



# Beyond the Three-Digit Number:

## *A Comparative Analysis of Traditional Credit Models and Lendsight AI*

### Executive Summary

The financial ecosystem relies heavily on accurate risk assessment to distribute capital and determine borrowing costs. For decades, consumer credit scoring has been dominated by standardized systems that translate a borrower's credit history into a simple three-digit number. However, the rise of alternative data, trended data, and machine learning has introduced dynamic new methodologies into the underwriting process.

This whitepaper analyzes the current credit scoring landscape, examining the traditional logistic regression models associated with the three major credit bureaus, the paradigm shift introduced by machine learning platforms like Lendsight AI, how these respective systems calculate risk, and a detailed comparison of their scoring ranges and tiers.

### 1. The Role of the Major Bureaus: Correcting a Common Misconception

Before comparing scoring systems, it is necessary to establish a foundational fact: **the three major credit bureaus—Equifax, Experian, and TransUnion—are not scoring models themselves.** Rather, they are data repositories. They collect and maintain consumer credit data, such as payment history, outstanding debt, and account age.

When a lending institution requests a credit score, a mathematical algorithm is applied to the raw data housed at one or more of these bureaus. The two primary, universal algorithms used across all three bureaus are the **FICO® Score** and the **VantageScore®**.

### 2. Traditional Scoring Systems

Traditional scoring systems primarily utilize logistic regression to assess consumer risk. They extract a limited number of variables from a consumer's credit report, assign specific percentage weights to those categories, and generate an easily digestible three-digit score.

#### *The FICO® Score*

Created by the Fair Isaac Corporation, FICO is the oldest and most widely used credit scoring



benchmark in the United States, utilized by 90% of top lenders.

- **How it Scores:** The base FICO model weighs five core categories of consumer data:
  - **Payment History (35%):** The most critical factor, tracking on-time payments versus delinquencies, charge-offs, or bankruptcies.
  - **Amounts Owed / Credit Utilization (30%):** The ratio of debt carried compared to available credit limits.
  - **Length of Credit History (15%):** The age of the oldest account, newest account, and the average age of all accounts.
  - **Credit Mix (10%):** The diversity of accounts (e.g., revolving credit cards vs. installment loans like mortgages).
  - **New Credit (10%):** The frequency of recent hard inquiries and newly opened accounts.
- **Scoring Range & Risk Tiers (300 to 850):**
  - **Exceptional (800 – 850):** Borrowers present almost zero risk of default and secure the lowest advertised interest rates.
  - **Very Good (740 – 799):** Highly dependable borrowers who easily qualify for credit at highly competitive rates.
  - **Good (670 – 739):** The tier where the average American borrower sits (the national average is roughly 715). Lenders view these borrowers as an acceptable risk.
  - **Fair (580 – 669):** Consumers considered "subprime." They can secure credit but face higher interest rates and stricter terms.
  - **Poor (300 – 579):** Borrowers with severely damaged credit or extremely thin files. Often restricted to secured credit cards or high-interest subprime loans.
- *Note: FICO also offers industry-specific scores (such as the FICO Auto Score or FICO Bankcard Score), which operate on a slightly wider scale of **250 to 900**.*

## VantageScore®

VantageScore was jointly developed by Equifax, Experian, and TransUnion to create a more consistent model across the bureaus and to effectively score consumers who might not have enough history to generate a traditional FICO score. Over time, VantageScore has released several iterations to improve predictive accuracy:

- **VantageScore 3.0:** Released in 2013, this was the first tri-bureau model to adopt the standard 300 to 850 range. It notably ignores paid collection accounts. The 3.0 model assesses credit data across six categories:
  - **Payment History:** 40%
  - **Depth of Credit (Age & Mix):** 21%



- **Credit Utilization:** 20%
  - **Balances:** 11%
  - **Recent Credit:** 5%
  - **Available Credit:** 3%
- **VantageScore 4.0:** Released in 2017, this model introduced **trended data**, looking at a consumer's historical trajectory over the past 24 months (e.g., consistently paying down balances versus making minimum payments) rather than just a static snapshot in time. It also **shifted its scoring weights**:
    - **Payment History:** 41%
    - **Depth of Credit (Age & Mix):** 20%
    - **Credit Utilization:** 20%
    - **Recent Credit:** 11% *(Increased focus compared to 3.0)*
    - **Balances:** 6% *(Decreased focus compared to 3.0)*
    - **Available Credit:** 2%
  - **VantageScore 4plus™:** An extension of the 4.0 model, 4plus allows consumers to explicitly permit lenders to connect to their bank accounts. By assessing real-time cash flow and alternative banking data, it provides even greater credit opportunities for people with limited credit history.
  - **VantageScore 5.0:** Released in April 2025, the latest model leverages consumer loan data from 2021–2023 to adjust for post-pandemic credit behaviors. It utilizes 24 months of trended data and is heavily optimized for lenders offering unsecured loans and credit cards, aiming to safely expand credit access to a wider demographic.

### 3. The AI Evolution: Lendsight AI

While FICO and VantageScore provide universal, off-the-shelf scores for consumers and lenders alike, **Lendsight AI** represents a fundamentally different architectural approach to underwriting. Lendsight AI is a B2B technology platform that allows lending institutions to build bespoke, machine-learning-driven underwriting models.

- **How it Scores:** Instead of relying on a generalized logistic regression model with roughly 20 variables, Lendsight AI's software consumes the exact same Fair Credit Reporting Act (FCRA)-compliant bureau data but applies advanced mathematics (like non-linear algorithms and decision trees). According to Lendsight AI, the technology can extrapolate around 60 million unique pieces of borrower data from raw credit reports. It analyzes complex, non-linear relationships and trend lines to build a custom risk-assessment model specific to an individual lender's geographic footprint, product type, and demographic base. This allows



lenders to identify creditworthy borrowers who are unfairly penalized by generic models.

- **Scoring Range (Custom Probability Cut-Offs):** Because Lendsight AI builds custom models for institutional use, **it completely discards the rigid 300 to 850 scale.** Instead, the software outputs a continuous **Probability of Payback** spectrum. Lenders then establish their own mathematical cut-offs based on their distinct risk appetite. For example:
  - **Custom Auto-Approval Thresholds:** e.g., Automatically approve any applicant with a calculated probability of payback greater than **90%**.
  - **Custom Manual Review Bands:** e.g., Route any applicant with a probability of payback between **85%** and **90%** to a human underwriter.
  - **Custom Auto-Decline Thresholds:** e.g., Automatically decline any applicant with a probability of payback under **85%**.

*By utilizing thousands of engineered data points, Lendsight AI creates a highly granular risk curve. This allows lenders to safely approve a borrower who might have a "Poor" 570 FICO score by proving that, based on deeper behavioral metrics, their actual probability of default aligns with a prime borrower.*

## 4. Side-by-Side Range Comparison

To illustrate how a single consumer might be categorized differently across the models, the following table compares the strict numerical tiers of FICO against all major iterations of VantageScore (3.0, 4.0, 4plus, and 5.0).

*Note: While Equifax provided a 5-tier breakdown for VantageScore 3.0, newer models (4.0 and 5.0) heavily consolidated the "Prime" and "Subprime" categories. The table below aligns the equivalent scores to prevent duplication. Lendsight AI is excluded from the rigid numerical table because it maps to custom probability percentages tailored to individual lending portfolios.*

Risk Level Category	FICO® Score Tiers	VantageScore 3.0 Tiers	VantageScore 4.0 & 5.0 Tiers
<i>Superprime / Exceptional</i>	<b>800 – 850</b> <i>(Exceptional)</i>	<b>748 – 850</b> <i>(Excellent)</i>	<b>781 – 850</b> <i>(Superprime)</i>
<i>Prime Plus / Very Good</i>	<b>740 – 799</b> <i>(Very Good)</i>	<b>716 – 747</b> <i>(Very Good)</i>	<b>661 – 780</b> <i>(Prime)</i> <u>Covers the entire Prime band</u>



<i>Prime / Good</i>	<b>670 – 739</b> <i>(Good)</i>	<b>661 – 715</b> <i>(Good)</i>	<u>See above</u>
<i>Near Prime / Fair</i>	<b>580 – 669</b> <i>(Fair)</i>	<b>600 – 660</b> <i>(Fair)</i>	<b>601 – 660</b> <i>(Near Prime)</i>
<i>Subprime / Poor</i>	<b>300 – 579</b> <i>(Poor)</i> <u>Covers all Subprime</u>	<b>300 – 599</b> <i>(Poor)</i> <u>Covers all Subprime</u>	<b>500 – 600</b> <i>(Subprime)</i>
<i>Deep Subprime / Very Poor</i>	<u>See above</u>	<u>See above</u>	<b>300 – 499</b> <i>(Deep Subprime)</i>

## 5. Conclusion

The credit scoring industry is actively transitioning from generalized metrics to highly granular data analysis. The traditional models relied upon by the major bureaus—FICO and VantageScore—continue to serve as the bedrock of consumer lending, utilizing the familiar 300 to 850 scale to provide standardized, easily communicated benchmarks of creditworthiness.

However, as computational power grows, AI-driven platforms like Lendsight AI are proving that the industry is moving past one-size-fits-all scoring. By leveraging deeper mathematics, alternative data interpretation, and custom risk curves, the future of credit scoring aims to be more inclusive and predictive. This evolution benefits both the lender—through reduced default risk and automated efficiency—and the borrower, whose true financial capability is evaluated far more accurately than a simple three-digit number allows.

## References & Validation Sources

1. **FICO Score Weights & Ranges:** MyCreditUnion.gov, "Credit Scores" | Experian, "What Are the Different Credit Score Ranges?" [Link](#)
2. **VantageScore Weights, Versions, & Ranges:** \* Experian, "What Is a VantageScore Credit Score?" [Link](#)
  - o Equifax, "Understanding VantageScore® Ranges" [Link](#)
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