VANTAGESCORE®

Testimony of

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Committee on Financial Services

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Hearing on

"Keeping Score on Credit Scores: An Overview of Credit Scores, Credit Reports and Their Impact on Consumers"

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Introduction

Good afternoon Chairman Gutierrez, Ranking Member Hensarling and members of the Subcommittee. My name is Barrett Burns and I am president and CEO of VantageScore Solutions. I'd like to thank the Subcommittee for the opportunity to testify today, providing an overview of credit scores and how they work.

About VantageScore

VantageScore Solutions is a joint venture of the three credit bureaus, Equifax, Experian and TransUnion. We were formed in 2006 to offer choice and competition in the credit score marketplace by providing a highly predictive credit score based on the latest analytic methodologies. Each of the three credit bureaus devoted teams composed of their top scientists and analytic leadership to the development of our credit score. Armed with a collective deep understanding of consumer risk modeling and their respective bureau's database design, team members spent several months building a new consumer credit score from the ground-up. Fifteen million anonymous consumer files were used as the basis for development and testing prior to release of the new model. These anonymous consumer files reflected the latest trends in consumer behavior, including a doubling of mortgage debt in the five years preceding development and the high percentage of subprime mortgages which peaked during that timeframe as well. Other innovative approaches in the model's development included advanced segmentation techniques that provide more scorecards than many traditional models, including separate segmentation scorecards for full file and thin file consumers, as well as segmenting consumers with a previous bankruptcy into high-risk and low-risk tiers.

The result is VantageScore®, a new consumer credit score that remains highly predictive, even in this changed economic environment. Through these advanced development techniques, VantageScore can score people who historically have had trouble getting a score with traditional credit score models. Additionally, one of the biggest points of confusion for consumers and lenders alike with credit scores is the inconsistency seen when obtaining credit scores. VantageScore tackles this issue by using the same algorithm for each bureau's data which reduces the variance. I will go into additional details about these benefits as I talk more about the application of credit scores.

The addition of VantageScore in the marketplace has reduced the concentration of risk that existed when a dominant provider was serving the majority of the market.

Since our introduction there has been significant marketplace adoption of VantageScore as well as regulatory recognition of the important contribution made by VantageScore. VantageScore is used by many lenders, including:

- 4 of the top 5 financial institutions
- 8 of the top 10 credit card issuers
- 3 of the top 10 mortgage originators
- 7 of the top 50 auto lenders.

VantageScore was also recognized by the Federal Reserve when our product was used in their analysis of credit scoring as part of the FACT Act report to Congress in 2007. Our company executives, including our chief analytic scientist, meet regularly with officials from Treasury, The Federal Housing Finance Agency (FHFA), the Federal Deposit Insurance Corporation (FDIC), the Federal Housing Administration (FHA), the Office of the Comptroller of the Currency (OCC) and the Federal Reserve to provide analysis of consumer debt behavior and to review understanding about the impact on credit scores from various marketplace events.

Impact on Credit Scores from Loan Modifications

Many in the Administration, several non-profit organizations such as the Hope Now Alliance, and many people at Fannie Mae and Freddie Mac are working hard to keep Americans in their homes during this prolonged economic crisis. Numerous programs, such as the Making Home Affordable effort, have been implemented and additional solutions are regularly being suggested or considered to help reach this goal.

VantageScore Solutions just completed a study describing the impact on a consumer's credit score from various mortgage restructuring options, such as forbearance, loan modifications or short sales. We reviewed the study results with several regulators and various government agencies. The good news is that the study shows the mortgage mitigation programs have little, if any, impact on a consumer's credit score. The impact is far greater when a consumer becomes delinquent on debt payments, especially delinquent on a mortgage. For this reason, we applaud the efforts by the Administration and the financial services industry imploring homeowners to contact their lenders before the homeowner becomes delinquent.

The study has additional good information should a homeowner become delinquent. There is significant benefit to homeowners who work with lenders to structure a mortgage modification that also allows sufficient monthly cash flow to bring all other delinquent debts current. Although a credit score may have deteriorated, generally, once a homeowner brings both their mortgage and other debts current through a modification and sustains that current status for approximately nine months, their VantageScore credit score can return to a prime credit tier. The study is attached as Appendix I.

Credit Scoring Background

With the continued turmoil in our nation's economy, this is a critical time for consumers, lenders, government agencies and other parties to fully understand the use and impact of credit scoring.

There are literally hundreds of credit scores and scoring models in use today by lenders. There are many scores that are used in unique applications, such as scores used by insurance companies and cell phone providers or custom models that are designed for specific lenders. VantageScore's only model is the initial algorithm which is designed as a consumer credit score. Therefore, my testimony will address generic credit scores used for consumer lending purposes.

Lenders' appetite for risk adjusts when economic and market factors change. Credit scores offer a uniform, non-judgmental mechanism that can be quickly deployed system-wide within an institution in order to respond to changing credit conditions. Prior to the introduction of automated credit scores, lenders would have hundreds – or sometimes thousands – of loan officers across the country individually evaluating credit files. These loan officers would obtain copies of applicants' credit files and use a combination of their own judgment and corporate criteria to interpret the credit file. Their personal interpretation of consumer credit files was part of the loan decision. It is difficult to apply fair and unbiased judgment in a uniform manner under this scenario.

Today, automated credit scores have, in large part, replaced the subjective human element in interpreting credit files. Lenders use credit scores in three primary areas: pre-select marketing efforts, originations and on-going management of their customer accounts. We believe that credit scores should be a part of any decision process for credit approval but not the sole criterion. Approving large loans without also verifying other critical information needed to assess a consumer's ability to repay the loan, such as employment, income level or assets, is simply not prudent.

Purpose of a Credit Score

VantageScore rank orders consumers on the likelihood of becoming 90 days or more past due on a credit obligation within a two year window. The higher the numerical value of the score, the less probable that such a delinquency will occur. Fewer people at the higher end of the score range will become delinquent, while more people at the lower end of the scale will become delinquent.

The numerical value of all credit scores is tied to an odds table that translates the score value into the actual probability of the 90-day delinquency occurring. These odds tables are generated for each lender's unique portfolio. For example, a VantageScore credit score of 990 may represent a 0.13% chance of becoming late, while a 501 VantageScore could mean a 48% chance of the consumer becoming 90 days or more late.

Benefits of Accuracy in Credit Scores

An accurate credit score model aids the safety and soundness of our country's financial system. When lenders employ accurate credit score models tied to sound underwriting policies, risk is more appropriately delineated. In addition, lower operational costs are realized through automation and overall portfolio risk is reduced.

Consumers also benefit with accurate credit scoring systems because the cost of credit is reduced through the elimination of expensive manual underwriting processes. Additionally, consumers receive credit offers that are better matched to their risk profile, providing better protection from over-extension of credit (provided that appropriate underwriting is also employed). Finally, credit scores deliver an incentive for borrowers to adopt better financial habits in order to receive the best terms and conditions.

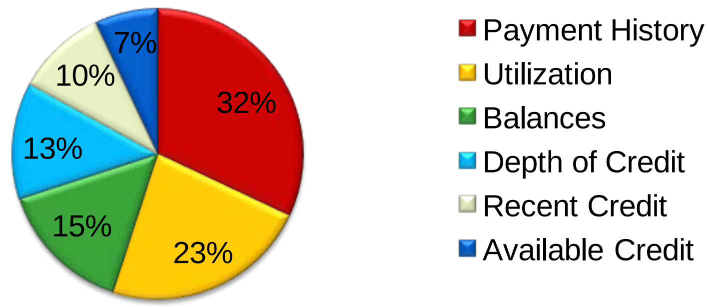
Factors used by VantageScore

The VantageScore development team, comprised of the top analytic scientists from each of the nation's three largest credit bureaus, used 15 million anonymous consumer credit files from all three major credit bureaus to evaluate behavioral consumer characteristics in combination with innate factors that exhibit the best performance at consistently predicting future credit conduct. The best performing 195 characteristics and factors were applied to patent-pending analytic techniques to produce a sophisticated algorithm that industry influencers agree is a highly predictive credit score.

There are six categories of consumer behaviors and factors within the VantageScore algorithm that are used to calculate a consumer's VantageScore credit score. The approximate weighting of each factor is:

- Payment History (32%) – whether previous payment patterns have been reported as satisfactory, delinquent or derogatory. Paying debt obligations on time is the single biggest action consumers can take to positively influence their credit score.
- Utilization (23%) – the percentage of credit amount used or owed on accounts.
- Balances (15%) – the amount of recently reported balances, both current and delinquent.
- Depth of Credit (13%) – the length of credit history and types of credit.

- Recent Credit (10%) – the number of recently opened credit accounts and credit inquiries.
- Available Credit (7%) – the amount of credit available.



We have posted this information on our website so that consumers may understand how their credit behavior correlates to their VantageScore credit score.

What's not in a Credit Score

Just as important as what is in a credit score is the information that is *not* considered by credit score algorithms in the calculation of a consumer credit score. All credit scoring systems must meet the regulations outlined in Regulation B, the Federal Reserve's regulation implementing the Equal Credit Opportunity Act of 1974. As a result, VantageScore does not, among other things, consider race, gender, age or income in the calculation of its scores.

Additionally, VantageScore does not factor medical debt into the calculation of a consumer's VantageScore credit score.

The VantageScore Scale

The scale chosen for VantageScore is also meant to be consumer-friendly and reduce confusion. The 501-990 score approximates the academic grading scale familiar to most consumers. A letter grade is assigned to each VantageScore credit score to aid in consumer understanding. The letter scores and the score ranges to which they correlate are:

- "A" for scores between 900-990
- "B" for scores between 800-899
- "C" for scores between 700-799
- "D" for scores between 600-699
- "F" for scores below 600.

Consistency across the Three Largest Credit Bureaus

Consumer confusion is also lessened by the ability of VantageScore to provide more consistent scores across all three major bureaus because there is only one version of the VantageScore algorithm and that same version is applied to the data at each of the three credit reporting companies ("CRCs"). As a result, any difference in credit scores for a consumer across the three bureaus would be attributed to data differences in the consumer's credit files at the three bureaus.

The use of the same VantageScore algorithm applied to each bureau's data has contributed to 69% of consumer scores calculated using VantageScore fall within a 20 point range among the three bureaus. This consistency serves to minimize consumer and lender confusion. Credit grantors benefit with the increased confidence of consistent credit decisions regardless of data source. Consumers benefit from a comparable risk assessment no matter which credit bureau their financial institution chooses.

A Consumer's Credit Score is Constantly Changing

Credit scores are not static. According to the Consumer Data Industry Association, the credit bureaus receive approximately 4.5 billion pieces of credit data every month, which arrive at the bureaus at various points throughout the month. Newly entered data is factored by the scoring algorithm the next time a consumer's credit score is requested. As consumers open new loans, pay down credit cards or change other payment or debt management behavior, their credit score will change accordingly. The use of the freshest data in credit files gives consumers the opportunity to impact their score, not just be impacted by it.

Scoring Thin File and other Previously Unscoreable Consumers

Millions of consumers can't obtain a credit score under some traditional models. The predictive power of VantageScore enables lenders to find more creditworthy consumers while maintaining accuracy in risk assessment. With this capability, VantageScore plays a vital role in making the mainstream credit markets more accessible to creditworthy consumers at appropriate rates and terms. Lenders can achieve higher volumes and more market share without lowering their credit standards and exposing their portfolios to undue risk, while keeping such consumers away from predatory lenders.

Through our analysis, VantageScore has identified three categories of consumers who face difficulties accessing mainstream credit markets because they are unable to obtain a score: "Thin file", "infrequent credit user" and "new entrant."

> **Thin File.** 'Thin File' commonly means "consumers with fewer than three accounts in their credit file." It is estimated that between 35 and 50 million adults in the United States – equivalent to 18 to 25 percent of the adult population – may be considered thin file. A significant number of consumers thus may be blocked from mainstream credit or incorrectly priced because lenders are unable to leverage their standard decisioning strategies with these populations. The analytical approach in the VantageScore model provides lenders with access to a larger pool of scoreable consumers while maintaining accuracy in risk assessment.
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> **Infrequent Credit User**. The infrequent credit user is a person who may not be eligible for a score because there has not been new activity on any credit account for six months. VantageScore, however, will reach back deeper into the consumer's credit history to provide a score. These could be people who have a long and favorable credit history, but they no longer use credit because they prefer to pay in cash.
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> **New Entrant**. As the name suggests, a new entrant is just establishing credit relationships and has not had credit open for more than the six months that some traditional models require in order to produce a score. Unlike these other credit scoring models, VantageScore will score new entrants to the credit market.

Individuals typically falling into the three categories above include:

- Young adults just starting their careers
- Recently divorced or widowed individuals with little or no credit in their own name
- Newly arrived immigrants
- Previous bankrupts
- People who shun the traditional credit products by choice
- People who have been prudent with fiscal management in their early years, perhaps paid off all debts and now use credit sparingly
- Possibly minorities. According to the National Council of LaRaza, 22 percent of Latinos have thin credit files or no credit files.

The implicit assumption is that a consumer without a credit score equates to high risk. VantageScore's ability to provide scores for many thin file consumers, infrequent credit users and new entrants allows lenders to better distinguish between good credit quality consumers and those with a clear track record of unfavorable credit behaviors. A sparse credit history and/or its lack of alignment with the data specifications of common scoring models is not necessarily a reflection of poor debt management behavior.

A comparison of VantageScore with a traditional CRC scoring model that used a random sample of mortgage customers saw an overall increase in scored consumers with VantageScore of 8.1 percent, equating to some 10 million consumers. Additionally, 2.5 million consumers from the study were more accurately indentified as higher credit quality than subprime – likely moving them away from the higher priced subprime products.

Population of consumers with a mortgage trade-line and valid risk scores			
Experian Risk Score score intervals	VantageScore scored population	Experian Risk Score scored population	Percent increase
< 840	37,200,879	35,650,730	4.3%
< 710	20,770,817	19,222,143	8.1%
< 690	18,905,850	17,361,704	8.9%
< 660	16,443,381	14,992,740	9.7%
< 675	14,743,723	13,403,763	10.0%
< 645	13,008,548	11,738,798	10.8%
< 620*	**11,968,160**	**10,746,894**	**11.4%**
Total	133,041,358	123,116,772	8.1%

Source: Experian, VantageScore Addresses Deficiencies in Traditional Scores in the Subprime Consumer Sector, (May 16, 2007), p. 2

Aiding the predictive performance of VantageScore is the ability of our model to consider "alternative data" as a factor in generating a consumer's VantageScore credit score. 'Alternative data' refers to payment obligations consumers have that aren't traditional credit products. Examples include utility bills, cell phone bills and rent payments. VantageScore will utilize the alternative data that exists in a consumer's credit file.

We would like to commend Congressman Green for both recognizing the importance of finding a way to appropriately score thin file credit applicants and for authoring the amendment included in the "Housing and Economic Recovery Act of 2008" (Public Law 110-289) directing the Federal Housing Administration to undertake a pilot program demonstrating how thin file applicants can benefit from automated scoring.

Unique Aspects about VantageScore

Several aspects of the VantageScore algorithm contribute to delivering a highly predictive score to lenders, consumers and the broader marketplace. Many of these development techniques are used for the first time in VantageScore, delivering a superior performance across multiple industries, products and lenders.

> **Characteristic Leveling.** As the VantageScore model was developed, the team reviewed hundreds of credit characteristics in thousands of combinations and chose 195 that culminated in the best performance. The definitions for these characteristics were then standardized for application to each of the three bureau's data.
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> **A Single Algorithm.** Standardizing the characteristics for application to each bureau's data provides the opportunity to put a single algorithm in place for VantageScore at all three bureaus. When this single algorithm is used on the data, more consistent scores are produced. An additional benefit to consumers for using VantageScore is that their scores will be generated by the same VantageScore model that lenders use because there is only one version of the same algorithm in place at all three bureaus.
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> **New Performance Definition.** A new modeling approach used in the development of VantageScore contributed to VantageScore's highly predictive performance. During the design phase, the VantageScore team utilized a deeper and broader suite of consumer behavior profiles to build an algorithm that interprets the number and nature of defaults with greater accuracy when the model is put into actual use. By contrast, conventional development techniques oversimplify consumer performance behaviors during development, resulting in an algorithm that is less sensitive to the number and nature of defaults later when placed into production, resulting in less accurate risk assessments delivered to lenders.
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> **Annual Revalidation.** VantageScore performs an annual revalidation to test the continued performance of the model. The results are made public each year. The most recent revalidation demonstrated that VantageScore continues to rank order effectively. (See Appendix II).

Credit Score Knowledge Still Lacking

Despite the best intentions and efforts of public and private entities in the credit industry, consumers' knowledge of credit scores remains low. One area that continues to mystify most consumers is the use of brand names versus generic terms. The generic term for products in our industry is "credit score." However, many people may refer to credit scores as "FICO scores." FICO is the brand name associated with score products offered by Fair Isaac Corporation. This is an important distinction to make in language in proposed legislation as well as in regulatory communications and guidelines. Using the term "FICO" in such instances unfortunately could lead lenders to believe that the legislation or regulation requires the exclusive use of a FICO score and does not allow the use of other credit scores.

All of the government regulators we have met with have embraced choice of credit scores in the marketplace. Both the Federal Reserve and FHFA have published written statements about the need for clarity in language.

- From the HOEPA rules adopted in July 2008:

  The Board also continues to believe— and few, if any, commenters disagreed— that the best way to identify the subprime market is by loan price rather than by borrower characteristics. Identifying a class of protected borrowers would present operational difficulties and other problems. For example, it is common to distinguish borrowers by credit score, with lower-scoring borrowers generally considered to be at higher risk of injury in the mortgage market. Defining the protected field as lower-scoring consumers would fail to protect higher-scoring consumers ''steered'' to loans meant for lower-scoring consumers. Moreover, the market uses different commercial scores, and choosing a particular score as the benchmark for a regulation could give unfair advantage to the company that provides that score.[1]

- From the FEDERAL HOUSING FINANCE AGENCY "2009 Enterprise Transition Affordable Housing Goals":

  Credit Score Terminology. The proposed rule provided a market analysis to support the proposed adjustment of the housing goals levels for 2009, and discussed the effect of tighter underwriting standards of private mortgage insurers and the reduction in mortgage insurance availability for borrowers with low credit scores. A credit reporting corporation and a credit scoring corporation commented that FHFA's analysis should not specifically reference "FICO" credit scores, stating that the reference implies endorsement of the Fair Isaac Corporation product and creates an unfair advantage. FHFA did not intend to endorse a specific product. Accordingly the market analysis in the final rule refers generally to credit scores rather than to a specific product.[2]

Thank you

Thank you for the opportunity to contribute to this important discussion. I hope the information I have shared is beneficial to the Subcommittee.

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[1] FEDERAL RESERVE SYSTEM, 12 CFR Part 226, Regulation Z; Docket No. R-1305 , Truth in Lending: Final Rule, VIII. Definition of ''Higher-Priced Mortgage Loan''—§ 226.35(a), *C. General Approach*

[2] FEDERAL HOUSING FINANCE AGENCY., 12 CFR Part1282, 2009 Enterprise Transition Affordable Housing Goals, Final Rule., Paragraph J, Other Issues, p. 45

APPENDIX I

Impact on Consumer VantageScore Credit Scores Due To Various Mortgage Loan Restructuring Options

January 2010

OVERVIEW

The recent economic downturn and the credit market crisis combined to produce immense pressure on American consumers and the financial services industry. Rising unemployment, the continuing decline in property values, together with much tighter credit requirements have resulted in increasing numbers of significantly delinquent mortgages and foreclosure actions. Most recently, prime loans, which represent two-thirds of all mortgages, experienced a 116.2 percent increase in serious delinquencies over the same period one year ago.[1]

To mitigate the negative impact caused by the crisis, the U.S. government and mortgage lenders developed multiple programs aimed at helping homeowners better manage their mortgage debt and meet monthly mortgage payments, ultimately hoping to stem foreclosures and allow families to remain in their homes.

These mitigation programs are gaining momentum. As reported by the Office of the Comptroller of the Currency (OCC) and the Office of Thrift Supervision (OTS), for example, newly initiated loan modifications and payment plans rose by 68.7 percent to more than 680,000 new home retention actions when compared with the prior quarter.[2] It was further reported that these programs resulted in lower monthly principal and interest payments on more than 80 percent of all modified loans.[3] While these results are positive, consumers and lenders alike are raising questions about how these programs affect consumers' credit profiles and especially their credit scores.

This study evaluates the effect of various mortgage programs on consumers' VantageScore® credit scores,[4] along with other consequences homeowners potentially face if unable to make timely mortgage payments: short sale, foreclosure, or bankruptcy. Given the recency of these programs, long-term consumer performance in response to these modifications remains to be seen. However, the initial impact to a consumer's credit score can be effectively modeled by emulating the restructured mortgage on the consumer's trade line. To calculate this effect, an analysis database was created by extracting a representative sample of homeowners from a national database.[5] In the analysis database, their credit profiles were changed to reflect a given mortgage restructuring program or event. Additionally, further scenarios are designed and evaluated to determine the range of score changes based on the financial magnitude of the restructured events. A final section of the study focuses on how a consumer may rehabilitate their score in order to gain access to reasonably priced credit.

[1] The OCC/OTS Report defines "serious delinquencies" as "loans 60 or more days past due and loans to delinquent bankrupt borrowers." *OCC and OTS Mortgage Metrics Report*, Third Quarter 2009, December 2009, p. 17.

[2] Ibid., p. 4.

[3] Ibid., p. 5.

[4] VantageScore is a generic credit score developed by the three major credit reporting companies, Equifax, Experian, and TransUnion.

[5] Personally identifiable information was removed from the consumer data prior to the data being furnished to VantageScore Solutions. VantageScore Solutions does not have nor maintain consumer credit files with personally identifiable information.

OVERVIEW
(Cont.)

KEY OBSERVATIONS

- Consumers and lenders should proactively seek out loan modifications before the consumer experiences a severe delinquency in their credit file. Late payments have a far greater impact on a credit score than loan modifications.
- Certain loan modifications can positively impact the score based on the recapitalization structure of the loan and whether the loan retains its original open date.
- A bankruptcy filing has the greatest impact on a consumer score and will negatively affect the consumer score for a minimum of seven years due to the presence of a public record on the consumer file.
- In order to rehabilitate consumers' scores as quickly as possible, consumers and lenders working toward mortgage restructuring should allow sufficient cash to be available to the consumer so that all other delinquent debts can be brought to current status.
- Consumers can rehabilitate their credit scores relatively quickly. Analysis has shown that even consumers whose credit score has fallen to 625 due to multiple delinquencies prior to a modification can raise their score to over 700 in as little as nine months if they bring all debts current and maintain a current status for the nine months.

SCENARIO DESIGN

Multiple programs are offered by the U.S. government and mortgage lenders to help consumers meet monthly mortgage payment obligations, including forbearance programs, refinance and renegotiation programs, the Making Home Affordable Program, Hope for Homeowners program as well as Fannie Mae and Freddie Mac streamlined loan modification programs, among others.

The overall intent of almost all programs is to lower the homeowner's monthly payment by maintaining or reducing interest rates or extending the term (from 30-year loan to 40-year loan, for example) in order to make the monthly mortgage payment affordable and sustainable. Some programs require a 3-month trial period before a loan modification is made permanent, which is the case with the Making Home Affordable Program.

Despite diverse eligibility requirements (below), programs generally drive toward one of two results:

1. Either a recapitalization of fees and past due amount, resulting in an increase in the principal after refinance or loan modifications. As a component of the recapitalization, the loan terms are often extended and/or interest rates are reduced, thereby lowering the monthly payment.
2. Or lenders agree to forgive part of the original principal, thus alleviating consumers' debt burden by reducing the balance and resulting in a lower monthly payment. The forgiven principal may or may not be recorded as a charge-off event.

SCENARIO DESIGN
(Cont.)

GOVERNMENT PROGRAM ELIGIBILITY REQUIREMENTS

	Primary Residence	Mortgage Origination	Owned or Guaranteed by Fannie Mae or Freddie Mac	Account Status	Mortgage Amount	Financial Hardship (e.g. Jump in interest rate, reduction in income, or unexpected medical bills)	Debt Burden
Making Home Affordable Programs/ Loan Modification	Yes	Before Jan. 1, 2009			<= $729,750 on first mortgage	Yes	First mortgage payment (including tax and insurance) > 31% of current gross income
Fannie Mae & Freddie Mac	Yes, and must be one unit property	Before Jan. 1, 2008	Yes	90+ days past due		Yes	First mortgage payment (including tax and insurance) > 38% of current gross income
Hope for Homeowners	Yes, and the owner doesn't own a second home	Before Jan. 1, 2008		Have made at least six payments		Yes	First mortgage payment (including tax and insurance) > 31% of gross income as of March 2008

The study uses scenarios designed to capture the relevant elements of mortgage restructuring programs that impact consumers' credit scores. Regardless of the perceived complexity of each program, the structure for recording the mortgage event can be standardized along a relatively straightforward design. The table below documents the fields that may be affected by each mortgage program or event. A comprehensive guideline for trade line documentation (Metro 2 format) can be found at the Consumer Data Industry Association's (CDIA) website: www.cdiaonline.org.

	Monthly Payment	Terms	Original Loan Amount/ Credit Limit	Current Balance	Account Status	Comment/ Status Codes[1]	Amount Past Due	Close Old/ Open New	First Mortgage	Second Mortgage
Forbearance	X					BT/AC	X	No	X	
Making Home Affordable Programs/ Loan Modification	X	X	X	X		AC		Maybe	X	
Refinancing	X	X	X	X		AC/AS/13		No	X	
Fannie Mae & Freddie Mac	X	X	X	X		AC		No	X	
Hope for Homeowners	X	X	X	X		AS/13		Yes	X	X
Short Sale				X	X	AU/13/61-65			X	
Foreclosure			X	X	X	65/89/94/BO	X		X	
Bankruptcy				X	X	Bankruptcy[2]	X		X	X

[1] The column represents reporting options which may be reflected in the credit files that are used in the VantageScore algorithm.
[2] In Metro 2, bankruptcy types are reflected in the 'Consumer Information Indicator.'

SCENARIO DESIGN
(Cont.)

The relevant components of each program are translated into a specific set of tradeline adjustments in consumers' credit profiles, described here:

Under forbearance programs, the borrower is permitted to make either substantially reduced monthly payments or postpone making monthly payments altogether during the forbearance period. There are generally three types of forbearance programs: interest only, reduced payment, and deferred payment. Therefore, three scenarios were created that reflect these three forebearance types. For the purposes of the study, the interest-only scenario is simulated by reducing the monthly payment amount to 25 percent of the original monthly payment amount. The reduced payment scenario is structured as 50 percent of the original monthly payment. Under the deferred scenario, no payments are made and the tradeline contains a 'D' in the terms frequency field.

With principal forgiveness, the current balance is reduced by 10 percent, 20 percent and 30 percent from the original current balance. Resulting monthly payment and term length are adjusted. Note however that these fields have immediate impact on the credit score. Scenarios are modeled under two configurations: first, where the new loan details overwrite the existing trade line so that the original age of the loan is maintained, and second where the original loan is closed and a new loan is created with the new terms. If the forgiven principal results in a partial charge-off by the lender, it is recorded as a derogatory event and the score impact is similar to that of a short sale or foreclosure.

Recapitalization: The original loan amount is increased by 10 percent, 20 percent, and 30 percent to reflect the recapitalizations of fees and past due amount. As with principal forgiveness, two configurations are analyzed – overwriting the existing tradeline while closing the old tradeline and opening a new loan with the new terms.

Analyzing historic mortgage loan size and monthly payment profile shows that the 10 percent forgiveness or recapitalization scenarios align with consumers whose mortgage payments have not been made for six months.

In some cases consumers face extreme financial situations (for example, job loss or severe income reduction) and simply cannot afford to continue paying their mortgage. This can lead to short sale, foreclosure, or bankruptcy. These events have significant impact on consumers' credit scores. This study also considers these events and their implications to the consumers' VantageScore credit scores.

STUDY APPROACH

CONSUMER PROFILES

All mortgage scenarios are evaluated on four consumer behavioral profiles:

- Population One: Consumers with clean credit files (presently current and no delinquency that has ever been greater than 30 days on any trade in the past).
- Population Two: Consumers with first mortgage in clean status, other delinquencies are present.
- Population Three: Consumers are delinquent on first mortgage, no other delinquencies are present.

STUDY APPROACH
(Cont.)

- Population Four: Consumers with delinquencies on the first mortgage and a delinquency on at least one other trade.

Approximately 100,000 consumer records[1] were randomly selected for each population according to the above criteria.

SCENARIOS FOR TESTING

Forbearance programs:

1. Interest only: 25 percent of original monthly payment amount
2. Principal plus interest: 50 percent of original monthly payment amount
3. Deferral: No payment is made

Loan modifications:

1. Principal forgiveness (with no partial charge-off). Existing loan is overwritten. Range of forgiven principal is 10 - 30 percent. In other words, the new loan amount is 70 - 90 percent of the original loan amount.
2. Principal forgiveness (with no partial charge off). Original loan is closed, new loan is established. Range of forgiven principal is 10 - 30 percent (new loan amount is 70 - 90 percent of the original)
3. Recapitalize first mortgage. Existing loan is overwritten. Range of recapitalization is 10 - 30 percent. The new loan amount is 110 - 130 percent of the original loan.
4. Recapitalize first mortgage. Original loan is closed, new loan is established. Range of recapitalization is 10 - 30 percent (110 - 130 percent of the original loan).
5. Recapitalization and principal forgiveness (as above) of both primary and subordinate loans.
6. Recapitalization on consumers with first mortgage in 90+ days past due status.

Derogatory Events:

1. Short Sale
2. Foreclosure
3. Foreclosure initiated, payments received after process initiation
4. Bankruptcy

[1] Personally identifiable information was removed from the consumer data prior to the data being furnished to VantageScore Solutions. VantageScore Solutions does not have nor maintain consumer credit files with personally identifiable information.

STUDY APPROACH
(Cont.)

For each test the average VantageScore credit score was calculated for each population before any changes were made, which is noted as the starting/benchmark score. Relevant tradeline fields were edited to reflect the scenario designs, and the VantageScore credit score was recalculated after the changes were made. The resulting score changes were then compared to the benchmark score and reported. Tests were run for each scenario and for each of the four consumer populations (except the final loan modification scenario which applies only to highly delinquent consumers).

CONSUMER SCORE REHABILITATION ANALYSIS

A final analysis was run to demonstrate a score rehabilitation process after implementation of one of the mortgage restructuring events (e.g. loan modifications). The intent of the analysis is to provide a general guideline for the time required for a consumer to restore their score to a reasonable credit tier after having become significantly delinquent and then processing a loan modification. Two scenarios are evaluated:

1. Due to the loan modification (reduced monthly mortgage payment), the consumer is able to pay ALL debts on time and continues to pay all debts on time for an extended timeframe; and

2. Due to the loan modification (reduced monthly mortgage payment), the consumer is able to pay only the mortgage on a timely basis and continues to pay the mortgage debt on time for an extended timeframe but remains delinquent with other debts.

The consumers' VantageScore credit scores are calculated at three, six, 12 and 24-month intervals after the event.

RESULTS AND OBSERVATIONS

CONSUMER PROFILE DEMOGRAPHICS

Average trade status	All trades clean	First mortgage clean, other trades delinquent	First mortgage delinquent, other trades clean	First mortgage delinquent, other trades delinquent
Total # of Open Trades	10.72	10.89	9.54	6.67
# of Open Trades 30+dpd[1]	0.03	0.15	0.66	1.16
# of Open Trades 90+dpd	0.00	0.02	0.14	0.34
Total # of Open Bankcard Trades	3.56	3.48	2.81	1.75
# of Open Bankcard Trades 30+dpd	0.01	0.04	0.03	0.16
# of Open Bankcard Trades 90+dpd	0.00	0.01	0.00	0.04
Total # of Open Auto Trades	0.61	0.63	0.68	0.65
# of Open Auto Trades 30+dpd	0.00	0.02	0.02	0.13
# of Open Auto Trades 90+dpd	0.00	0.00	0.00	0.01
Total # of Open Mortgage Trades	1.59	1.95	2.04	1.25
# of Open Mortgage Trades 30+dpd	0.01	0.05	0.56	0.64
# of Open Mortgage Trades 90+dpd	0.00	0.01	0.14	0.22
VantageScore	862	830	722	625

[1] DPD: Days Past Due.

Two important insights are observed:

1. As consumer behavior reflects greater default levels, their credit score drops significantly. On the VantageScore scale of 501 to 990, the difference between a consumer who has no delinquencies and a consumer who has delinquency and defaults on all primary trades (mortgage, auto and credit card) is an average of 237 points.

2. Comparing the impact of mortgage delinquency to all other delinquencies shows the importance of maintaining the mortgage in current status. Consumers with delinquency on only auto and card trades had an average score of 830, but consumers with their mortgage in delinquent status yet maintained current status on their auto and card trades had an average score of 722.

RESULTS AND OBSERVATIONS
(Cont.)

SCORE IMPACT AS MORTGAGE SCENARIO SEVERITY INCREASES

The table below shows the expected point drop or increase to VantageScore credit scores for consumers in Population One (consumers with clean credit files) using the scenarios previously described.

			All trades clean
VantageScore Starting Score			862
Forbearance	Interest only		0
	Reduced principal plus interest		0
	Deferral		-40 to -30
Loan Modification	Principal forgiveness, no partial c/o	Loan is overwritten	10 to 30
		Old loan closed, new loan opened	-14 to -20
	Recapitalization	Loan is overwritten	3 to 15
		Old loan closed, new loan opened	2 to 10
	Recap. and forgive subordinate loans		3 to 10
	Recap. and highly delinquent		
Short Sale			-130 to -120
Foreclosure	Foreclosure initiated		-140 to -130
	Foreclosure initiated, payments still made		-125 to -115
Bankruptcy	Filing only for mortgage trade line		-175 to -165
	All trade lines included in filing		-365 to -355

The impact to a consumer's VantageScore credit score increases as programs reflect more severe restructuring. Loan modification programs have relatively small impacts on consumers' VantageScore credit scores, whereas derogatory events such as short sale, foreclosure, and bankruptcy have much more significant negative impacts. Loan modification ranges are presented for the 10 percent and 30 percent scenario, e.g. a 10 percent recapitalization with an overwritten loan increases the score by 3 points. A 30 percent recapitalization with an overwritten loan increases the score by 15 points.

UNDERLYING DRIVERS FOR RESULTING IMPACT TO VANTAGESCORE CREDIT SCORES

In the above table, the first two forbearance cases have no impact on scores since the consumer is still paying on time (just with reduced monthly payment amount). In the third forbearance case, where no payment is made during the forbearance period, the trade line is temporarily excluded from active trade line calculations. This will lower the consumer's score by 30 to 40 points.

For loan modifications with principal forgiveness, the partial forgiveness of principal will reduce the overall utilization level and help the score if the existing loan is modified, whereas the creation of a new account will reduce the average age of trades on file and have a negative impact on score. In the recapitalization case, the scores are generally higher due to higher credit amounts on open real estate trades. Again, if a new account is created, the positive effect is

RESULTS AND OBSERVATIONS
(Cont.)

partially offset. Similar observations can be seen for recapitalization with forgiveness of subordinate loans.

In the cases of derogatory events (short sale, foreclosure, and bankruptcy), the impact to the score is much more serious. The VantageScore credit score is reduced by 115 to 140 points for short sale and foreclosures, and by 165 to 365 in the event of bankruptcy.

SCORE IMPACT TRENDS FOR CONSUMER PROFILES EXHIBITING INCREASINGLY SEVERE DELINQUENCY

The impact to VantageScore credit scores for consumers with delinquent tradelines on their files (Populations Two, Three and Four) is less than for consumers with all clean tradelines (Population One). Given that the more delinquent populations already have some negative reporting in their credit profile, adding an additional delinquent event will not be as serious as changing from a clean profile to a delinquent profile. As observed, the Short Sale scenario reduces the credit score of the 'all clean' population by 130 to 120 points but only 25 to 15 points for the population who have delinquency on all trades (first mortgage delinquent, other trades delinquent).

		All trades clean	First mortgage clean, other trades delinquent	First mortgage delinquent, other trades clean	First mortgage delinquent, other trades delinquent	First Mortgage 90+dpd
VantageScore Starting Score		862	830	722	625	587
Forbearance	Interest only	0	0	0	0	
	Reduced principal plus interest	0	0	0	0	
	Deferral	-40 to -30	-35 to -25	-10 to 0	0 to 10	
Loan Modification	Forgive, no partial c/o, overwrite	10 to 30	10 to 30	5 to 20	0 to 15	
	Forgive, no partial c/o, new loan	-14 to -20	-10 to -15	-9 to -12	-2 to -5	
	Recapitalization, overwrite	3 to 15	2 to 10	2 to 7	0 to 5	
	Recap., new loan	2 to 10	1 to 5	1 to 5	0 to 3	
	Recap. and forgive subord. loans	3 to 10	3 to 8	5 to 12	12 to 18	
	Recap. and highly delinquent					~ 0
Short Sale		-130 to -120	-110 to -100	-50 to -40	-25 to -15	
Foreclosure	Foreclosure initiated	-140 to -130	-130 to -120	-55 to -45	-20 to -10	
	Foreclosure initiated, payment made	-125 to -115	-115 to -105	-40 to -30	-10 to -5	
Bankruptcy	Filing only for mortgage trade line	-175 to -165	-160 to -150	-70 to -60	-30 to -20	
	All trade lines included in filing	-365 to -355	-330 to -320	-220 to -210	-120 to -110	

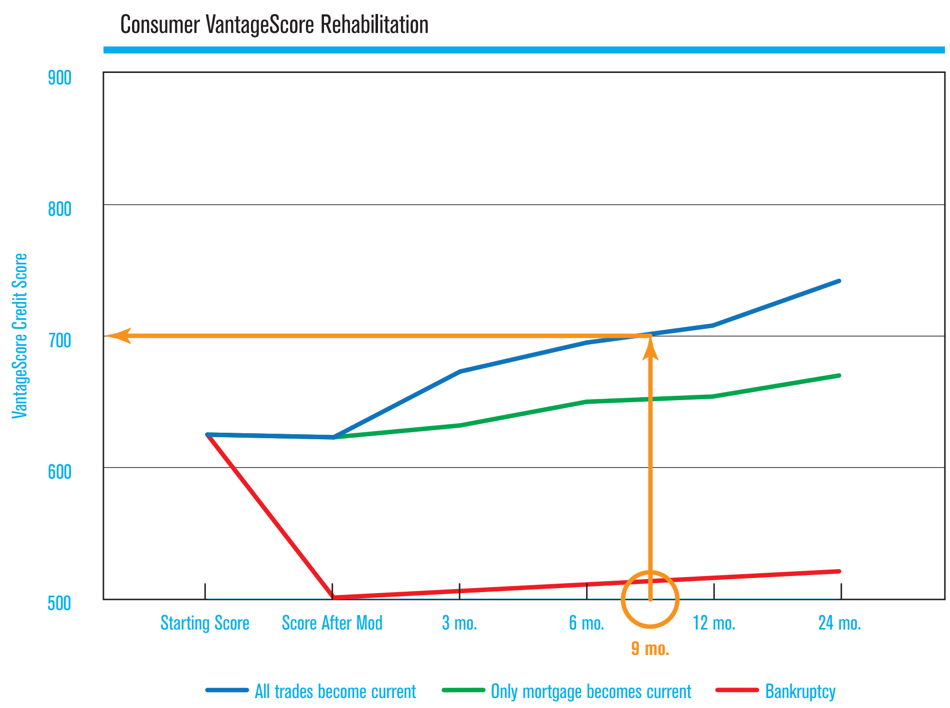
RESULTS AND OBSERVATIONS
(Cont.)

CONSUMER VANTAGESCORE REHABILITATION

Analysis shows that consumers can bring their score to a reasonable credit tier (such that they are potentially eligible for prime credit quality interest rates) if they are able to pay their debts on time after the loan modifications.

Consumers in Population Four (consumers with a delinquent mortgage and at least one other trade whose credit score has fallen to 625) can rehabilitate their score if they bring all debts current and maintain current status for approximately nine months. In that scenario, their score can rise to over 700. (Blue line on the graph). If the consumer brings only their mortgage debt current and maintains that status but other debts remain delinquent, their score could rise to 660, near prime quality after 24 months. (Green line on the graph)

Finally, a derogatory event such as bankruptcy significantly reduces the consumer's score (the red line in the graph below) and further, raising the score is extremely challenging until the public record identifying the bankruptcy filing is removed from the credit file. This is seven years for Chapter 12 and Chapter 13 bankruptcy, 10 years for a Chapter 7 bankruptcy.



RESULTS AND OBSERVATIONS
(Cont.)

NEW LOAN MODIFICATION COMMENT CODES

Historically, loan modifications have been documented on the tradeline with the code 'AC' (see CDIA Guidelines for the Metro 2 format). This code has been used for any loan modification regardless of the nature of the restructuring event. In November, 2009, CDIA announced that the comment codes used to identify loan modification events is expanded and refined to allow lenders to document modifications with greater clarity. The following code is now available:

Special Comment Code CN:

Text: "Loan modified under a federal government plan"

Description: The Special Comment Code is designed to be used for Mortgage accounts that have been modified under one of the federal government loan modification plans.

As statistically adequate volumes of these events are observed in consumer trade files along with the commensurate performance period, VantageScore Solutions LLC will determine the optimal method for utilizing these data to provide analysis to the industry.

CONCLUSION

Housing loans were the epicenter of the national economic crisis. Millions of American families are considering loan restructuring options from a mix of public and private efforts with a goal of saving their homes. Both traditional avenues, such as foreclosure or bankruptcy, as well as new government initiatives such as the Making Home Affordable Program are available to homeowners today. Given the broad reach of the crisis and newly introduced loan modification programs, it is important for consumers, lenders, government leaders and counselors to find the best immediate and long-term solution for these consumers. One factor to consider is the effect that various restructuring options have on consumers' credit scores. This paper addresses both the short term impact to consumers' scores from these various options and then provides a longer term perspective on scores in an effort to highlight the steps consumers can take both during and immediately following a restructuring event to rehabilitate their score should they see a drop.

Clearly, the greatest impact to a consumer score is driven by increasing delinquency rather than changes to the consumer's mortgage trade from a mortgage loan modification. Therefore consumers should proactively work with lenders as early as possible to address potential mortgage payment issues in order to avoid serious deterioration in their score generated from the reporting of several late payments to their credit file. It is no surprise that bankruptcy remains as causing the most severe and longest lasting negative impact on a consumer's credit score. One strategy that consumers can employ to more quickly rehabilitate their score after a severe delinquency is to restructure their mortgage loan in such a fashion to allow them sufficient monthly cash flow to bring other delinquent debts to paid status as quickly as possible.

Finally, as new data fields and comment codes are added to the Metro 2 reporting format, a repeat of this study will need to be conducted to determine the effect of those new elements on a consumer credit score. Such research will be initiated when there is enough evidence of these loan modifications and ensuing consumer behavior in consumer credit files to produce a meaningful result.

APPENDIX II

2008 VantageScore Revalidation

February 2009

The New Standard in Credit Scoring

Overview

VantageScore Solutions LLC has conducted its annual revalidation of the credit risk score, VantageScore.

For the third consecutive year, the results of the revalidation show that VantageScore is highly predictive, consistent and has remained highly predictive despite the economic volatility seen in the U.S since 2007.

This paper provides an overview of credit risk score revalidation processes and the primary metrics for determining the quality of a credit risk score. VantageScore revalidation results for the 2006 to 2008 timeframe are also presented.

Background

Credit risk scores play an integral role in today's bank lending processes. Scores are used to identify the likelihood that a consumer will repay a loan. Stated another way, a score with strong predictive power will effectively identify and separate good (likely to pay) consumers from those consumers that are unlikely to pay. This information contributes to the banks' strategies for the type of loan to offer, loan pricing and terms, and the ongoing management of the consumers' accounts.

A credit risk score synthesizes a consumers' prior debt management behavior to estimate how they will manage the repayment of debts in the next two years. An underlying assumption in the design of all score algorithms is that the economic environment remains generally similar to the history on which the score was designed. Scores that have been architected in more recent timeframes like VantageScore will therefore reflect more relevant underlying drivers and behaviors of current economic conditions, and consequently maintain greater predictive power.

Validation routines are run at the time of score development to assess the score's predictive power. Score revalidation analyses are run at subsequent intervals to insure the score retains its predictive power. If the predictive power falls substantially, observed by a significant reduction in statistical predictiveness or a failure to rank consumers according to increasing risk, then the score could expose the lending institution to increased and unnecessary risk.

Given the underlying design assumption presented above, recent economic turbulence and its impact on consumers may result in significant deterioration in credit risk score predictiveness. Score revalidation and monitoring processes are therefore essential to ensuring credit risk scores retain their predictiveness and aid risk mitigation within lending strategies. Lenders should also validate score predictiveness on their own portfolios to ensure the score addresses any nuances within their specific consumer base.

A key mission of VantageScore Solutions, LLC is to validate VantageScore on an annual basis and publish the results to the industry to facilitate understanding of VantageScore predictiveness as well as foster an awareness of credit risk score performance in general.

Revalidation Process

With the recent economic turbulence, an annual revalidation of a credit risk score is critical. In terms of the demographic configuration, size of the sample and the same seasonal timeframe, data selected for the revalidation should be reflective of the data used at time of development.

VantageScore was developed using a June 2003 – June 2005 timeframe on an anonymized sample of 7.5 million consumers, representing the entire U.S. demographic composition. For purposes of the annual revalidation, a similar number of consumers are randomly selected from the three national consumer reporting companies' (CRC – Equifax, Experian and TransUnion) databases over the most recently available two-year window. For the 2008 revalidation of VantageScore, the sample timeframe for revalidation is June 2006 to June 2008.

Many measurements exist to evaluate the performance of a credit risk score on a variety of dimensions. Primary measurements used in the industry are:

- Statistical Validation – Kolmogorov-Smirnov (KS) test or GINI Index. The higher the value of either metric, the more effectively the score predicts consumer repayment performance. (The KS statistic is cited in this paper). Typical commercial credit risk scores have KS statistics in the range of 45 to 70.

- Rank Ordering – Consumers are ranked using the score such that increasing levels of default likelihood are observed in the higher deciles. An effective credit risk score ranks consumer risk such that the risk rate should monotonically increase for each increasing decile. Risk rates that do not monotonically increase are an indication that the score is failing to rank correctly, in other words, consumers with high risk profiles could be assigned to low risk lending strategies.

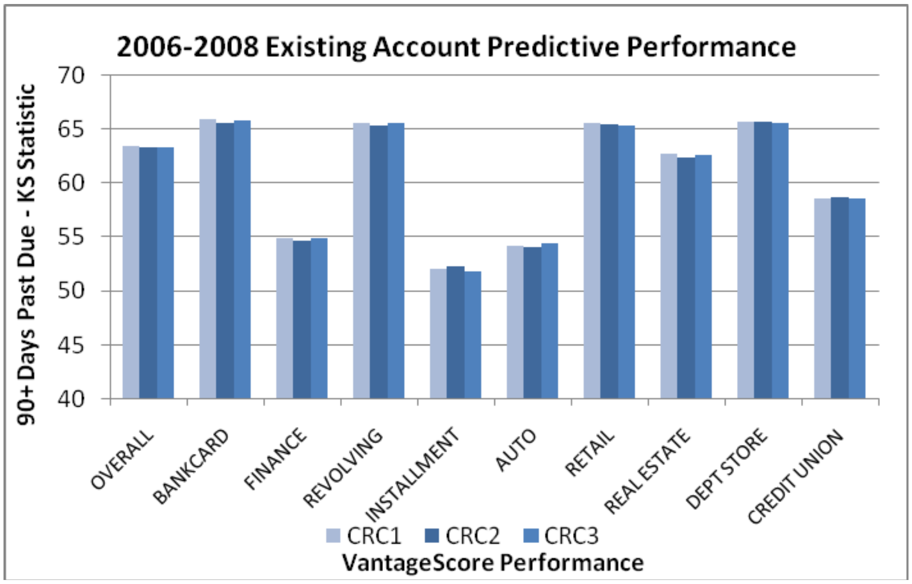
- Score Consistency across CRCs. Using a consistent data set and the same scoring algorithm a consumer should receive identical credit risk scores from multiple CRCs. VantageScore uses the same algorithm at each CRC, furthermore the characteristics used by the algorithm are leveled such that data submitted by lending institutions is interpreted in a highly consistent fashion. Differences in a consumer's VantageScore are driven by variations in the consumer credit file that might exist at each CRC. Those variations are largely driven by two reasons: not all lenders submit customer payment information to all CRCs and payment information may be submitted at different timeframes.

- Score Reliability. Implementation of strategies requires significant resources so lenders require that credit risk scores maintain strong, stable performance over extended timeframes regardless of changes in economic conditions.

VantageScore Validation Results For the June 2006 to June 2008 Timeframe

Statistical Validation

The chart below demonstrates VantageScore is highly predictive. KS statistics are provided for VantageScore when validated at each CRC. Strong scores typically achieve a KS value in the range of 45 to 70.



Rank Ordering

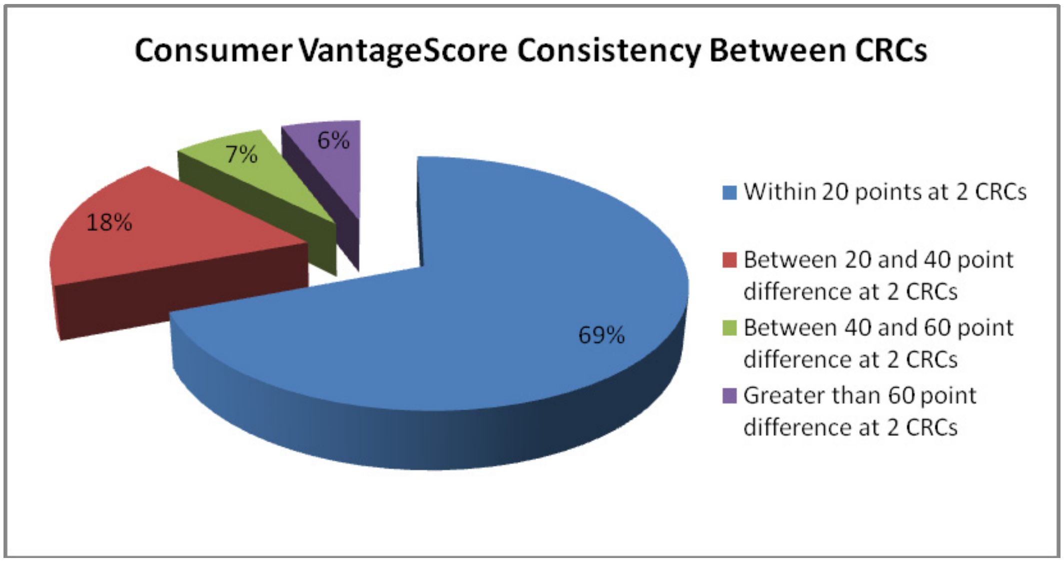
VantageScore demonstrates strong rank ordering functionality, seen in the table below with interval risk rates that are monotonically increasing as the deciles increase. This ensures higher risk consumers are identified and assigned to higher deciles for more conservative lending practices.

	90+dpd Rates	
	Account Mgmt Rates	
Decile	Interval	Cumulative
1	0.14%	0.14%
2	0.19%	0.16%
3	0.30%	0.21%
4	0.57%	0.30%
5	1.16%	0.47%
6	2.41%	0.80%
7	4.81%	1.37%
8	9.34%	2.37%
9	18.05%	4.11%
10	39.64%	7.66%

Consumer Score Consistency

VantageScore continues to demonstrate very strong consumer consistency. Consumers were simultaneously scored at each of the three national CRCs and then analysis was conducted comparing two of the three results. Sixty-nine percent of these consumers received a VantageScore within 20 points of each other. In other words, the consumer's risk threshold is the same from two independent sources. This result is especially important for the real estate industry, where lenders typically require a credit risk score from at least two CRCs. Large variations in the score can result in sub-optimal product and pricing offers for the consumer. The analysis was repeated using all pairwise combinations of data sourced from the three CRCs. Similar results were obtained for each combination.

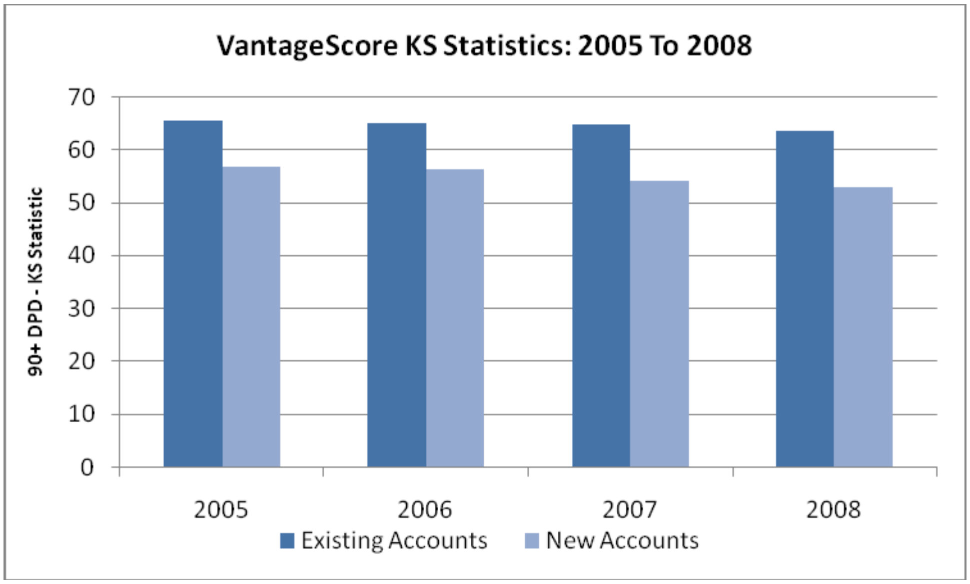
Using the Score Consistency Index (see prior paper from VantageScore, *Score Consistency Index,* April, 2008), VantageScore is typically at least 30% more consistent than other comparable CRC proprietary generic credit risk scores, thereby enabling lenders to make more appropriate product and pricing offers to consumers.



Additionally, score consistency has remained stable over the last four annual validations.

Score Reliability

Four annual validations have been conducted on VantageScore since its development in 2005. The graph below shows the KS statistics for Existing and New account validations for each year. The predictive power of the score has remained extremely strong despite the economic volatility.



Conclusion

Robust revalidation processes are especially critical in periods of economic volatility. The transparency delivered to the market by publishing revalidation results provide the market with an effective tool for understanding risk model performance and stability. The analytics presented above clearly demonstrate VantageScore's ability to deliver consistent performance despite changes in economic conditions.

All lenders who utilize consumer credit risk scores need to be assessing their models' efficacy on an annual basis with measurements similar to the tests provided in this paper. Any significant shifts in score performance could require a corresponding shift in strategy.

VantageScore is a generic credit risk scoring model introduced to meet the market demands for a highly predictive consumer score. Developed as a joint venture among the three major credit reporting companies (CRCs) – Equifax, Experian and TransUnion, VantageScore offers more consistency across all three CRCs and has the ability to score a broad population.