VantageScore 3.0

Better predictive ability among sought-after borrowers

Highlights

The VantageScore 3.0 model pairs our industry-leading analytics with more granular data from consumers' credit histories to create our most predictive and most consistent credit scoring model ever.

By utilizing more granular data from the three national Credit Reporting Companies (CRCs), the VantageScore 3.0 model offers unparalleled predictive ability in evaluating a borrower's creditworthiness.

As a result, the VantageScore 3.0 model delivers up to a 25 percent predictive lift over earlier models among prime and near-prime consumers, typically the most desirable segment for any lender. That performance boost gives lenders a far better ability to assess the potential risks to their own portfolios.

Plus, the VantageScore 3.0 model can generate scores for 30-35 million previously "unscoreable" consumers because it considers all of a consumer's credit history rather the most immediate 24 months. Additionally, alternative data is included if it is available on the credit file, ultimately expanding a whole new universe of potential customers for lenders.

The VantageScore 3.0 model includes a number of changes to make it easy for lenders to implement. Among them:

- The numerical scale of VantageScore credit scores now ranges from 300 to 850, accommodating existing systems.

- The number of reason codes has been reduced and made easier to understand.

## Contents

PERFORMANCE
Predictive Strength

In performance tests against the VantageScore 2.0 model and benchmark models provided by the three national CRCs, the VantageScore 3.0 model demonstrated significant gains in predictiveness.

Peformance by Industry: VantageScore 3.0

Industry	Account management	Originations
	Gini Value (%)	
Bankcard	81.33	76.29
Revolving	80.10	74.88
Installation	74.15	67.50
Auto	75.50	68.14
Retail	78.85	72.61
Real estate	77.51	69.65
Department store	79.73	75.55
Credit union	75.75	61.46
Student loan	72.51	66.19
Overall	**79.49**	**73.47**

Importantly, the model achieves up to 25 percent predictive improvement among prime and near-prime consumers, which is traditionally where lenders focus lending strategies and is the most sought after group among most mainstream lenders.

Performance Improvement Over CRC* Score
VantageScore 3.0: Prime/Near Prime

Real Estate — Bankcard — Auto
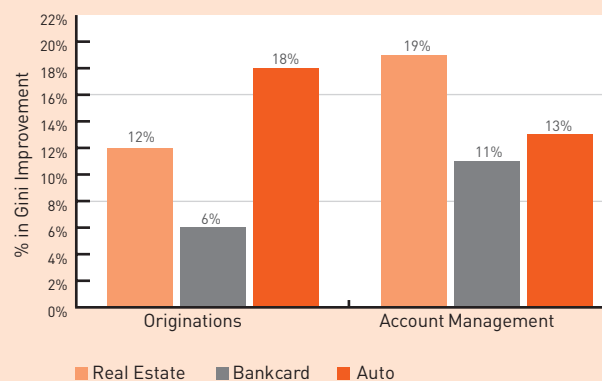
*CRC Credit Reporting Company

Performance Improvement Over VantageScore 2.0
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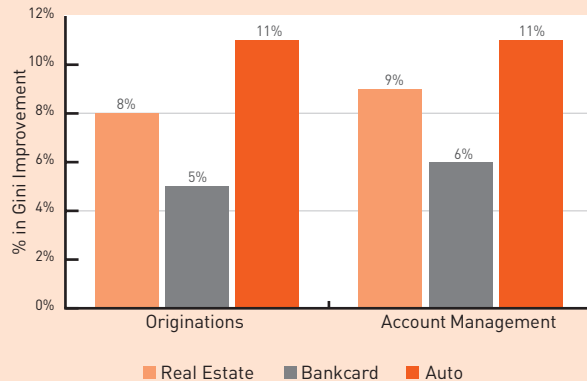
Score Consistency: Making scores more consistent

The VantageScore 3.0 model provides lenders with nearly identical risk assessments across all three CRCs. How? The same VantageScore model is deployed at each of the three national CRCs. This patented one-model approach is achieved through a process called "characteristic leveling." Simply put, this process establishes consistent and equitable definitions for consumers' payment and credit management behavioral data across the three CRCs so that it is interpreted in the same way when present at multiple sources.

As a result, consumer scores are highly consistent across the three CRCs. In fact, 90.7 percent of consumers scores are within a 40 point range when simultaneously pulled at all three CRCs.

Score consistency across all CRCs

Range	Percent
<10 points	56.7%
<20 points	75.9%
<30 points	85.3%
<40 points	90.7%
<50 points	94.0%
<60 points	96.2%
<70 points	97.5%
<80 points	98.4%
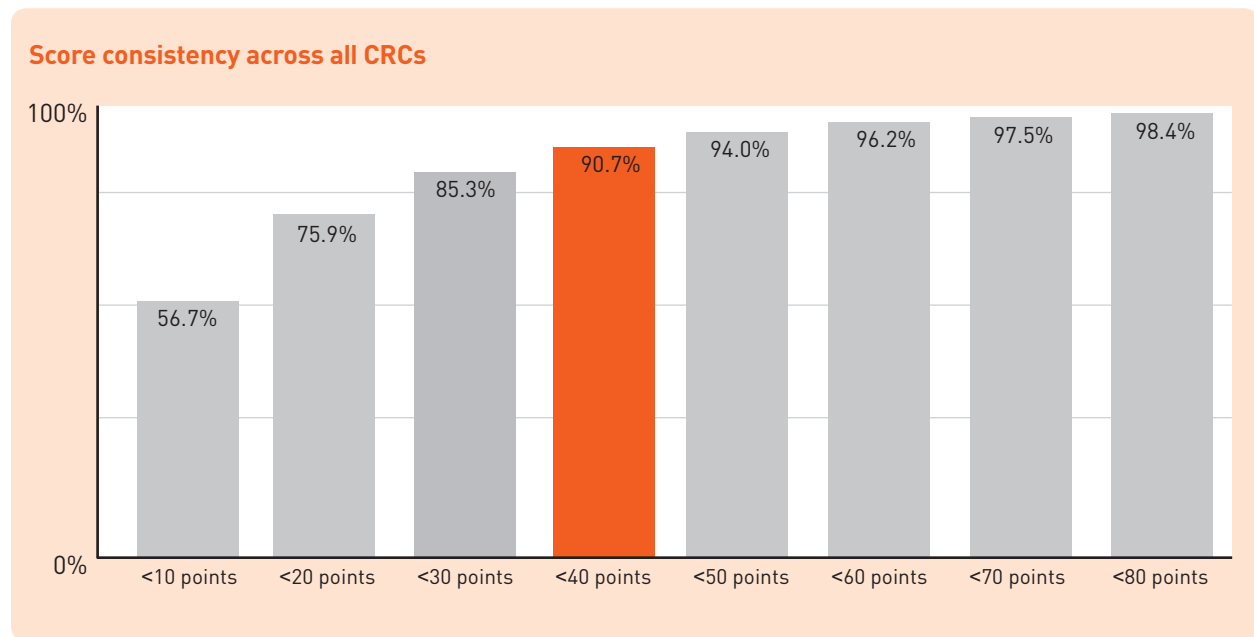
Universe Expansion

The VantageScore 3.0 model reaches a new milestone by providing a predictive credit score to 30—35 million more adults than conventional scoring models.

- VantageScore models score consumers that may not be scored by conventional models that require a minimum of six months of credit history on the credit file or an update to the credit file at least once every six months.

- Four NEW SCORING populations are incrementally scored:

    · Less than 6 months history on their credit file

    · Updates to their credit file within a 6 to 24 month window

    · Trade activity is at least twenty-four months old

    · No open trades

- VantageScore 3.0 was validated on these populations. Results are:

    · Gini = 54.78%
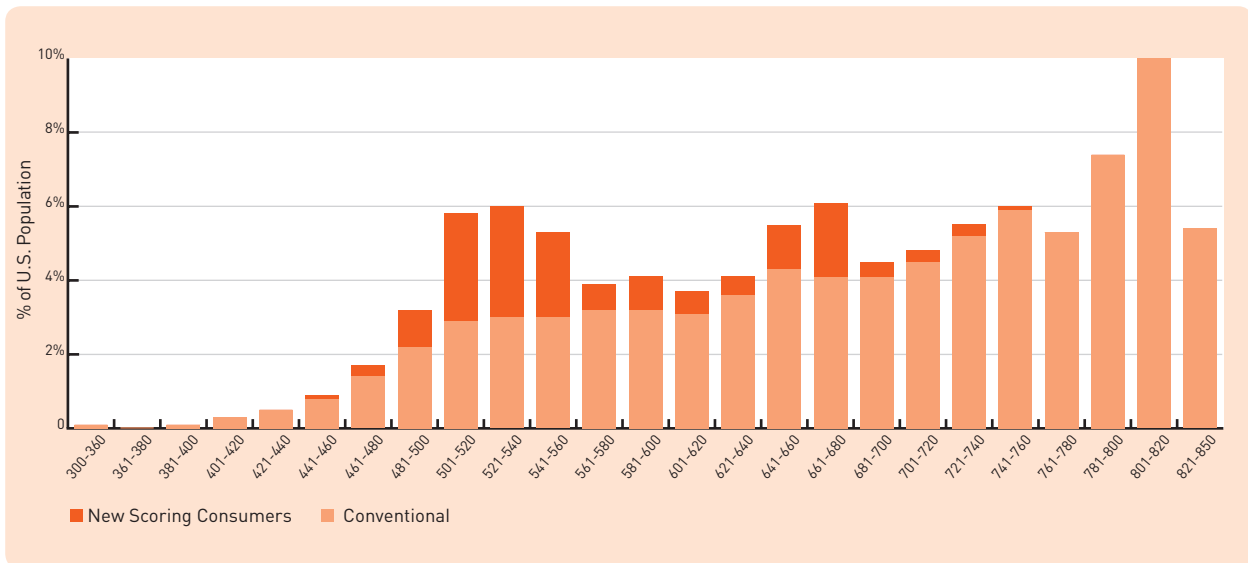
DESIGN STRENGTH
Data

The VantageScore 3.0 model uses data blended from two different timeframes, 2009–2011 and 2010–2012, to capture a broad development sample of recent consumer behaviors, including activity at the height of, and following, the economic crisis. This reduces model sensitivity to highly volatile behavior that can be found in a single timeframe; extending performance stability.

The three CRCs are making more detailed data from existing consumer credit files available and the VantageScore 3.0 model takes advantage of this additional data. Examples of the additional data used in the VantageScore 3.0 model are:

- Detailed mortgage tradelines separating first mortgage from other mortgage related transactions; facilitating greater intelligence with regard to a borrower's mortgage-related debt.

- More distinct definitions of installment data, such as the ability to identify student loan accounts from other types of installment accounts.

- More specific measurement of delinquency and default timeframes, which provides for an improved representation of a consumer's payment behaviors.

Attributes are designed to represent behaviors on the following dimensions:

Record type
Trade
Inquiries
Collections
Public records
Judgment
Bankruptcy
Tax lien

Trade industry
First mortgage
Home equity - line of credit
Home equity - loan
Installment
Auto
Personal Installment
Student Loan
Revolving credit
Bankcard
Secured
Unsecured
Retail

Behavior Type
Payment status
Age
Balances
Utilization
Available credit
Account status

Function
Average
Sum
Worst ever
Highest
Lowest
Newest/Oldest
Presence of

Segmentation

The patented segmentation structure used in previous VantageScore models remains in place containing the same 12 individually optimized segments, and is now amended to include a 13th scorecard. The segmentation structure combines business-logic, attribute-based segmentation with empirically-derived, score-based segmentation. The new 13th scorecard ranks consumers with sparse credit histories.

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│ Previous bankruptcy  │        │  No previous bankruptcy │      │ [13] No recent activity/no trades│
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   ┌──────────────────┐               ┌──────────────────┐   ┌──────────────────────┐
   │ [2] Lowest risk  │               │ [3] Highest risk │   │    Highest risk      │
   └──────────────────┘               └──────────────────┘   └──────────────────────┘
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                                                                │ [8] Bad profile          │
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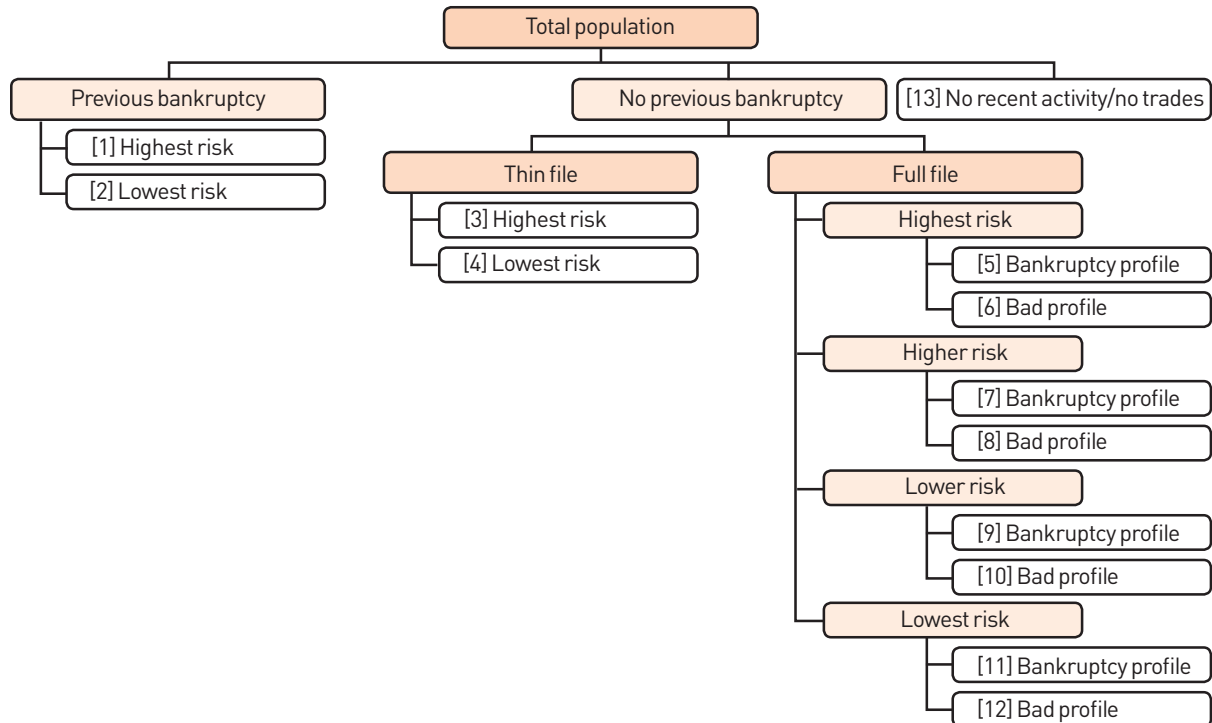
FINAL MODEL
Final Attributes

Attributes were designed in the following categories:

Item	Description
Payment history	Repayment behavior (satisfactory, delinquency, derogatory)
% of credit limit used	Proportion of credit amount used/owed on accounts
Balances	Total amount of recently reported balances (current and delinquent)
Age and type of credit	Length of credit history and types of credit
Recent credit	Number of recently opened credit accounts and credit inquiries
Available credit	Amount of credit available

Generally, these categories contribute to a credit score in the following amounts:

Recent credit **5%**
Available credit **3%**
Depth of credit **21%**
Payment history **40%**
Balances **11%**
Utilization **20%**
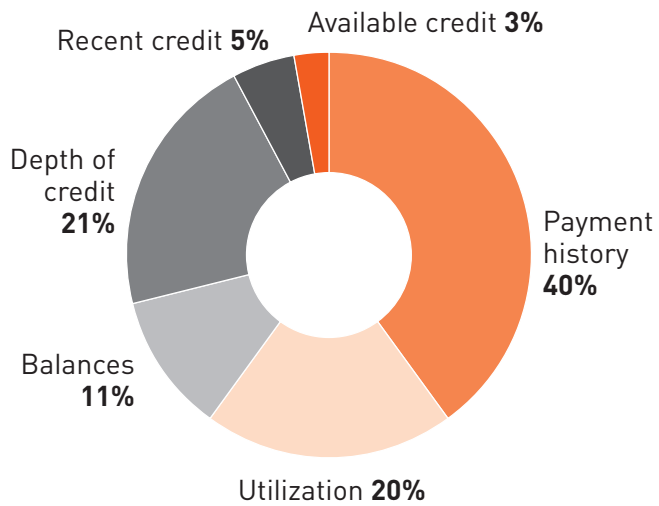
For the U.S. population, the following credit tiers are identified by these score ranges:

Credit Tiers	VantageScore 3.0
Superprime	781–850
Prime	661–780
Near prime	601–660
Subprime	300–600

Comprehensive validation

Each year the VantageScore models are validated and the performance results are published to the industry. To align with the recently published OCC model governance guidelines (OCC 11-12), the VantageScore validation process has been expanded to consider the recommended validation procedures. Additionally, a comprehensive User Guide has been developed, that can be accessed through the CRCs.

- **Executing Effective Validations:** http://www.vantagescore.com/resource/7

- **Validating a Credit Score Model in Conjunction with Additional Underwriting Criteria:** http://www.vantagescore.com/resource/5

Most major lenders use the VantageScore model

The VantageScore model helps numerous lenders evaluate the creditworthiness of their borrowers.

- 7 of the Top 10 Financial Institutions

- 8 of the Top 10 Credit Card Issuers

- 5 of the Top 5 Mortgage Originators

- 6 of the Top 10 Auto Lenders

Secondary market

Fitch Ratings:

Fitch Ratings accepts loans based on the VantageScore model. Fitch has fully incorporated the VantageScore model into Resilogic 2.1, its flagship quantitative model that provides credit risk analysis at the individual loan and pool level for residential mortgage loans.

Standard & Poor's:

The VantageScore model is an acceptable option for Standard & Poor's clients to include in collateral characteristics when submitting portfolios of residential mortgage loans for rating purposes.

The VantageScore model is embedded into these industry platform standards:

- MISMO

- All major vendors that provide the software necessary for lenders' systems to communicate with the credit bureaus' systems

LEARN MORE
Visit VantageScore.com to find additional information.

Lenders interested in learning more about how the VantageScore 3.0 model can improve their credit decision-making power should contact their CRC sales representative.

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