2025 VantageScore®4.0 Model Assessment

Sustaining Predictive Performance

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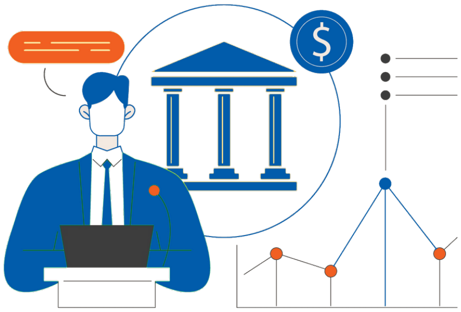
Each year, VantageScore evaluates the performance of its credit score models. Consistent with its mission to increase transparency and support model governance, VantageScore publishes these findings annually, together with updated odds and performance charts.

All VantageScore models are empirically built and proven to be statistically rigorous, using established testing methods that align with and inform our analytical approach. This 2025 report is the eighth annual performance assessment of the VantageScore 4.0 credit score model. VantageScore 4.0 is the first and only tri-bureau credit scoring model to incorporate trended credit data and apply machine learning to deliver stronger performance. Trended data extends traditional, static measures of borrowing and payment activity that have long been recorded in consumer credit files and used in risk model development. By capturing how borrower behaviors change over time, trended data provides a dynamic view of credit use and enables deeper insight into a consumer's credit risk profile. As part of the annual assessment, VantageScore 4.0 performance results are compared with the performance results of credit scoring models that were developed earlier and contain only static credit attributes.

A key advantage of VantageScore models is the strong consistency of a consumer's credit score across the three nationwide consumer reporting agencies (NCRAs)—Equifax, Experian, and TransUnion. This consistency is supported by using credit attributes that are leveled and measured in a uniform manner. As part of the annual performance assessment, VantageScore also conducts testing and comparative analyses focused on score consistency.

Finally, an essential requirement of credit scoring is that the resulting scores exhibit no statistical bias. Bias would be evident if consumers from different groups assigned the same or similar credit scores displayed materially different observed default rates. This document references the results of testing conducted to detect such bias.

The model performance assessment was based on 15 million anonymized, randomly selected U.S. consumer credit files drawn from each NCRA's database. This model assessment used data with a performance observation window spanning June 2023 through June 2025.



2025 VantageScore Model Highlights

Superior Performance: VantageScore 4.0 outperforms prior versions of VantageScore models, as well as other benchmark NCRA credit scoring models for both Originations and Account Management and across most major product categories, including Bankcard, Auto, Mortgage and Personal Loans.

Trended Data Improves Results: VantageScore 4.0's use of trended attributes continues to bring significant predictive performance improvements.

High Consistency: Using the VantageScore proprietary attribute-leveling process, VantageScore 4.0 continues to provide the most consistent scores of all VantageScore models across the three NCRAs.

Financial Inclusion: VantageScore 4.0 continues to provide unbiased results across ethnic groups.

Predictive Performance

VantageScore 4.0 maintains a consistent performance lift over VantageScore 3.0 and over NCRA generic risk scores. This performance improvement is observed across lending product categories, which are detailed below. The performance stability of VantageScore is due to its use of trended credit data, which examines credit behaviors over a longer period than models that rely on a snapshot of data from the prior month.

Industry Specific Results

Bankcard

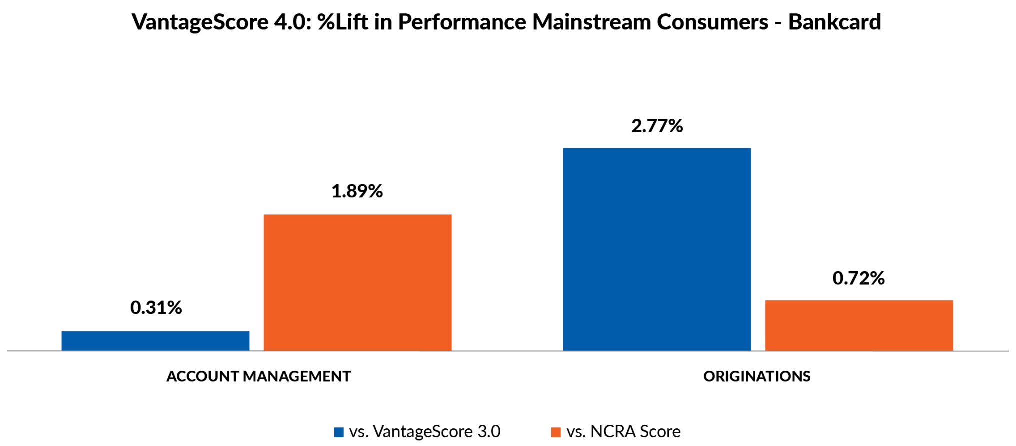
The 2025 economic environment remains characterized by elevated interest rates and rising consumer debt, driving increased reliance on credit cards[1]. In response, issuers are leveraging advanced credit scoring models to improve predictive performance, enhance risk segmentation, and expand score inclusivity, capturing a broader range of consumers while maintaining accuracy. These capabilities support more precise underwriting and portfolio management, enabling issuers to balance growth and risk in a dynamic market. VantageScore 4.0 continues to demonstrate stronger predictive performance compared to VantageScore 3.0 and NCRA models (Figure 1).

- VantageScore 4.0 continues to show an improved predictive performance compared to VantageScore 3.0 of 0.31% in the Account Management space.
- VantageScore 4.0 achieves a predictive performance lift over VantageScore 3.0 of 2.77% within Originations.

[1] Source: Consumer Financial Protection Bureau (CFPB). Consumer Credit Card Market Report, 2025.

- VantageScore 4.0 achieves an average predictive performance lift over NCRA scores of 1.89% within Account Management and 0.72% within Originations.

Figure 1: VantageScore 4.0 predictive performance in bankcard



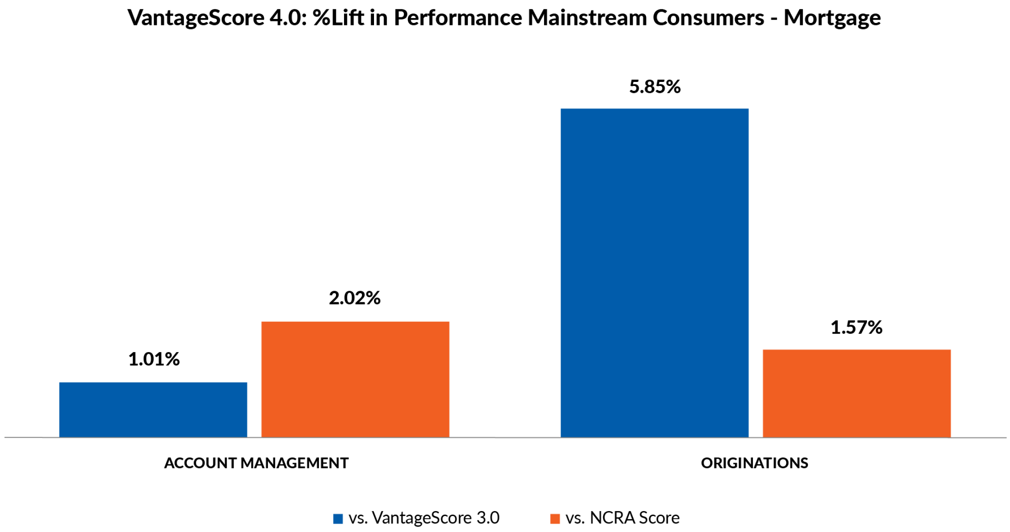
Mortgage

The 2025 mortgage market remains constrained by elevated interest rates and affordability challenges[2], resulting in subdued origination volumes and tighter credit conditions despite modest year-over-year stabilization in lending activity. In the mortgage space, VantageScore 4.0 consistently outperforms both VantageScore 3.0 and NCRA models in predictive accuracy. This is an increasingly important advantage as adoption expands, including VantageScore 4.0's recent implementation at the GSEs (Fannie Mae and Freddie Mac), where consistent, well-governed risk assessment supports standardized underwriting and ongoing portfolio oversight (Figure 2).

- VantageScore 4.0 maintains a predictive performance lift over VantageScore 3.0 of 1.01% in the Account Management space.
- VantageScore 4.0 achieves a predictive performance lift over VantageScore 3.0 of 5.85% within Originations.
- VantageScore 4.0 achieves an average predictive performance lift over NCRA scores of 2.02% within Account Management and 1.57% within Originations.

[2] Source: Consumer Financial Protection Bureau (CFPB). Consumer Credit Trends: Mortgages, 2025–2026

Figure 2: VantageScore 4.0 predictive performance in mortgage

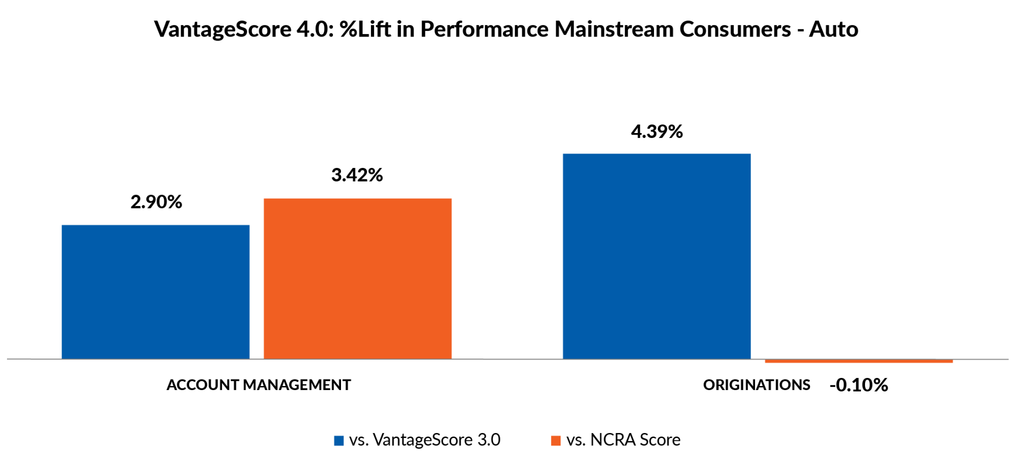


Auto Finance

The auto finance marketplace of 2025 was marked by rising delinquencies, elevated interest rates, high vehicle prices, and rising loan balances. In the auto finance market, VantageScore 4.0 continues to demonstrate stronger predictive performance compared to VantageScore 3.0 and NCRA models (Figure 3).

- VantageScore 4.0 demonstrates a predictive performance lift over VantageScore 3.0 of 2.90% in the Account Management space.
- VantageScore 4.0 achieves a predictive performance lift over VantageScore 3.0 of 4.39% within Originations.
- VantageScore 4.0 achieves an average predictive performance lift over NCRA scores of 3.42% within Account Management and on par within Originations.

Figure 3: VantageScore 4.0 predictive performance for auto loans and leases

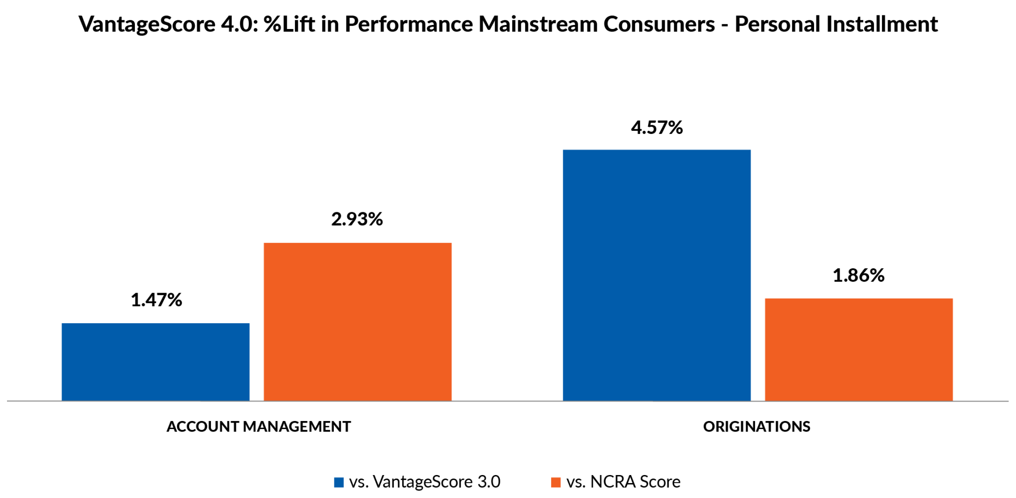


Personal Loans

In 2025, the personal loan market continued to grow, with increasing balances and originations, while overall performance showed signs of stabilization at the aggregate level. However, rising non-prime lending pushed delinquencies higher in late 2025, indicating that underlying credit risk is building despite generally resilient consumer behavior[3]. VantageScore 4.0 continues to demonstrate strong predictive performance compared to VantageScore 3.0 and NCRA models (Figure 4).

- VantageScore 4.0 achieves predictive performance lift over VantageScore 3.0 of 1.47% in Account Management.
- VantageScore 4.0 achieves predictive performance lift over VantageScore 3.0 of 4.57% in Originations.
- VantageScore 4.0 achieves an average predictive performance lift over bureau scores of 2.93% within Account Management and 1.86% in Originations.

Figure 4: VantageScore 4.0 predictive performance for personal loans



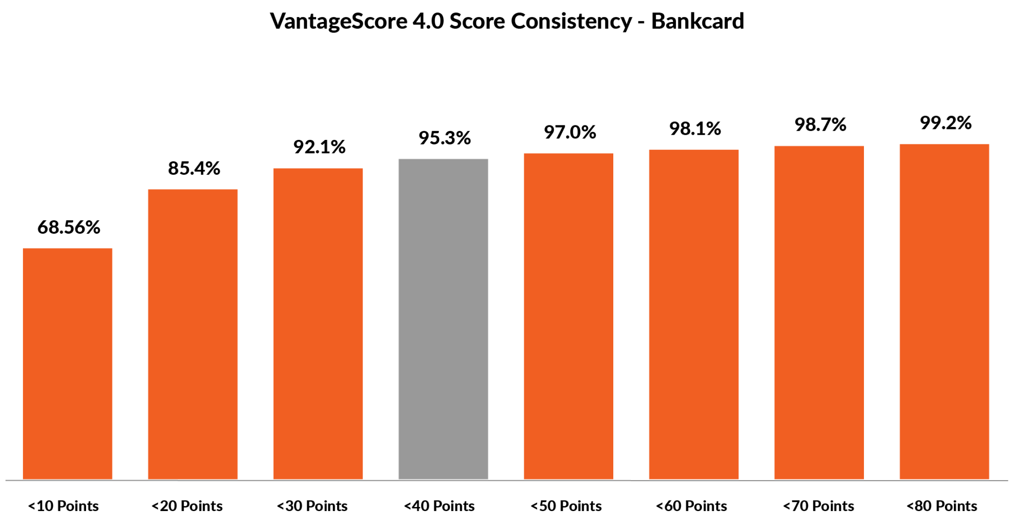
Score Consistency

VantageScore 4.0 and earlier VantageScore models stand out as the only credit score models that utilize the same data characteristics and the identical scoring model across all three nationwide consumer reporting agencies (NCRAs). This approach ensures that the credit scores generated at each NCRA are highly consistent, with any differences reflecting only the variations in the consumer's credit file data.

For instance, among bankcard consumers with credit files at all three NCRAs, 85.4% have VantageScore 4.0 scores within a 20-point range, and 95.3% within a 40-point range (Figure 5).

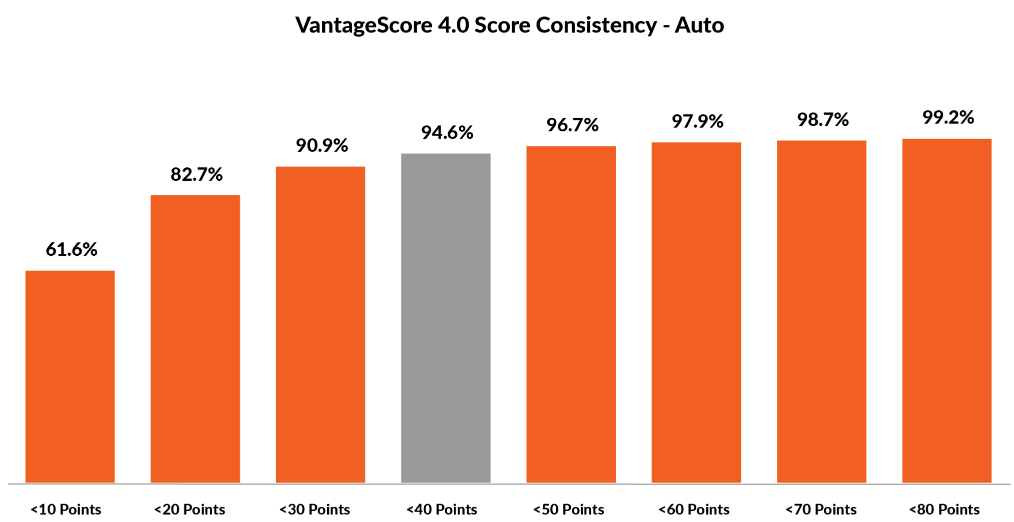
[3] Source: TransUnion. Q4 2025 Credit Industry Insights Report. 2026

Figure 5: VantageScore 4.0 score consistency for bankcard consumers



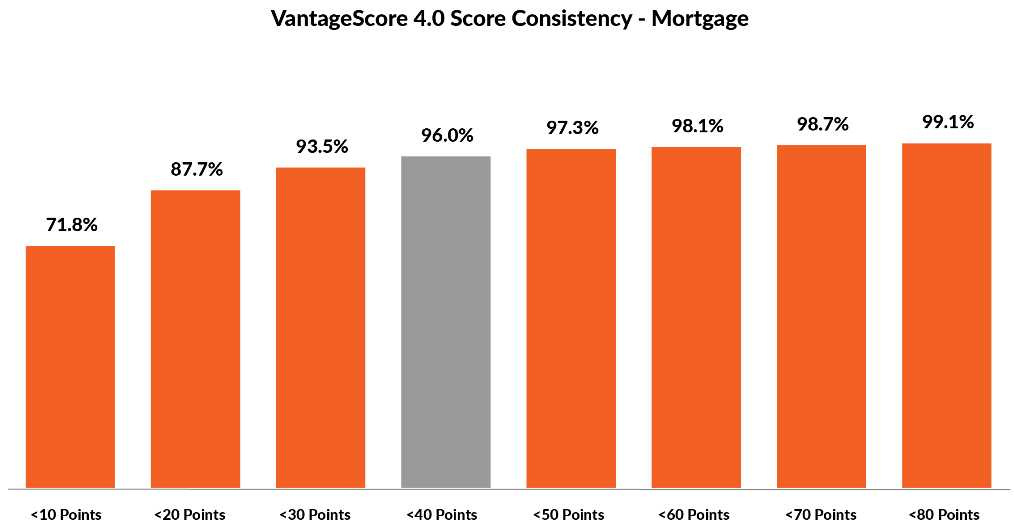
Similarly, in the auto finance sector, 82.7% of consumers have scores within a 20-point range, and 94.6% within 40 points across the three NCRAs (Figure 6).

Figure 6: VantageScore 4.0 score consistency for auto consumers



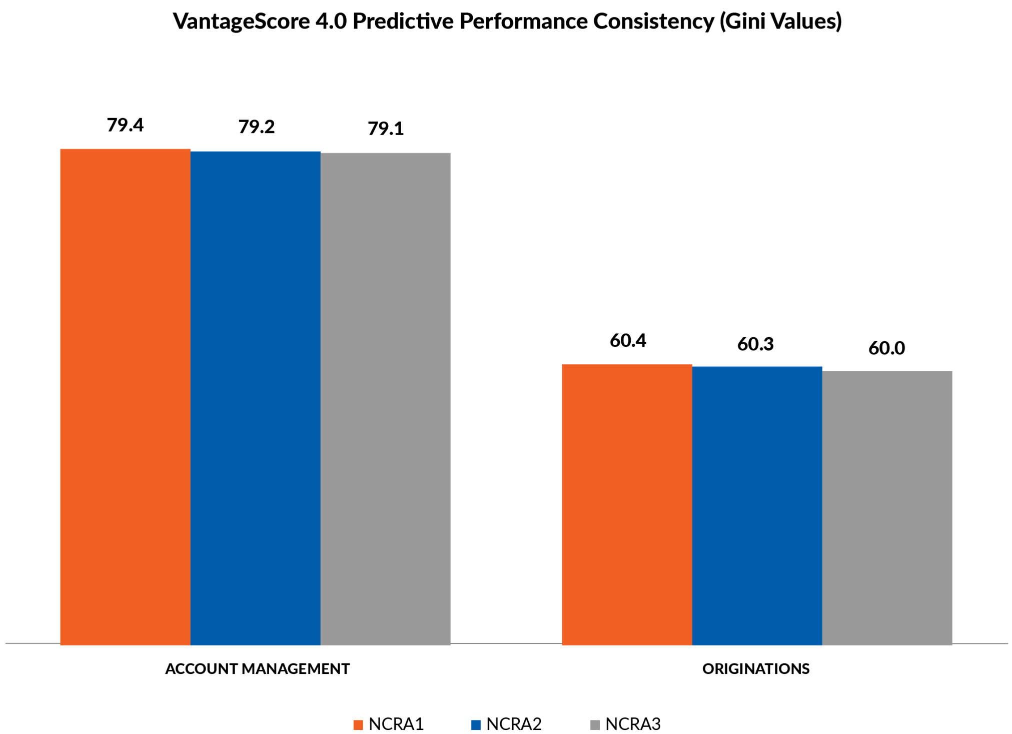
For mortgages, 87.7% of consumers have scores within a 20-point range, and 96.0% within 40 points across the three NCRAs (Figure 7).

Figure 7: VantageScore 4.0 score consistency for mortgage consumers



In terms of predictive consistency, VantageScore 4.0 Gini results between NCRAs remain strongly consistent for both Originations and Account Management.

Figure 8: VantageScore 4.0 predictive performance consistency



In terms of score risk alignment, the score to risk (90 or more days past due) relationship also remains consistent across all NCRAs for both Originations (Figure 9) and Account Management (Figure 10).

Figure 9: VantageScore 4.0 odds alignment between NCRAs on Originations

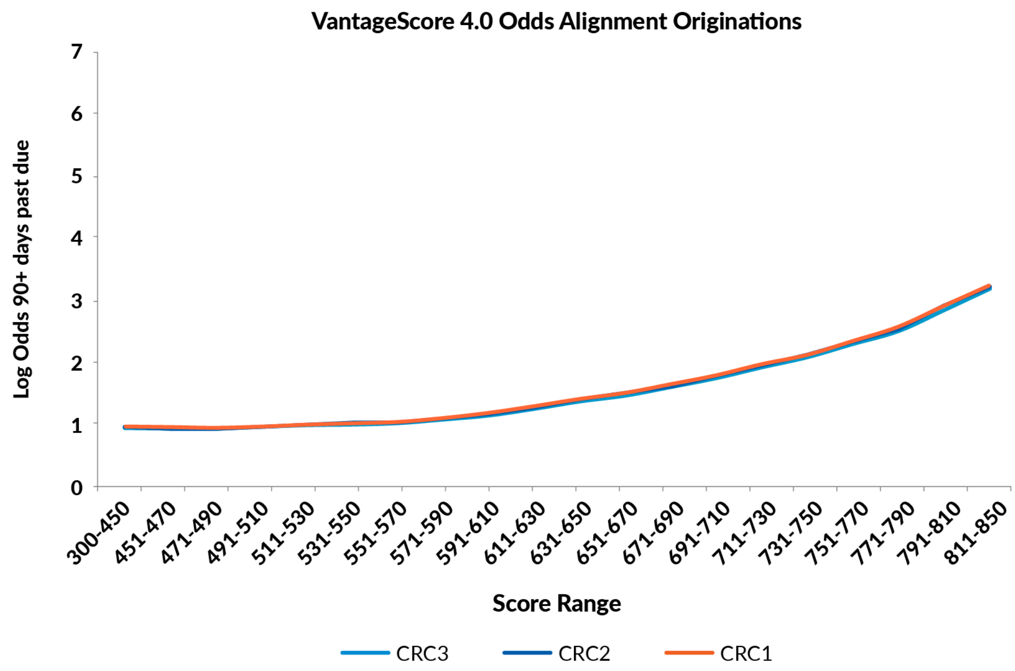
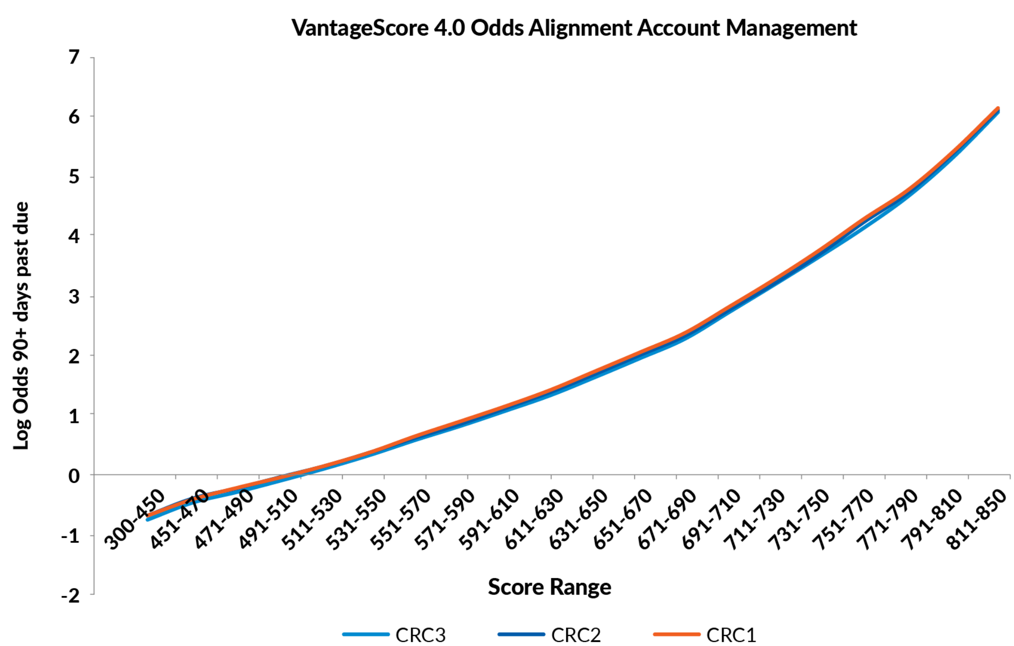


Figure 10: VantageScore 4.0 odds alignment between NCRAs on Account Management



This distinctive feature of VantageScore is essential for lenders because it delivers consistent and dependable risk evaluations. Such consistency supports more informed lending decisions, helps preserve the quality of credit portfolios, and lowers the chances of inaccurately assessing a borrower's credit risk.

Statistical Bias Testing

State and Federal regulators are intensively focused on ensuring fairness in the consumer credit marketplace, particularly regarding fair lending. One of the primary concerns is whether a credit scoring model assigns different levels of risk (probability of default) to two similarly situated consumers simply because they belong to different population groups. If a model's score-to-risk relationship is consistent across various demographic groups, it indicates that the model is free from statistical bias and treats consumers equally, regardless of their classification.

VantageScore takes this issue seriously, making it a key component of the annual model performance assessment to ensure that VantageScore 4.0 remains unbiased. This involves rigorously comparing default rates for a given credit score across different ethnic groups.

The results of this testing confirm that VantageScore 4.0 delivers equal treatment and is unbiased (Figure 11). Consumers with similar scores experience similar default rates with VantageScore 4.0, irrespective of their demographic background. This commitment to fairness aligns with regulatory expectations and underscores VantageScore's dedication to promoting equitable credit practices.

Figure 11: VantageScore 4.0 delivers unbiased outcomes

	African American Classification (AOMC)		Hispanic Classification (AOHC)	
	Bankcard	Mortgage	Bankcard	Mortgage
VantageScore 4.0	Pass	Pass	Pass	Pass

VantageScore 4.0	Start Point	821	801	781	761	741	721	701	681	661	641	621	601	581	561	541	521	500
	End Point	850	820	800	780	760	740	720	700	680	660	640	620	600	580	560	540	520
Bankcard																		
AOMC	Test Chi-Square	0.00	1.08	6.28	1.11	2.18	3.67	5.91	3.74	2.01	3.26	2.44	1.28	0.20	0.21	0.47	4.77	1.05
AOHC	Test Chi-Square	0.19	7.17	5.51	4.78	4.37	4.83	6.62	2.13	3.45	2.39	0.67	0.03	0.47	0.05	1.25	1.23	1.48
Mortgage																		
AOMC	Test Chi-Square	0.38	0.02	3.53	1.67	0.58	0.17	2.92	0.19	0.05	0.34	2.95	0.13	0.01	0.00	0.00	0.02	1.12
AOHC	Test Chi-Square	1.36	0.01	1.01	0.19	0.40	3.28	2.49	1.11	3.79	0.05	1.04	0.00	0.06	0.00	0.02	0.09	0.54

Conclusion

The 2025 evaluation of VantageScore 4.0 confirms its strong performance in both predictive accuracy and consistency relative to benchmark models, while also reinforcing its commitment to fair and unbiased credit scoring. The model continues to provide reliable, consistent, and equitable credit risk assessments across a wide range of populations.

VantageScore also offers a variety of open-source digital tools available at www.vantagescore.com. Among these is RiskRatio, which allows users to analyze default rates by selecting different models, products, time periods, and delinquency categories. This tool enables lenders to effectively visualize how VantageScore credit scores correspond to risk over time.

As part of sound model risk management practices, it remains important for users to independently monitor the performance of any models they employ to ensure alignment with their specific population data.

VantageScore 4.0, distributed through Equifax, Experian, and TransUnion, continues to serve as a reliable solution for lenders in a dynamic credit environment. For additional details, lenders and other commercial entities are encouraged to reach out to one of the three nationwide consumer reporting agencies (NCRAs) listed below.

The VantageScore credit score models are sold and marketed only through individual licensing arrangements with the three major credit reporting companies (NCRAs): Equifax, Experian and TransUnion. Lenders and other commercial entities interested in learning more about the VantageScore credit score models, including the VantageScore 4.0 credit score model, may contact one of the following NCRAs listed for additional assistance:

VantageScore

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www.vantagescore.com

Call 1-888-202-4025

http://VantageScore.com/Equifax

Call 1-888-414-4025

http://VantageScore.com/Experian

Call 1-866-922-2100

http://VantageScore.com/TransUnion