# Credit Scoring Models

Credit scoring models are essential tools used by lenders to assess the creditworthiness of borrowers. These models aggregate various financial data points to produce a score that predicts the likelihood of a borrower repaying their debt. In the United States, the two predominant credit scoring models are FICO and VantageScore.

**Types of Credit Scoring Models:**

**1. FICO Score:** The most widely used credit scoring model in the US, developed by Fair Isaac Corporation. It considers factors like credit history length, payment history, credit utilization ratio, types of credit used, and new credit inquiries. Approximately 90% of top lenders utilize FICO scores in their credit decisions.

**Key Features:**

- **Score Range:** 300 to 850
- **Primary Factors:**
    - **Payment History (35%):** Considers on-time payments versus late payments.
    - **Credit Utilization (30%):** Ratio of current credit card debt to total available credit.
    - **Length of Credit History (15%):** The age of your oldest account and average age of all accounts.
    - **Credit Mix (10%):** Diversity of credit accounts such as credit cards, mortgages, and loans.
    - **New Credit (10%):** Frequency of new credit inquiries and recently opened accounts.

**2. VantageScore:** Another major credit scoring model, developed by the three major credit bureaus (Experian, TransUnion, Equifax). It uses similar factors as FICO but may weigh them differently.

**Key Features:**

- **Score Range:** 300 to 850
- **Primary Factors:**
    - **Payment History (40%):** Similar to FICO, this heavily influences the score.
    - **Age and Type of Credit (21%):** Evaluates the age of accounts and the diversity of credit types.
    - **Credit Utilization (20%):** The proportion of credit limits used across all accounts.

- ○ **Total Balances and Debt (11%):** Aggregate debt amounts.
- ○ **Recent Credit Behavior (5%):** Newly opened accounts and recent inquiries.
- ○ **Available Credit (3%):** Total credit available to the borrower

**3. Alternative Data Models:** Newer models incorporate alternative data points beyond traditional credit reports, such as utility bills, rental payments, and bank account information.

Other less common models include:

- **CreditXpert:** Uses alternative data like rent and utility payments to assess creditworthiness.
- **TransRisk Score:** Primarily used for automotive lending, evaluates risk based on non-traditional data.
- **Experian's National Equivalency Score:** Provides a score ranging from 0-1,000, different from the typical 300-850 range

**Data and Figures:**

**FICO Score Distribution:** According to Experian, the credit score distribution in the US for July 2023 is as follows:



Percentage of Consumers vs. Credit Score Range
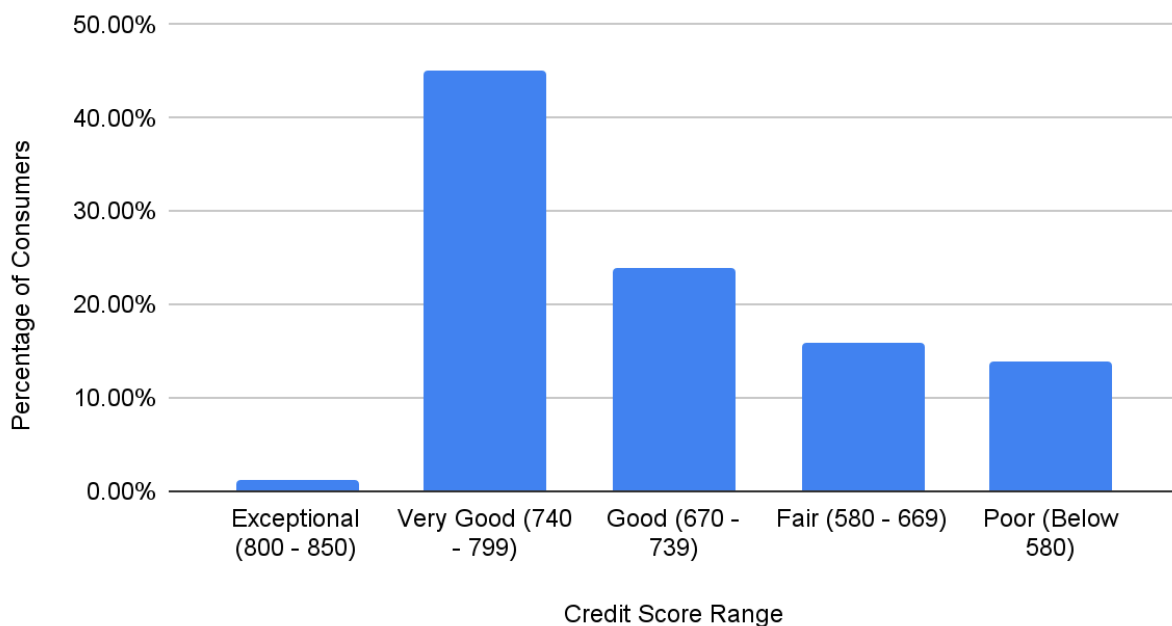
This data highlights the importance of credit scores for a significant portion of the US population.

**Impact on Consumers:** Credit scores can significantly impact loan eligibility, interest rates, and insurance premiums. Minority borrowers and those in low-income communities often have lower credit scores, potentially limiting their access to affordable credit.

**Future Trends of Credit Scoring:**

- **Focus on Explainability:** There's a growing emphasis on understanding how credit scores are calculated and the factors that contribute to them. This allows consumers to take steps to improve their creditworthiness.
- **Incorporation of Alternative Data:** Alternative data points, when used responsibly and fairly, can offer a more holistic view of a borrower's financial health, potentially expanding access to credit for underserved populations.
- **Technological Advancements:** New technologies like machine learning can potentially lead to more sophisticated and nuanced credit scoring models.

**Conclusion:**

Credit scoring models play a vital role in the US banking system, impacting loan decisions and financial access for millions of consumers. As the industry evolves, ensuring fairness, transparency, and responsible use of alternative data will be critical.