

Analytics Challenge Round 2: Case Study Option 2

TVS Credit – Empowering India. One Indian at a Time

From the largest cities to the smallest villages, India is filled with ambition and enterprise. As Indians from all walks of life set out to write their growth story, our timely and affordable credit empowers them to bring their dreams alive.

As part of the \$8.5 billion TVS Group, we empower Indians from various socioeconomic backgrounds with financial products that serve their needs. In doing so, we further the cause of financial inclusion.

Our two wheeler, used car, three wheeler, and tractor loans are designed for Indians in small towns and the rural heartland, for our nation's growth is powered by their prosperity. Our foray into the used commercial vehicle and consumer durable finance is yet another step in this direction.

With over 5 million customers and a long-term CRISIL rating of AA-, our growth is built on firm foundations. We have won several awards, including the Flame Award for Excellence in Rural Marketing, The Best BFSI Company Award at the ET Now Makers of Developed India Awards 2018, and the Most Effective Employee Engagement Strategy Award at the World HRD Congress.

Key Facts:



Began Operations in
2010



RBI Licensed (2010)



AA- by CRISIL for Long Term Loans
A+ by CRISIL & ICRA for Short
Term Debt



ISO 9001/2015
ISMS 27001/2013 certification

Products:



Two Wheeler
Loans



Used Car
Loans



Tractor
Loans



Used
Commercial
Vehicle Loans



Three
Wheeler
Loans



Business
Loans



Consumer
Loans

Case Study-Two Wheeler Focused Representation Model

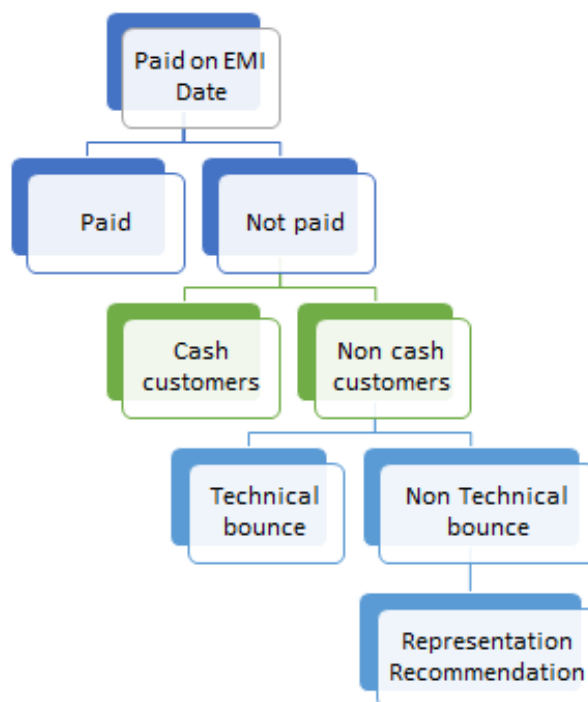
Collections in the NBFC space refers to the collection of EMIs from the customers for the loan they have taken. It is one of the most critical pillars in the lending industry.

At the time of taking a loan, a customer confirms his repayment instrument (PDC/ACH/ADM/ECS) and the pre-agreed date for EMI payment. On the EMI date, the repayment instrument is presented to the bank. This is called presentation.

The customer is said to have defaulted when he/she fails to pay the EMI on the pre-agreed date. At this stage, there are several modes through which TVS Credit can collect the defaulted EMI from the customer. Some of the modes have a higher cost of collection than the others. One identified mode with lower cost of collection is focused Representation.

Representation refers to presenting the repayment instrument again to the bank. It is not possible to do representation for all the bounce customers due to the cost and operational effort involved. It is vital to select the right customers for representation.

The objective of this exercise is to predict the customers with likelihood to clear during representation. Recommendation is based on past payment history, demographics, external data etc. Dataset consists of 36 features from various sources, please find below the flow chart along with the description of the features.



Data Dictionary

Feature	Feature Definition
V1	ID
V2	Number of times customer bounced in presentation in last 3 months
V3	Longest period (in months) in which the customer bounced in presentation continuously
V4	Fraction of times the customer was allocated to a collection agency
V5	Binary variable indicating if the customer bounced in presentation last month
V6	EMI_DELAY is the difference between the presentation date and the actual date of payment of EMI in that particular month. This feature is the average of EMI_DELAY of all previous MOBs (Months on book)
V7	Number of MOBs in which the customer bounced in presentation so far but paid (did not flow)
V8	Sum of EMI_DELAY of all previous MOBs of the customer
V9	Ratio of the number of times (MOBs) the customer paid in week 3 to the number of MOBs transacted
V10	Total number of times customer paid in representation
V11	Binary variable indicating if the customer paid the last time he was represented
V12	Number of times (MOBs) the customer paid in week 4
V13	Fraction of number of times the customer paid the EMI in cash
V14	Total number of times the customer was represented so far
V15	Total outstanding amount (overdue amount) in customer's unsecured loans which are currently live
V16	Binary variable indicating if the customer paid in representation last month
V17	Scheme Code
V18	Binary variable indicating whether the customer downloaded SAATHI app
V19	Model Segment
V20	LTV (Loan to Value)
V21	Employment Type
V22	Gender
V23	Dealer Code
V24	Number of apps in customers phone
V25	Asset Cost
V26	Age
V27	Binary variable indicating if the customer's Aadhaar information is available
V28	Number of historical loans of the customer in which they were 180 days past due
V29	Number of historical loans of the customer in which they were 30 days past due
V30	Number of historical loans of the customer in which they were 90 days past due
V31	Credit Age
V32	Binary variable indicating if the customer's Voter ID information is available
V33	Tenure of loan
V34	Qualification of the applicant
V35	Residence Type
V36	Target Variable (Representation Status)

Deliverable for Round 2:

1 Pager (word file/excel/ppt) which includes brief understanding of the problem, approach (4-5 lines), expected benefit (value), algorithm used and final evaluation metric.

Deadline: 17th November 2019 23:59 HRS

Deliverable for Round 3- Teams will be selected basis their submissions in Round 2.

In Round 3, the qualified teams will have to present a detailed ppt on the case study selected in Round 2.

For any queries with regards to the **Analytics Challenge Round 2-Case 2**, please write to us at epic@tvscredit.com.