## 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 socio-economic 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 8.4 million customers, and a long-term CRISIL rating of AA, our growth is built on firm foundations. We have won several awards, including the Economic Times Best BFSI Brands 2021, India's leading BFSI & Fintech Companies 2021, Flame Award for Best use of Social Media and Best CSR Campaign, and the Most Effective Employee Engagement Strategy Award at the World HRD Congress.

**Product Portfolio:**

**Two-Wheeler Loans**
No.1 TVS Motor financier with a market share of 46%

**Used Car Loans**
Among the top 3 players in the market

**Tractor Loans**
Key financier for New Tractors, Used Tractors & Agri-implements

**Consumer Durable Loans**
30K+ dealer points touching 5000+ pincodes

**Used Commercial Vehicle Loans**
Asset size of Rs.1300+ crore with 2200+ channel partners.

**Business Loans**
Launched in 2018 with focus on Tier 2 and Tier 3 customers.

**Retailer Loans**
Launched in 2020 with focus on small retailers.

**InstaCard Programme**
Launched in 2020, it offers a continuous credit line to over 9 lakh+ customers

## E.P.I.C Season 4 -Analytics Challenge Case Study-2

## Residual Analytics – Resale Price Estimation

At the time of taking a Two-Wheeler Loan (secured loan), the customer confirms his repayment instrument and the pre-agreed date for EMI payment. On the EMI date, the repayment instrument is presented to the bank. A customer is called a bounce customer if he/she fails to pay the EMI on the presentation date (the day the EMI is due).

In such a scenario, the company sends multiple reminders to the customer requesting him/her to clear the dues. Even after multiple reminders if the customer fails to pay, a legal notice is sent by the company. If the customer fails to pay his dues even then, the company resorts to repossession (seizure) of the hypothecated vehicle while ensuring all legal formalities are followed.

The seized vehicle is then transported to large parking yards in the city/town where they will be auctioned after a certain waiting period to recover the outstanding amount. The residual team is responsible for auctioning the seized vehicles. The goal of the team is to sell as many vehicles as possible at a higher price and in the shortest time to recover the outstanding dues.

The objective of this case study is to estimate the resale value of the seized vehicle when auctioned at a given month in the future. This will help the residual team to decide on whether to approve or negotiate the quote received for the vehicle.
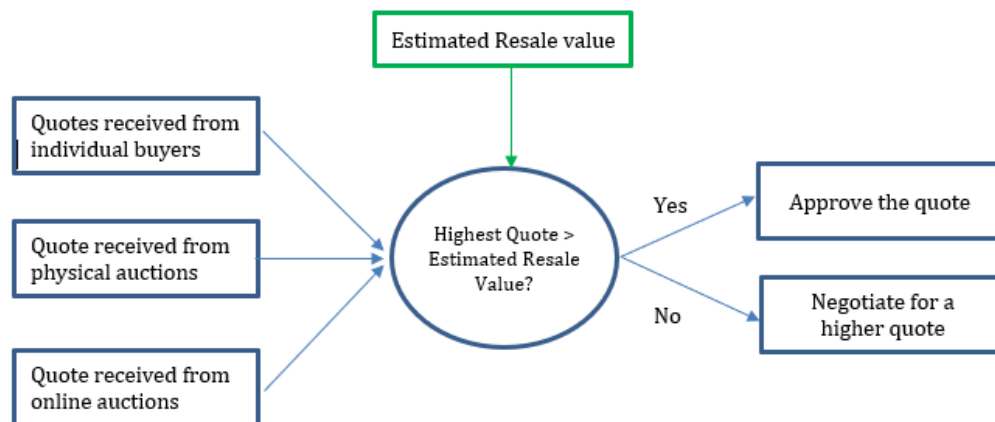
# Data Dictionary

| Variable | Data Type | Definition |
|----------|-----------|------------|
| V1 | String | The unique identifier for the loan account |
| V2 | Datetime | The date in which the vehicle was seized |
| V3 | Categorical | The unique identifier for the area in which the loan was disbursed |
| V4 | Categorical | The unique identifier for the dealer where the vehicle was purchased |
| V5 | Categorical | Type of dealer - Main or Subdealer |
| V6 | Numeric | On road price of the vehicle (aka asset cost) |
| V7 | Numeric | Ratio of loan amount to asset cost |
| V8 | Categorical | The encoded model of the TW - Jupiter, Mopeds, Star City, Radeon, Apache etc |
| V9 | Numeric | The outstanding dues of the customer |
| V10 | Numeric | The DPD (days past due) bucket of the customer at time of seizure |
| V11 | Categorical | Condition of the Tyre (Good/Average/Poor) at time of yard entry |
| V12 | Categorical | Condition of the Body (Good/Average/Poor) at time of yard entry |
| V13 | Categorical | Condition of the Engine (Good/Average/Poor) at time of yard entry |
| V14 | Categorical | Condition of the Overall TW (Good/Average/Poor) at time of yard entry |
| V15 | Binary | Whether the vehicle is registered or not (1 indicates registered) |
| V16 | Numeric | The Year of Manufacturing of the vehicle |
| V17 | Numeric | The count of months elapsed since loan disbursement until seizure of vehicle |
| V18 | Numeric | The count of months elapsed since loan disbursement until auction of vehicle |
| V19 | Categorical | The unique identifier of the parking yard in which the vehicle is located |
| V20 | Categorical | The state in which the parking yard is located |
| V21 | Numeric | The month in which the vehicle will be sold in auction |
| V22 | Numeric | The year in which the vehicle will be sold in auction |
| V23 | Numeric | The age of the vehicle in years when sold in auction |
| V24 | Numeric | The days spent by vehicle in yard when sold in auction |
| V25 | Binary | Whether the vehicle is BS6 or not (1 indicates BS6) |

| V26 | Categorical | The RTO circle in which the TW is registered |
|---|---|---|
| V27 | Binary | Whether the vehicle is BS4 and unregistered at time of seizure (1 indicates yes) |
| V28 | Numeric | Per day parking charge of the vehicle in the yard |
| V29 | Numeric | The ratio of the months elapsed until seizure (V17) to the tenure of the loan |
| V30 | Numeric | The time period for repayment of loan in months |
| V31 | Binary | Whether the customer availed first free service for the vehicle (1 indicates yes) |
| V32 | Numeric | The very first KM reading captured at time of the very first service |
| V33 | Numeric | Count of months elapsed since loan disbursement until the very first service |
| V34 | Numeric | KM reading captured at the recent most service |
| V35 | Numeric | Total count of free service availed by the customer |
| V36 | Numeric | Count of months elapsed since recent service until seizure of vehicle |
| V37 | Binary | Whether the original RC book of the vehicle is available or not ('Y' indicates yes) |
| V38 | Binary | Whether the vehicle is accidental or not accidental |
| V39 | Numeric | The quote amount for which the vehicle was sold **(Target Variable)** |

## Deliverables

Participants need to solve any **ONE** of the two Analytics Case Studies shared as part of the challenge.

**Deliverable for Round 2:** 1-2 Pager (word file/excel/ppt), which includes a brief understanding of the problem, approach (4-5 lines), expected benefit (value), the algorithm used and final evaluation metric.

**Deliverable for Round 3 (Finale Round) -** Participants will be shortlisted basis their submissions in Round 2. In this round, the participants will have to present a detailed PPT on the same case study selected in Round 2.

For any queries on the **Analytics Challenge Case Study**, please email us at epic@tvscredit.com.