

# VantageScore 1.0 Validation 2013

Model continues to demonstrate accuracy and consistency

## Overview

Developers of credit score models and users of credit scores should conduct a performance validation annually to understand model performance and outputs against current consumer behavior. Not only does this process provide increased confidence in lending decisions, it can uncover additional opportunities to improve profit and loss ratios.<sup>1</sup>

In April 2011, the Office of the Comptroller of the Currency (OCC) expanded long-standing guidelines titled, “Supervisory Guidance on Model Risk Management”.<sup>2</sup> The OCC issued these guidelines in response to the banking industry’s increasing reliance on modeling and analytics to drive decision making. The guidelines provide an invaluable road map that allows lenders to develop a robust model validation philosophy and function within their institution whether or not their institution is regulated by the OCC.

VantageScore Solutions annually validates its models and releases the results to the marketplaces to facilitate model transparency and education. With the release of the OCC guidelines, VantageScore Solutions enhanced its validation analytics to align with the outcome analyses proposed by the OCC guidelines.<sup>3</sup>

VantageScore 1.0 was introduced in 2006. Performance highlights are outlined below. Please contact VantageScore Solutions for additional details.

VantageScore 1.0 was validated on the October 2010 to October 2012 time period. Performance highlights are outlined on the following page.

## Contents

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Validation highlights.....	2
Score performance .....	2,3
Sensitivity analysis .....	4
Risk consistency .....	5
Systemic risk levels and consumer score distributions .....	6
Distributions .....	6,7
Conclusion.....	8

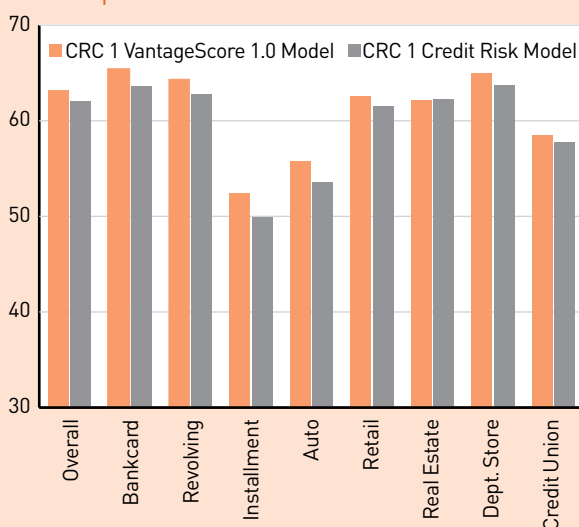
## October 2010-2012 validation highlights

- VantageScore 1.0 outperformed the three Credit Reporting Companies' (CRC) Risk Models in Originations by an average of 2% in all industries.
- VantageScore 1.0 outperformed the CRC Risk Models for all industries in Account Management activities by an average of 2%, except Real Estate/Mortgage, where performance was on par with the CRC Risk Model.
- Score consistency between the three national CRCs is maintained.
- Continued strong rank ordering for all economic quadrants.
- Overall risk levels are reducing in all major industries.
- Consumer score distributions reflect improving consumer performance, especially in the Real Estate/Mortgage sector.

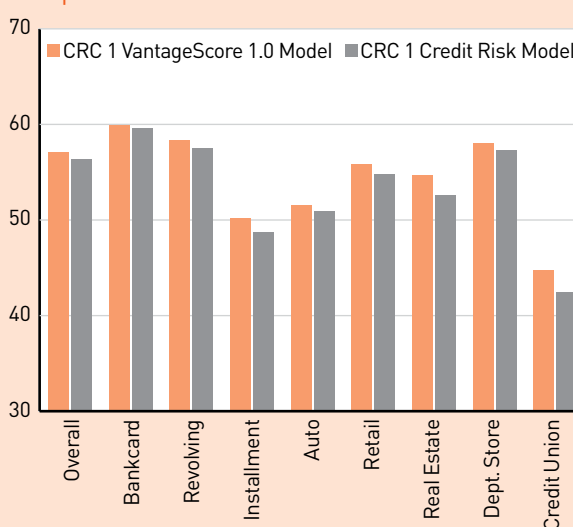
## Score performance benchmarking

Overall and within product and issuer subsets, VantageScore 1.0 outperformed the benchmark CRC models, except for within the Real Estate/Mortgage account management subsector, where KS results were on par.

**Account Management KS values: VantageScore 1.0 compared to CRC Credit Risk Model**



**Originations KS values: VantageScore 1.0 compared to CRC Credit Risk Model**

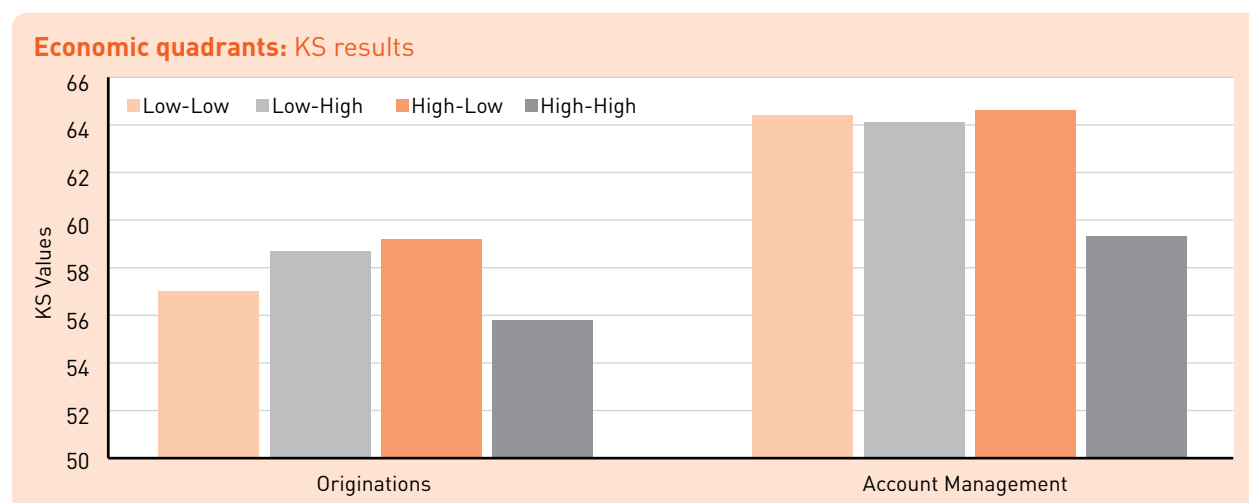


## Score stress testing: Performance across economic quadrants

To understand VantageScore 1.0's performance in regions characterized as being stressed by higher rates of unemployment and home price depreciation – two factors that contribute to default levels – the model was examined within four quadrants of the country with varying degrees of stress.

VantageScore 1.0 continues to deliver strong predictive strength for all economic quadrants.

Home Price Depreciation	Unemployment	
	High (>9.5%)	Low (<9.5%)
High (>15%)	H-H	H-L
Low (<15%)	L-H	L-L



## Sensitivity analysis: Score consistency

Often the credit file data for a specific consumer can vary slightly due to data being reported at different times to different CRCs and because of differences in the ways in which CRCs define and store the data. This can result in consumers receiving different credit scores from different CRCs.

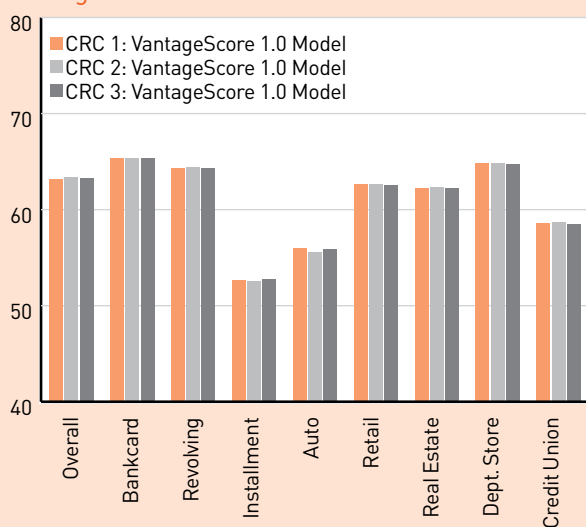
One of the hallmarks of the VantageScore model is its patented characteristic leveling process, which yields consistent and equitable data definitions across multiple sources of information. Simply put, this ensures that when the same data is present in multiple sources, it is interpreted the same way, even though there still may be differences in how the data is defined. Consequently, the consumer credit scores are more tightly aligned.

For lenders, a model that levels credit behavior data definitions creates a more consistent picture of a consumer's credit payment behavior across the three national CRCs, regardless of which CRC provides the data.

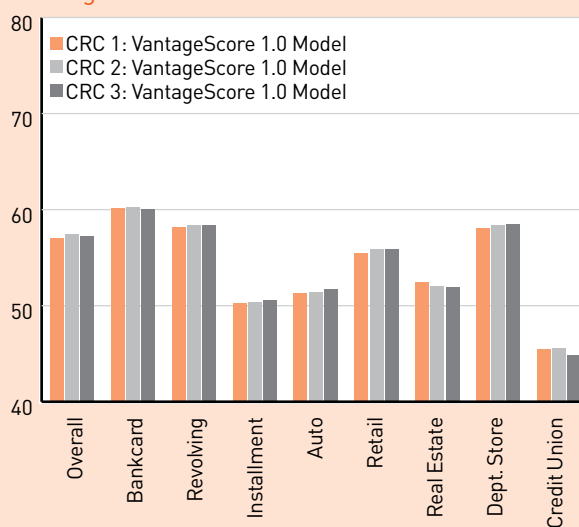
VantageScore 1.0 KS results among CRCs remain highly consistent.

**VantageScore 2.0 KS  
results among CRCs  
remain highly consistent.**

**Account Management:**  
VantageScore 1.0 KS values

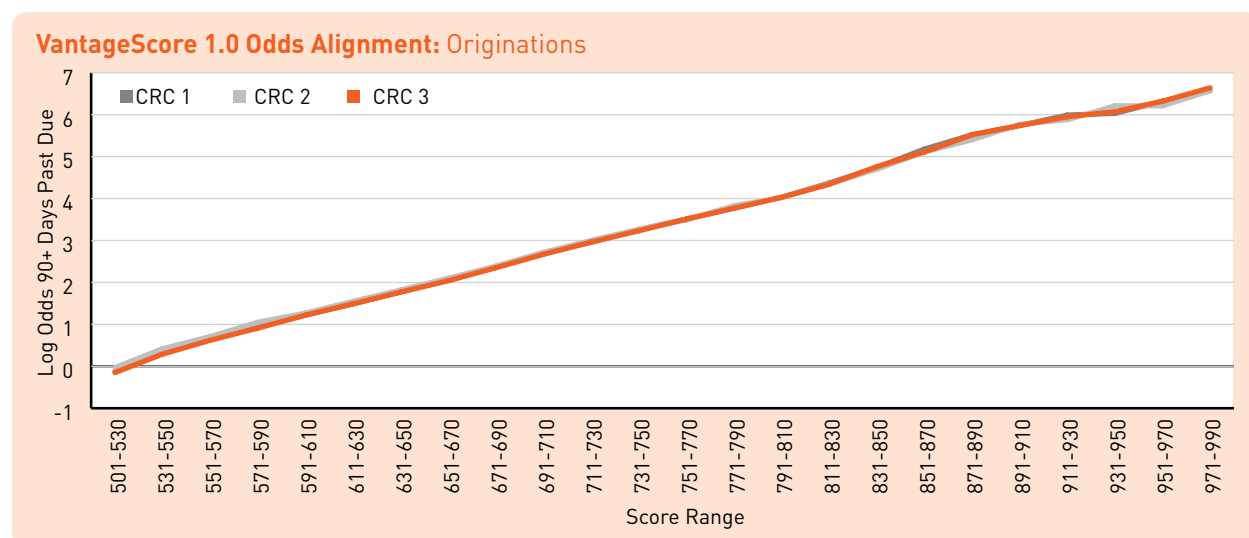


**Originations:**  
VantageScore 1.0 KS values



## Risk consistency

The score-to-risk level relationship (90+ days past due) is consistent across all CRCs.



## Consumer score consistency

The percentage of accounts with a difference in VantageScore 1.0 of less than 20 points between CRC 1 and CRC 2 is 74% and 77% between CRC 1 and CRC 3.

### Cumulative Percent of Populations

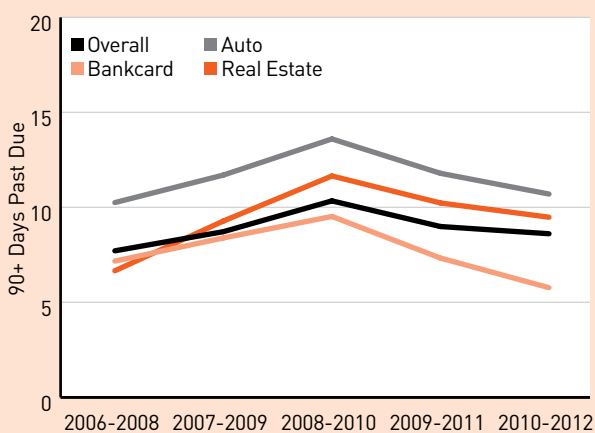
	CRC 1 - CRC 2	CRC 2 - CRC 3	CRC 1 - CRC 3
<20 Points	74.00%	74.00%	77.00%
<40 Points	89.00%	89.00%	91.00%
<60 Points	94.81%	94.90%	95.63%

These tests provide insight into model sensitivity when minor variances in the input data (consumer credit file) exist. Wherever possible, effective scoring model design should minimize the impact of minor variances in data and continue to provide sound predictive insights.

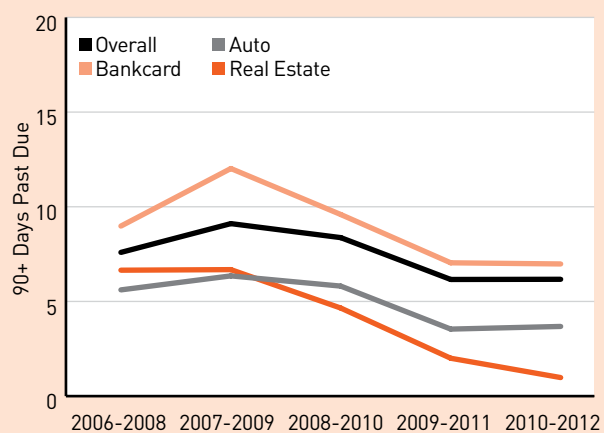
## Systemic risk levels and consumer score distributions

Compared to the prior year, default rates have maintained similar levels or improved for all major industries for both Originations and Account Management.

**Account Management: 90+ days past due rates**

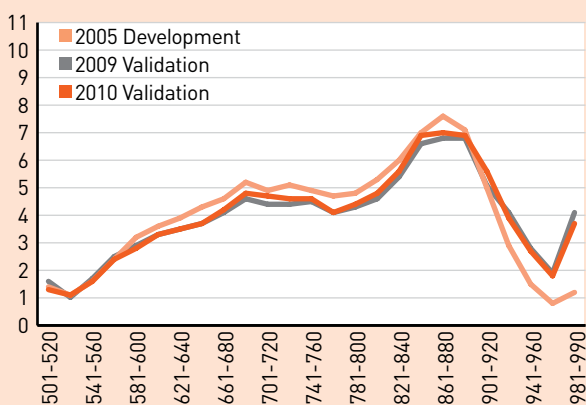


**Originations: 90+ days past due rates**

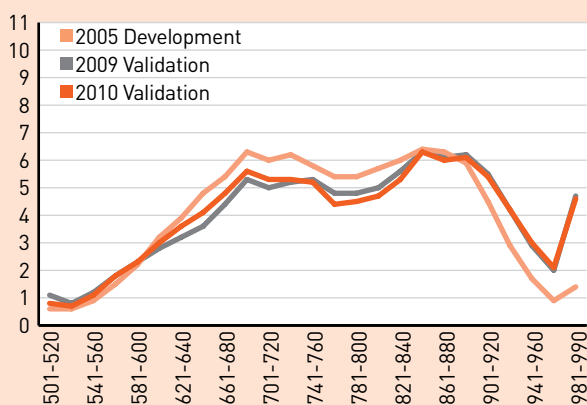


Consumer score distributions for Overall, Real Estate, Bankcard, and Auto reflect the observed shifts in economic conditions providing confidence that VantageScore 1.0 remains accurate.

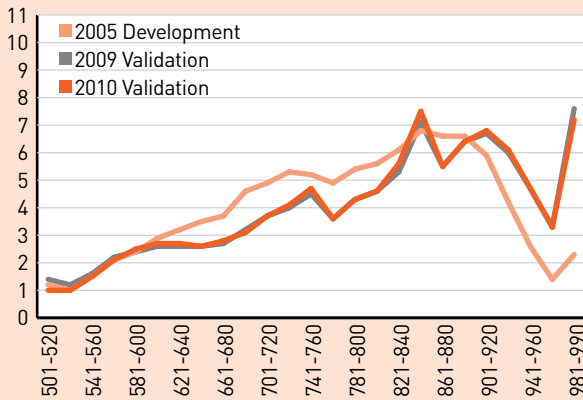
**Account Management: VantageScore 1.0 score distribution: Overall**



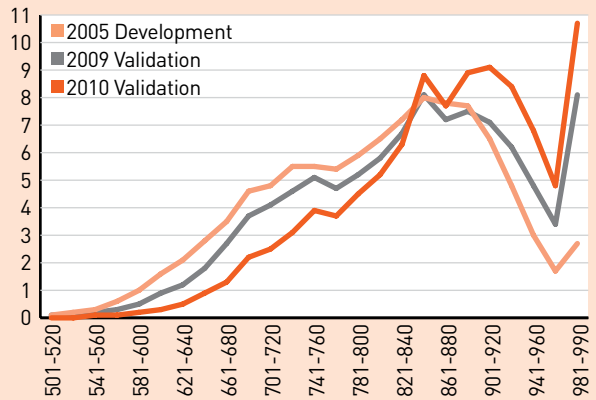
**Originations: VantageScore 1.0 score distribution: Overall**



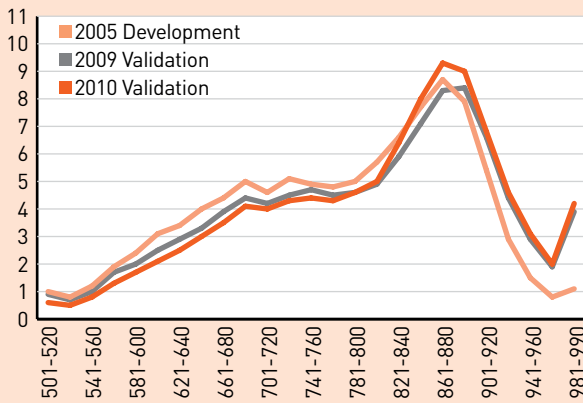
**Account Management: VantageScore 1.0 score distribution: Real Estate**



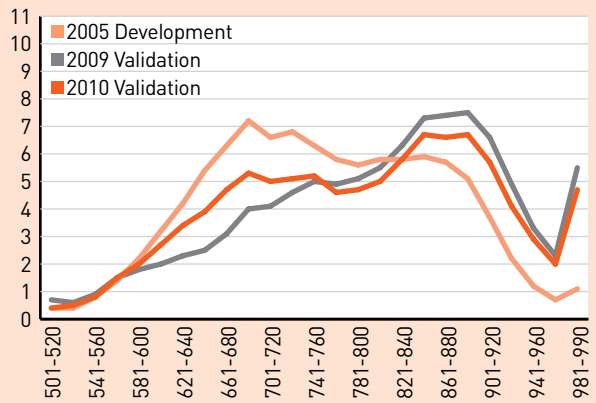
**Originations: VantageScore 1.0 score distribution: Real Estate**



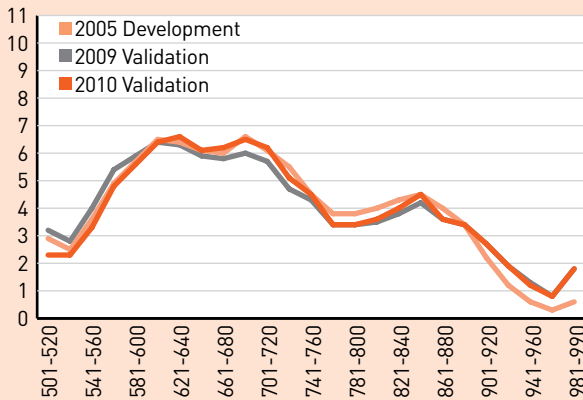
**Account Management: VantageScore 1.0 score distribution: Bankcard**



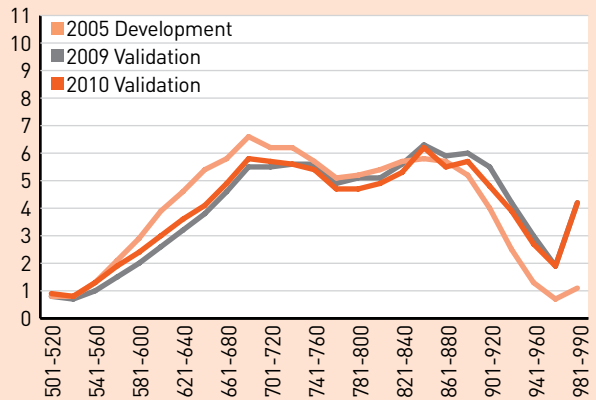
**Originations: VantageScore 1.0 score distribution: Bankcard**



**Account Management: VantageScore 1.0 score distribution: Auto**



**Originations: VantageScore 1.0 score distribution: Auto**



## Conclusion

It is imperative that credit scores provide the highest level of accuracy to enable lenders to have confidence in their decisioning. The validation of VantageScore 1.0 demonstrates that the model remains highly accurate, consistent, and stable across all major credit categories, and when examined geographically.

The VantageScore models are sold and marketed only through individual licensing arrangements with the three major Credit Reporting Companies (CRCs): Equifax, Experian, and TransUnion. Lenders and other commercial entities interested in learning more about the VantageScore models may contact one of the following CRCs listed at the right for additional assistance.



Call 1-888-202-4025

Visit [www.equifax.com/vantagescore](http://www.equifax.com/vantagescore)



Call 1-888-414-1120

Visit [www.experian.com/consumer-information/vantagescore-lenders.html](http://www.experian.com/consumer-information/vantagescore-lenders.html)



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<sup>1</sup> "Executing Effective Validations", a white paper from VantageScore Solutions that provides validation best practices, is available for free at <http://www.vantagescore.com/resource/7>.

<sup>2</sup> Board of Governors of the Federal Reserve System, Office of the Comptroller of the Currency, Supervisory Guidance on Model Risk Management, April 4, 2011: <http://www.occ.treas.gov/news-issuances/bulletins/2011/bulletin-2011-12a.pdf>.

<sup>3</sup> "Validating a Credit Score Model in Conjunction with Additional Underwriting Criteria", a white paper from VantageScore Solutions that provides guidance for validating a credit score model when additional underwriting criteria may impact performance, is available for free at <http://www.vantagescore.com/resource/5>.

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