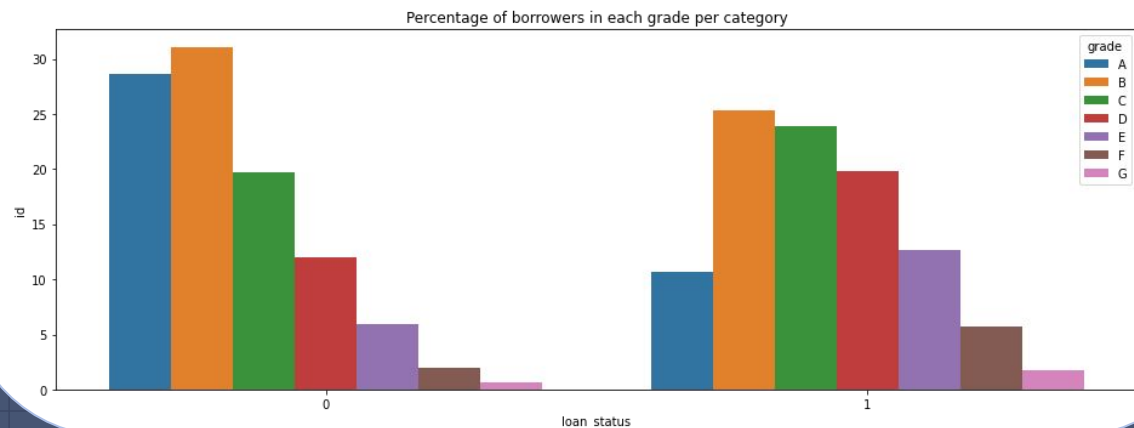Interest rate categorized by loan status

Insight

- Median Interest-rates higher for charged off loan status.
- High rates increase difficulty for borrowers to continue their payment
- But: High interest rates will pay more to the investor

DTI

- **Insight**
- Median DTI higher for charged off loan status

GRADES OF CLIENTS

Number of borrowers in each grade per category

Percentage of borrowers in each grade per category
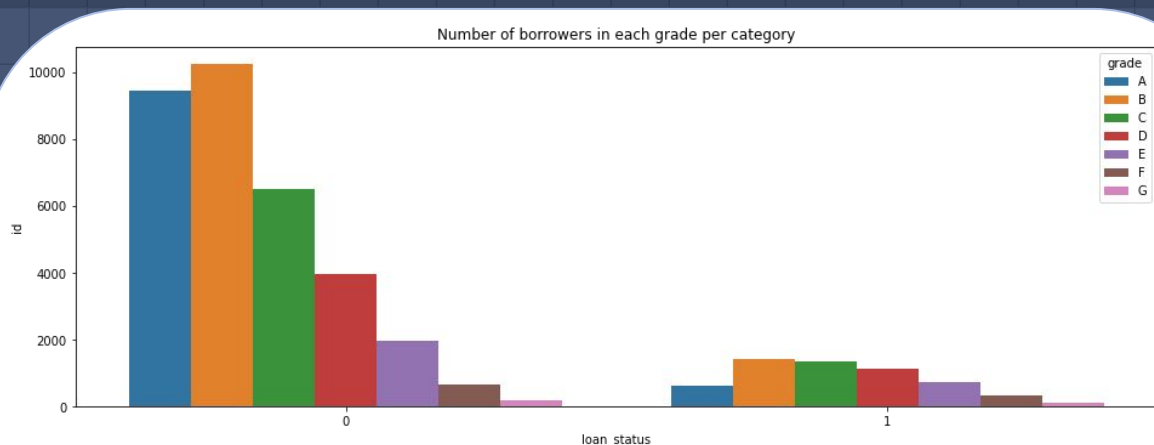
Insight

- Higher proportion of loan terms that were charged off belong to grade C and below

TERMS OF LOANS

Number of borrowers in each term per category

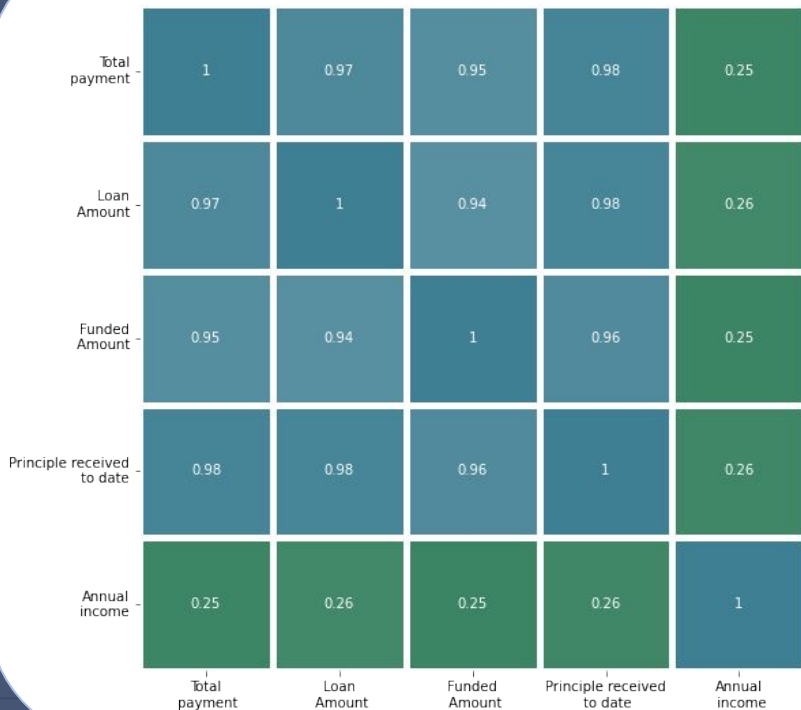Percentage of borrowers in each term per category
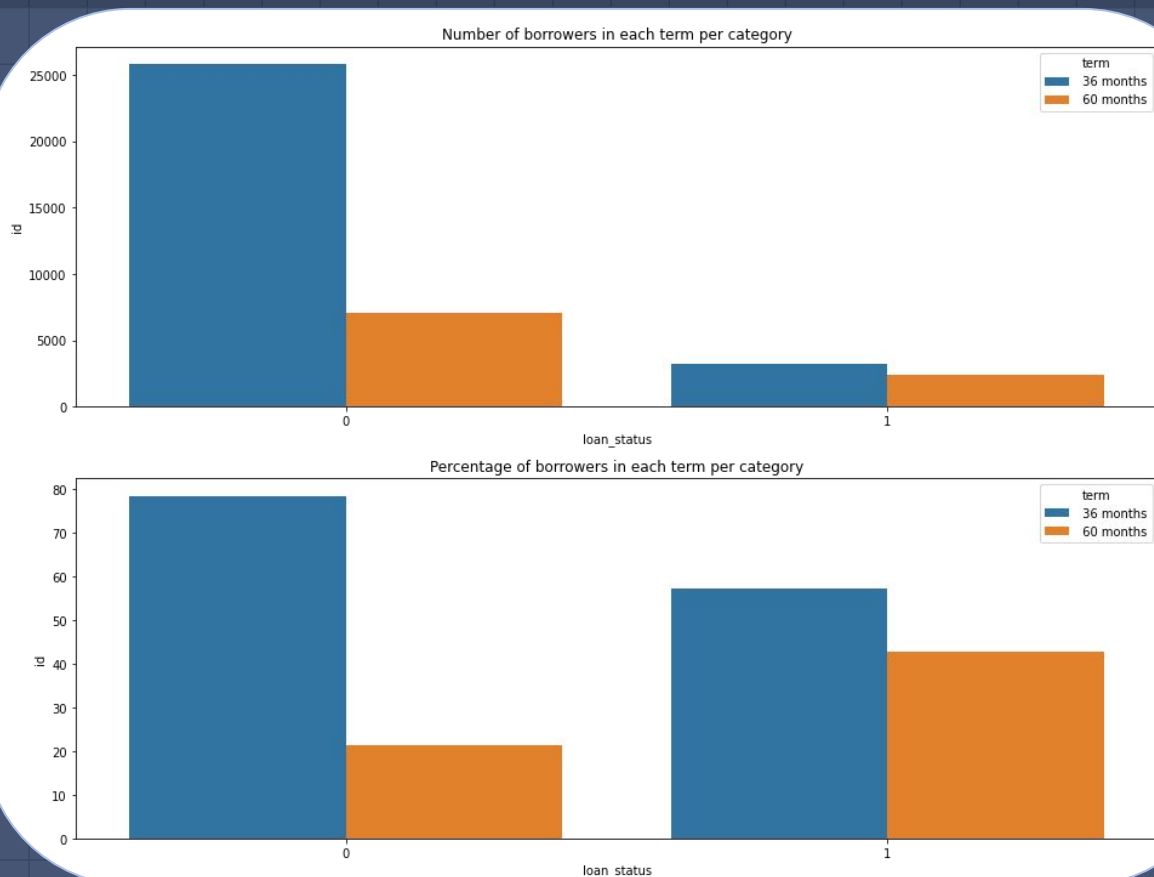
Insights

- Higher proportion charged of at '36 months
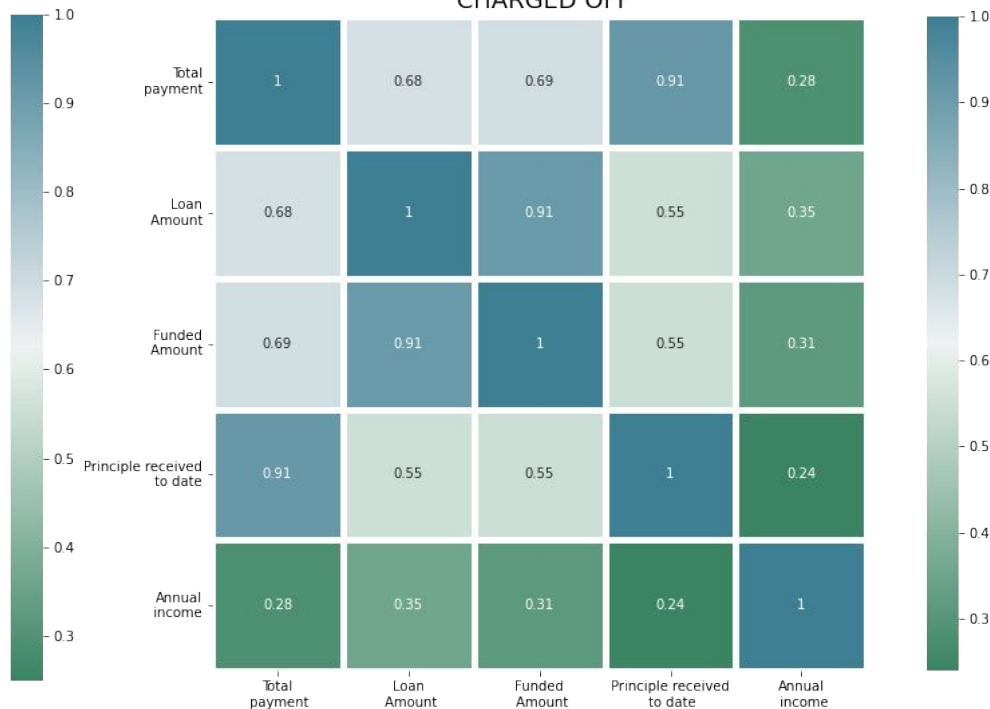- Offering to extend the term may lead to customers being able to pay off their loan.

CORRELATIONS BETWEEN DIFFERENT FACTORS

Correlations between different factors: PAID OFF

Correlations between different factors: CHARGED OFF

Insights: Paid off vs. Default: strongest and weakest factors

FINDINGS

$ Purpose of the loan does not matter. Borrowers are still as likely to pay off their loan, even when borrowing to consolidate current loans.

€ Borrowers were **more likely to default on their loans if interest rates at time of borrowing were high.**

Borrowers were also **more likely to default when term was 60 months, and they were below Grade B.**
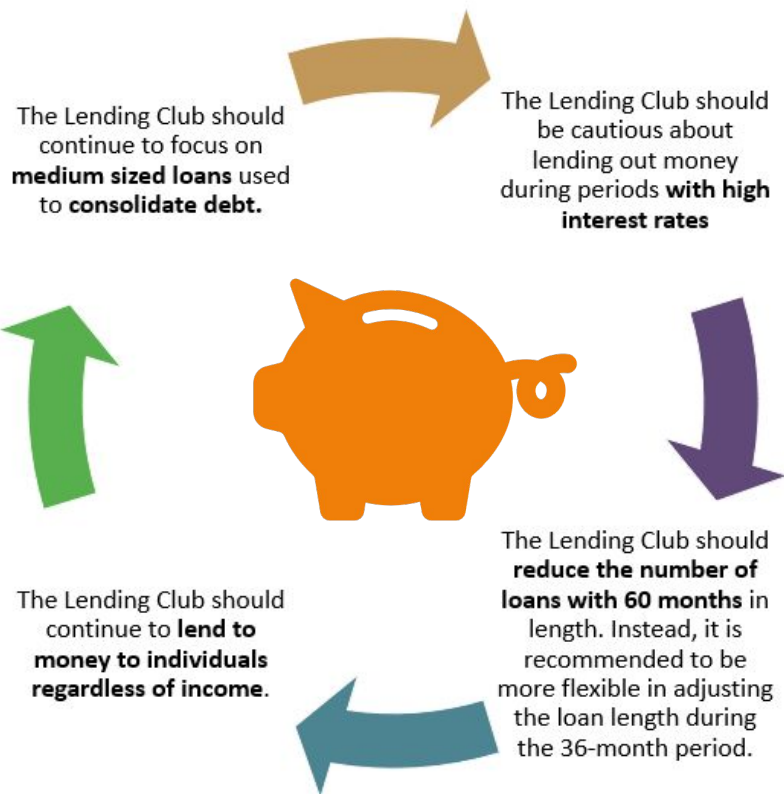
₽ The amount of funds provided by investors is an import factor, as those whose who were **able to pay off fully had help from investors**

Annual income is not an indicator of whether the loan will be paid.

The Lending Club should continue to focus on **medium sized loans** used to **consolidate debt.**

The Lending Club should be cautious about lending out money during periods **with high interest rates**

The Lending Club should continue to **lend to money to individuals regardless of income.**

The Lending Club should **reduce the number of loans with 60 months** in length. Instead, it is recommended to be more flexible in adjusting the loan length during the 36-month period.

Recommendations based on data analysis and business aims of the Lending Club

The Lending Club aims to:

| Allow access to loans for a wider range of people | Provide easy, yet personal loans | Help individuals manage their debt |