

# **CREDIT SCORING MODELS**

## **INTRODUCTION :**

Financial firms utilize credit scoring models as critical tools to evaluate an individual's or business's creditworthiness. To determine the probability that a borrower will return their debt, these models use information including payment history, credit utilization, and length of credit history. VantageScore and FICO scores are popular models that employ credit report data from Equifax and Experian agencies. Higher scores indicate lesser risk, according to the numerical scores assigned by the models. They support lenders in making well-informed choices about credit limits, interest rates, and loan approvals. In these approaches, regulatory control guarantees accuracy and fairness. Machine learning advances are augmenting their forecasting capabilities by integrating supplementary data sources. Reputable credit scoring methodologies encourage responsible lending and increase loan availability.

## **WHY IS THE CREDIT RISK SCORING MODEL IMPORTANT?**

Lenders can evaluate the creditworthiness of individuals and enterprises in a consistent and objective manner according to the credit risk scoring model. Lenders can assess the risk of making a loan or providing credit to a borrower by utilizing a credit scoring model, which enables them to decide on loan terms and interest rates with knowledge.

Lenders assessing a borrower's creditworthiness would be forced to make assumptions and personal opinions in the absence of a credit risk rating methodology. Inconsistencies and maybe discriminatory lending practices could arise from this. A fair and transparent lending process is created when all borrowers are assessed using the same standards, which is ensured by a standardized credit scoring model.

## **LEARNING ABOUT THE VARIOUS CREDIT SCORING MODELS USED IN FINANCE**

There are various types of credit scoring models used in finance, each with its own unique methodology and criteria. Understanding the different types of credit scoring models can help individuals and businesses make informed decisions about credit and loans

1. FICO Score: In the US, the FICO score is the most widely used credit rating methodology. A credit score is determined by a number of criteria, such as credit use, payment history, length of credit history, types of credit accounts, and current credit inquiries. Higher scores indicate a lesser chance of default. FICO scores range from 300 to 850.

Here is a look at each category and the weight it carries in determining the credit score

**Payment history (35%)**: This component assesses the regularity with which a borrower has fulfilled their loan obligations. The borrower with the highest score is the one who has never missed a payment and has always paid payments on schedule.

**Credit utilization (30%)**: The proportion of available credit that is being utilized is assessed by this measure. A borrower will have a higher score than one who utilizes more credit if they use less than thirty percent of their available credit.

**Length of credit history (15%)**: This component assesses the duration of a borrower's credit account utilisation. A borrower with a longer credit history and in good standing will score better than someone with less credit history.

**Credit account types (10%)**: This component assesses the many credit account kinds that a borrower possesses, including credit cards, loans, and mortgages. A borrower with a variety of credit accounts will score higher than someone with only one kind of account.

**Current credit inquiries (10%)**: This component assesses the frequency with which a borrower has submitted credit applications. In recent times, a borrower with fewer credit queries will have a higher score than one with more.

Numerous lenders, such as banks, credit card firms, and mortgage lenders, employ FICO scores. Lower interest rates and better loan terms can be obtained with a high FICO score, while lower interest rates and less favorable terms can be obtained with a low score.

2. Vantage Score: The three main credit bureaus collaborated to create this more recent credit rating methodology. It computes a credit score using a variety of parameters as well, but it assigns a different weight to each one than the FICO score does. Higher scores indicate a lesser default risk. VantageScores vary from 300 to 850.

Payment history, age and kind of credit, percentage of credit limit used, total balances and debt, current credit behavior and inquiries, and accessible credit are the six elements that VantageScore 4.0, the most recent version of the model, employs to create a credit score. Compared to the FICO model, the VantageScore model places greater focus on credit utilization and less emphasis on payment history. The following lists each category and the amount of weight it contributes to the credit score:

**Payment history (40%):** This component, like the FICO score, assesses how regularly a borrower has paid off their loans.

**Credit type and age (21%):** This component assesses the borrower's credit history, taking into account the mix of credit kinds and the age of their oldest and newest credit accounts.

**Percentage of credit limit used (20%):** This component, like the FICO score, assesses how well the borrower uses their credit.

**Debt and total balances (11%):** This component assesses the borrower's overall debt, which includes credit card and loan balances.

**Available credit (3%):** This component assesses the borrower's credit availability, or the total amount of credit that they could obtain in the event that they required it.

VantageScores are used by a variety of lenders, including banks, credit card companies, and mortgage lenders. Like the FICO score, a good VantageScore can result in lower interest rates and better loan terms, while a poor score can lead to higher interest rates and less favorable terms.

#### Alternative Models of Credit Scoring

A credit scoring algorithm called CreditXpert was created to assist lenders in determining the risk of making a loan to a borrower with a short credit history. It evaluates creditworthiness using many data sources, like rent and utility bills.

**TransRisk Score:** This credit scoring algorithm evaluates creditworthiness by utilizing alternate data sources, including public and property records. Lenders in the auto sector frequently use it to assess the risk of making loans to applicants with short credit histories.

**Experian's National Equivalency Score:** The weight and criteria are not made public. Users are assigned a score between 0 and 1,000 depending on factors such as payment history, credit length, credit mix, credit utilization, total balances, and number of queries. A score of 100 indicates a 10% likelihood that at least one account would go overdue in the following 24 months, while a score of 900 indicates a 90% chance. This rating system differs from the FICO model. Also

offered is a more recognizable alternate scoring system that ranges from 360 to 840.

## CONCLUSION :

Credit scoring models are essential instruments in the financial sector, offering a methodical and impartial approach to assessing an individual's or business's creditworthiness. To forecast the likelihood of debt repayment, these models—FICO and VantageScore, for example—analyze important data elements including payment history, credit use, and length of credit history. By allocating numerical ratings, they support equitable and open lending processes by assisting lenders in making well-informed decisions about credit limits, interest rates, and loan approvals.

One cannot stress the significance of credit scoring models enough. By guaranteeing that credit choices are founded on uniform and data-driven standards, they lessen the possibility of skewed or subjective assessments, thereby lowering the risk for lenders. In addition to improving the effectiveness and precision of credit evaluations, this standardization promotes public confidence in the financial system.

Furthermore, these models are constantly being improved by technological breakthroughs, especially in the areas of machine learning and big data analytics. By combining data from other sources, these models are better able to represent the financial behaviors of people with sparse credit histories. This development is essential for increasing credit availability, allowing more people to engage with the financial system and accomplish their financial objectives.

To sum up, credit scoring models are essential to the upkeep of a fair, effective, and inclusive financial system. By promoting ethical lending practices, guaranteeing equitable access to credit, and fostering financial stability and expansion, they enable both lenders and borrowers.