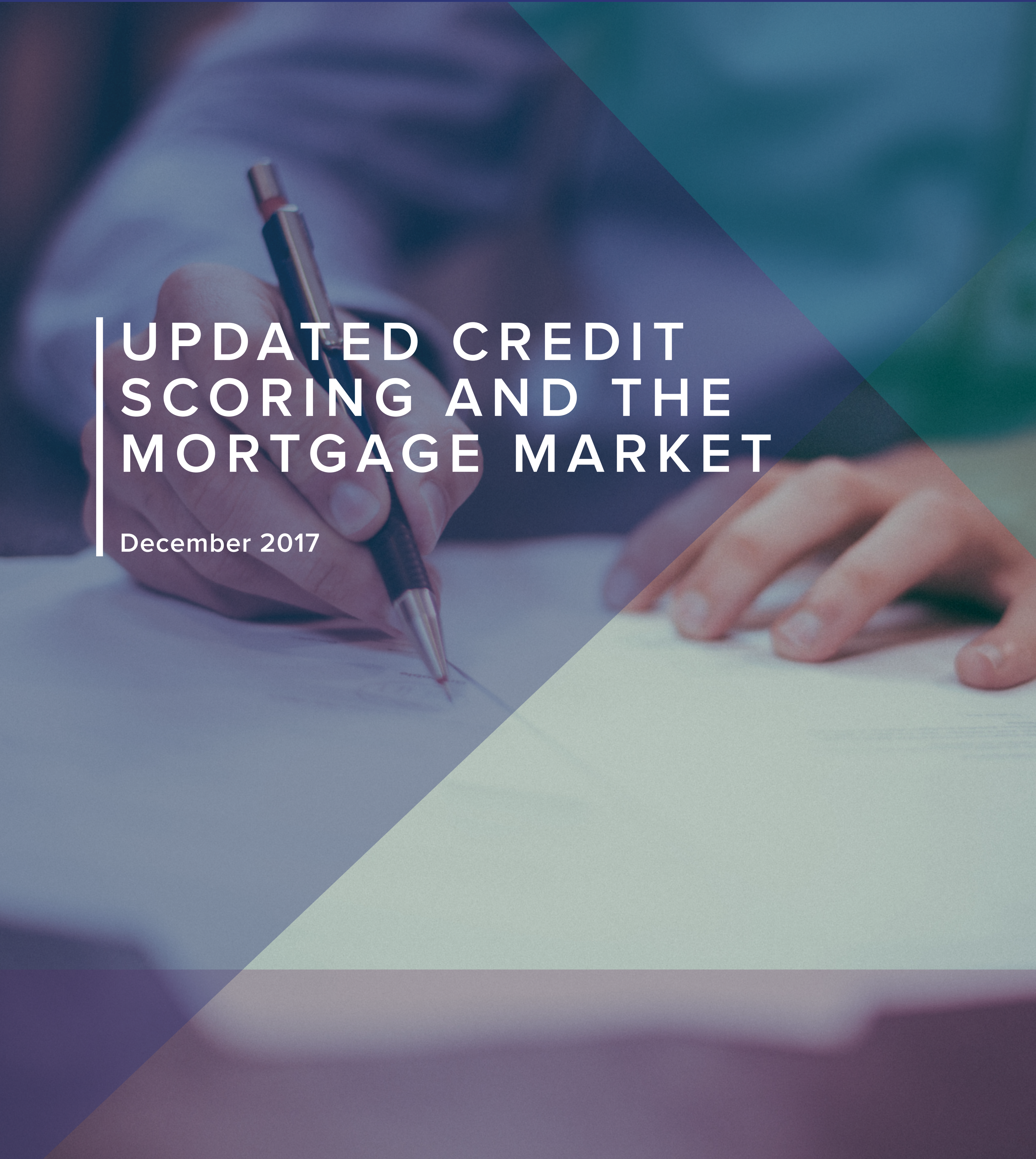
UPDATED CREDIT SCORING AND THE MORTGAGE MARKET

December 2017



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RISKS AND OPPORTUNITIES IN EXPANDING MORTGAGE CREDIT AVAILABILITY THROUGH NEW CREDIT SCORES

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Research sponsored by FICO

EXECUTIVE SUMMARY

Economic recovery following the 2008 credit crisis has stabilized consumer credit markets and led to a rebound of credit availability for consumers. Underwriting standards have returned to a more normal range. Nonetheless, questions arise concerning whether some consumers are being left behind and locked out of homeownership due to their lack of access to traditional credit or having lost access to credit during the economic downturn.

This question has caught the attention of both regulators and Congress. The Federal Housing Finance Administration (FHFA) is in the process of evaluating the costs and benefits of using updated FICO Scores as well as considering VantageScore, owned by the three credit bureaus (Equifax, Experian and TransUnion, known as the CRAs), for GSE purchased mortgages.

Analysis of these two approaches resulted in three primary findings:

Credit Access: VantageScore's approach of lower scoring standards (by scoring very thin and very stale credit files as described below) falls short of the promise of increasing access to homeownership for millions of Americans. We estimate less than 50,000 new purchase mortgages would result from VantageScore's expansion of the credit universe. Even if that estimate is off by a factor of two, it is still a very small fraction of the millions of new consumers that VantageScore touts. We also must not lose sight of the fact that every one of these consumers is newly scored simply because VantageScore implemented very loose guidelines that deteriorated the explanatory power of their model. We cannot be confident that these consumers will perform similarly to more established consumers will similar scores.

Consequences of Lower Standards: VantageScore's approach to lower scoring standards increases the risk exposure of anyone lending based on the scores, meaning a 620 VantageScore does not equal a 620 FICO Score. FICO requires at least one credit trade line open for six months or more and at least one trade line updated within the last six months. VantageScore eliminates these requirements entirely, thus adding very thin and very stale credit files to their scored population. When a lender receives a VantageScore for a particular consumer, they cannot tell if the consumer had a very thin or very old credit record without actually looking into the full credit bureau file. Loosening information requirements increases the risk exposure of anyone lending based on these scores because the model has a looser fit.

Competition: The ownership structure of VantageScore under the three CRAs creates significant barriers to true competition in the conforming mortgage space. While we might normally expect competition to increase innovation, while reducing prices, the structure of the credit scoring industry is anything but normal. VantageScore is owned and controlled by the three credit bureaus, who each, individually, have power to control access to and pricing of their data. As this data is an absolutely critical input to credit scoring models, the ownership structure of VantageScore could result in either limited or very expensive access to the data for competing firms such as FICO. Thus, increasing the use of VantageScore, particularly through a GSE mandate, could dangerously obstruct true competition.

In particular, score competition could push score providers to loosen standards under pressure from lenders and realtors looking to increase loan volume. This could start a race to the bottom similar to what we observed among bond rating agencies during the housing bubble. For example, in the years immediately preceding the crisis, getting a AAA rating on subprime mortgage bonds was essential for marketability; when deal arrangers could not convince one rating agency to issue a AAA, they simply went to the next agency.

This “rating shopping” became the norm so quickly that all of the major rating agencies quickly lost sight of the true risk of the bonds as they became caught up in the race for revenues. The same could happen very easily with an uncontrolled move towards multiple credit scores, particularly when the score is selected by an entity that doesn’t assume the risk of the mortgage.

Credit scoring practices affect the capital markets as well as consumers. Private capital is finally slowly returning to the market for mortgage credit risk. Any confusion created by new or untested scoring practices could sideline that capital and increase the cost of credit.

The consumer credit scoring industry has a unique structure with the three credit bureaus dominating the collection and sale of credit data while FICO provides the scoring engines that drive the vast majority of consumer credit decisions. The three credit bureaus’ joint ownership of VantageScore raises conflict of interest and fair competition issues that must be resolved to allow for true competition in credit scoring.

Finally, policymakers must remember that a credit score is but one input into the underwriting decision. While lack of score can be a barrier to entry, we must not overestimate the access to affordable credit that the mere presence of a score would generate. Most of the newly scored would be rejected for credit based on prudent underwriting practices. While expanding the availability of credit to those who can handle it is good, burdening people with credit they cannot handle is counterproductive for both consumers and investors.

INTRODUCTION

Economic recovery following the 2008 credit crisis has stabilized the consumer credit markets and led to a rebound of credit availability for consumers. Overly strict underwriting standards have loosened to a more normal range. However, questions arise concerning whether significant groups of consumers are being left behind due to their lack of access to reasonably affordable credit.

Nearly 45 million consumers are unscorable by today's most widely used credit scoring models that use traditional credit bureau data. This gap, as well as the current practices of using credit scores, has caught the attention of both regulators and Congress. The Federal Housing Finance Administration (FHFA), in its role as conservator of Fannie Mae (FNMA) and Freddie Mac (FHLMC), the government sponsored enterprises (GSEs or Agency), is evaluating the costs and benefits of using scores other than FICO® Scores for GSE purchased mortgages. Legislation has also been introduced to encourage expansion in credit scoring.

As new scoring providers and techniques emerge, we face not only the prospect of models being tweaked to include more people but also the risk that score providers will lower scoring standards under pressure from lenders and realtors looking to increase loan volume. This could start a race to the bottom similar to what we observed among bond rating agencies during the housing bubble. We must ensure that otherwise useful innovation does not lead us down that path again.

REGULATORY ENVIRONMENT

United States Senator Tim Scott (R–South Carolina) and Representative Edward Royce (R-California), along with bipartisan co-sponsors in both chambers, introduced the Credit Score Competition Act of 2017 (Act) earlier this year. While the bill aims to expand competition in the use of credit scores by Fannie Mae and Freddie Mac, the actual wording of the bill does not mandate the use of any particular credit score by the GSEs. It simply establishes a procedure by which the GSEs can use commercial credit scores and evaluate different models and vendors.

Currently, both GSEs have FICO® Score guidelines for loans submitted through their automated underwriting systems. However, Fannie Mae does not actually use the score in their underwriting process. Rather, they use internally developed underwriting models that take into account a large number of factors from the applicant's credit report as well as information on income, assets and property values. Fannie Mae also has a program for loans without FICO® Scores[1] but for pricing purposes, they assign those loans to the lowest FICO® Score pricing bucket. Freddie Mac uses FICO® Scores directly along with other underwriting information. They also have a program for mortgages without FICO® Scores.[2]

Of more immediate interest is the position of FHFA on alternative models. In early August, FHFA Director Mel Watt previewed his plans during a speech before the National Association of Real Estate Brokers when he stated, "FHFA will be issuing a request for input this fall to get additional information about the impact of alternative credit scoring models on access to credit, costs and operational considerations, and including questions around competition and using competing credit scoring models to make mortgage credit decisions."

There are at least two ways to characterize credit score "competition." First, you could have more than one model in use at the same time. We discuss later some of the issues with this approach in terms of a potential "race to the bottom." Second, the GSEs can rigorously test multiple models and choose the one that gives the most consistent and accurate portrayal of relative risk. This second definition is more objective and does not lead to the possibility of lenders gaming the system by choosing the most lenient model for each loan.

Setting aside the broad language in both the proposed Act and Mel Watt's comments, we believe the real issue comes down to two fundamental questions:

1. Does the current scoring system exclude a large number of creditworthy potential homeowners?
2. Could new approaches to consumer risk modeling not only broaden credit availability but also improve the terms of credit for homeowners currently in the system?

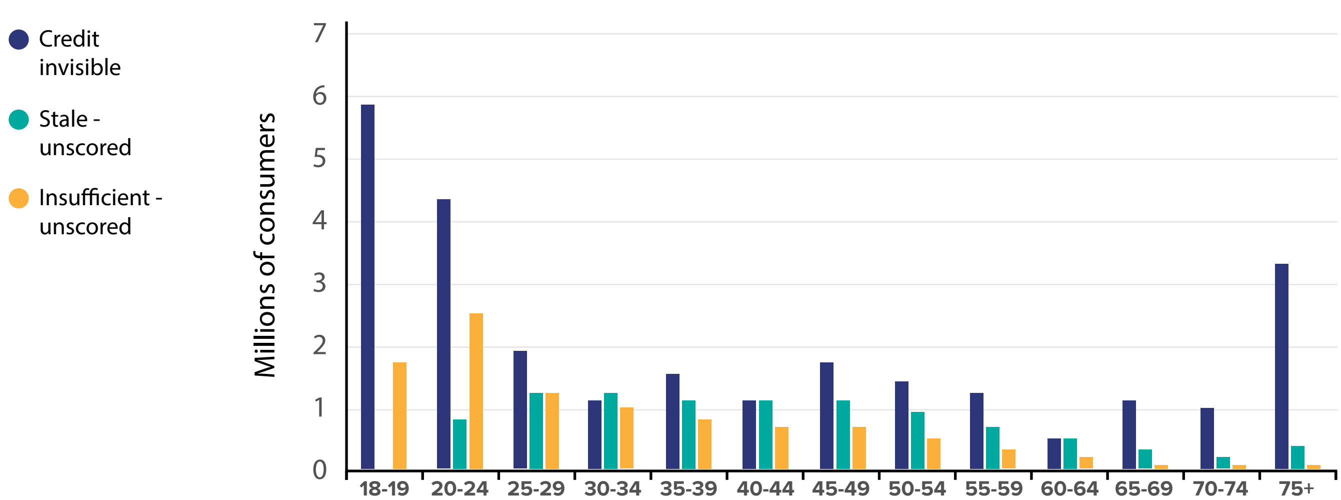
UNSCORABLE CONSUMERS

A 2015 Consumer Financial Protection Bureau (CFPB) study found nearly 45 million American adults do not have a traditional credit score. FICO[3] and VantageScore[4] conducted similar studies with consistent results.

Using census and credit bureau data, the CFPB estimated that 26 million adults had no credit bureau records at all while an additional 19 million had credit records but were still deemed unscorable at that time by FICO. A consumer can have a credit bureau file but be unscorable because the data is stale or there is insufficient data upon which to calculate a score.

In terms of access to mortgage credit, we need to break down the 45 million figure by age to determine how much a lack of score may be impeding mortgage lending. Figure 1 shows the unscorable by age. 48% are either under 24 or over 65. Neither of those groups is likely to have large numbers of people seeking mortgage credit. For the younger group, however, it is important to become visible to the credit system in order to secure future mortgages.

Exhibit 1: Unscoreables by Age Group



The CFPB study refers to consumers without any credit record as "Invisibles." They have either never used traditional forms of credit or have not used credit for quite some time. Young people who have not yet used credit certainly make up a large share of the group. However, there is also a subgroup of older or wealthier people who no longer need or use credit. There are also people of all ages who may be generally unbanked either because they lack the assets or steady income to participate in mainstream financial services or because they may be recent immigrants just getting established in the U.S. Finally, there are those who may have lost credit access due to defaults or bankruptcies and thus been excluded from the system for a number of years.

The "Stale" subgroup contains people who have data in their credit files but no recently reported activity. The "Insufficient" subgroup contains people who have active accounts and recent data but not enough of either to be scored by conventional models.

SCORING THE TRADITIONALLY UNSCORABLE

VantageScore and FICO studies also identified unscorable populations. VantageScore estimated there were 30-35 million[5] consumers as of 2010 who had credit files at one or more of the CRAs but were considered unscorable by traditional models. A FICO study estimated there are approximately 25 million consumers who are traditionally unscorable due to having no records at the CRAs.[6] The two credit scoring companies have taken quite different approaches to expanding the scorable population. FICO uses additional data from outside the CRAs while VantageScore lowers the data requirements necessary for a CRA based score.

FICO APPROACH TO EXPANDING THE SCORABLE UNIVERSE

After intensively studying the traditionally unscorable population, FICO concluded that their existing algorithms already capture all of the relevant information from the CRAs. Additionally, FICO determined that any loosening of their standards for creating a credit score (Exhibit 2) resulted in unacceptable model fits. As the FICO® Score is used in over 90% of consumer credit decisions[7] in the U.S., FICO is understandably strict in protecting the integrity of the FICO® Score. Lowering the standards would have resulted in less reliable rank ordering of creditworthiness.

Exhibit 2

The general criteria for being able to calculate a FICO® Score are:

1. Data exists at a credit bureau
2. At least one trade line is six or more months old
3. At least one trade line has had activity reported within the past six months
4. No indication that the borrower is deceased

Conversely, any of the following criteria render a consumer unscoreable by traditional FICO scoring:

1. No data exists at any credit bureau
2. All trade lines are less than six months old
3. There are no trade lines reported within six months
4. The only data on file are collections or public records

As part of their research into expanding the scorable universe, FICO found that responsibly using new, alternative data, data from outside of the credit bureau files at the CRAs, produced reliable scores for certain types of lending. Based on these findings, FICO developed FICO® Score XD, a score created by FICO focused solely on consumers who are not scorable by traditional FICO® Scores. FICO® Score XD has been validated and only made available for use in credit card lending. FICO does not supply FICO® Score XD for use in mortgage lending decisions. They believe that the score accurately rank orders credit behavior for lending such as credit cards.

With FCRA-compliant alternative data, FICO has successfully scored over 50% of the people previously considered unscorable. Importantly, this group contains millions of people with no credit bureau record at all – the truly invisible.

VANTAGESCORE APPROACH TO EXPANDING THE SCORABLE UNIVERSE[8]

VantageScore takes a very different approach than FICO to expanding the scorable population. Rather than looking outside of the credit bureau files, they have lowered the thresholds at which they are willing to create a VantageScore for a consumer. As a joint venture of Experian, Equifax and TransUnion, VantageScore understandably has great incentive to leverage the data available to it from the credit bureau files.

In order to score more consumers, VantageScore uses far less stringent requirements than FICO. FICO requires at least one credit trade line open for six months or more and activity on at least one trade line within the last six months. VantageScore eliminates these requirements entirely, thus adding very thin and very stale credit files to their scored population. As an example, VantageScore could score for a consumer with no open accounts and for whom the most recent activity is more than 24 months old. VantageScore does require that a credit bureau file exist for the consumer because they do not use information outside of the CRA files.

VantageScore creates four categories of consumers who are excluded by FICO® Score 9 (but not necessarily FICO® Score XD) and then evaluates the credit file data for these consumers.

1. ***New to market:*** All trade accounts are less than six months old
2. ***Infrequent user:*** No trade has been updated within a six month window
3. ***Rare credit user:*** No activity on the file in the last 24 months
4. ***No trades:*** A subprime population with only closed trades, public records and collections information available

Unlike FICO® Score XD, VantageScore does not separate these consumers from their traditionally scored population. When a lender receives a VantageScore for a particular consumer, they cannot tell if the consumer had a very thin or very old credit record without actually looking into the full credit bureau file.

While these additional scorecards expand the VantageScore universe, the scores actually calculated on the newly scorable consumers tend to be quite low with only 25%-30% of the newly scored consumers having a VantageScore above 620. Furthermore, VantageScore reports that only 7% of the newly scored consumers with VantageScore less than 620 improved to above 620 in the 2012-2014 observation period.[9] This indicates continued poor performance by these consumers and likely limited access to credit in the future. While scoring these groups gives them visibility within the system, VantageScore's own evidence suggests that this is not good for many of the newly scorable. Acquiring credit before someone has demonstrated the ability and willingness to responsibly service their obligations can trap them in a cycle of increasingly onerous payments and penalties. It is far better to simply wait until the consumer is able and willing to make timely payments on a consistent basis.

Even for these modest gains in the scorable universe, we find several weakness in VantageScore's approach:

1. VantageScore is scoring more consumers simply by decreasing the information requirements. This is quite simply a loosening of standards. In their publication "Maximizing the Credit Universe" they conclude "leveraging the mathematical innovation in VantageScore 3.0 not only maximizes the lending universe, but it also does so without increasing risk exposure." In fact, loosening information requirements is not a mathematical innovation and actually increases the risk exposure of anyone lending based on these scores because the model has a looser fit. This means that the lenders cannot have the same confidence in the model results. Greater uncertainty is clearly a risk factor.
2. In several publications, VantageScore touts the consistency of VantageScore across the three CRAs. They accomplish this through "characteristic leveling," a process that essentially forces disparate sources of data into agreement for the purpose of producing consistent scores. However, VantageScore then admits that more information is critical when assessing default behavior. In discussing ways to expand the scorable universe, VantageScore states: "A review of the default rate profiles ... shows that consumers with two or more credit scores have lower actual default rates across the credit score spectrum."[10] This finding does not surprise us. When considering very thin or very old credit files, there is simply not enough information to produce stable, reliable scores. "Characteristic leveling" in no way solves that problem. On the contrary, it can produce a score based on inadequate data from one CRA and then make it appear that the score is supported by data at the other two CRAs when, in fact, such data may not exist. When only one CRA has data on a consumer, it is almost certainly the case that the consumer simply does not have enough active, current information on which to base a reliable score.
3. VantageScore published a Gini coefficient of 54.78% on the newly scored population that compares rather unfavorably to their overall VantageScore 3.0 Gini of 73.47%-79.49%.[11,12] The gap in goodness of fit is actually larger than difference between the newly scored and total population Gini coefficients because the total population includes the relatively poorly fit newly scored consumers. This fit degradation is not surprising given the sparse information available to fit the newly scored consumers but it does clearly point out the new combined model is less robust than the original.

In many articles, VantageScore references a score of 620 as a threshold for standard qualification for a mortgage by the GSEs.[13] This is simply misleading. The GSEs do have a threshold of **620 for the FICO® Score** but that is not comparable to a VantageScore of 620. While VantageScore now uses the same 300 to 850 score range as the FICO® Score, that in no way means that the scores represent the same odd ratios. If the GSEs considered accepting VantageScore as a risk indicator, they would have to rigorously test the score and determine its odds ratio.

RECENT CHANGES TO SCORING

In addition to their efforts to include more people, both FICO and VantageScore have recently made several adjustments in their scoring algorithms (FICO® Score 9 and VantageScore 3.0) to more accurately, and in many cases more positively, score people.

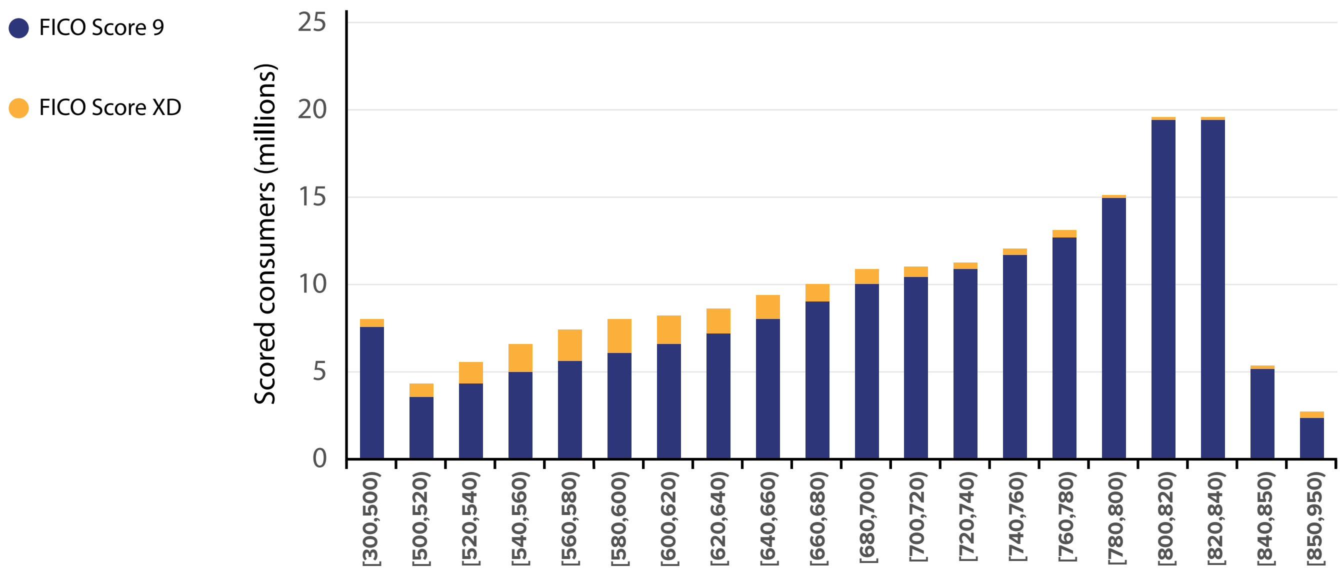
Of all collection accounts, up to 60% are for medical expenses. Recent research indicates that people with medical collections have better credit behavior, all else held constant, than those with non-medical collection accounts. Several possibilities explain this difference. People may not even be aware that late medical payments can impact their credit score and thus pay less immediate attention to those bills. Also, since large medical expenses are unusual events, late payments on those accounts may not reflect the consumers' general capacity and willingness to pay their credit obligations. Regardless of the reason, FICO found that the presence of medical collections, while still indicating poorer than average credit behavior, was not associated with the same degree of future delinquencies as non-medical collection accounts. Bad rates for consumers with non-medical collection accounts were as much as seven points higher than otherwise similar consumers who had only medical collections.[14] FICO now differentiates between medical and non-medical collection accounts when scoring consumers.

Another collection account related change involves obligations that have been paid in full. FICO found that including these accounts did not offer predictive power, in part because much of the derogatory information that led to the collection activity was already in their algorithms. Another complicating factor in collection accounts is the "pay for delete" practice that some collection agencies have, whereby they remove derogatory information if a consumer pays the collection in full. One of the problems with this practice is that the population of people who have had collection accounts is altered by the consumer – but only sometimes.

PREVIOUSLY UNSCORABLE PERFORMANCE

In order to see the impact of credit availability on non-traditionally scorable consumers, we must look at the performance of these groups once they obtain credit. Using FICO's approach as an example, we see that the newly scored are predominately at the lower end of the credit spectrum.

Exhibit 3: Distribution of FICO 9 and FICO XD



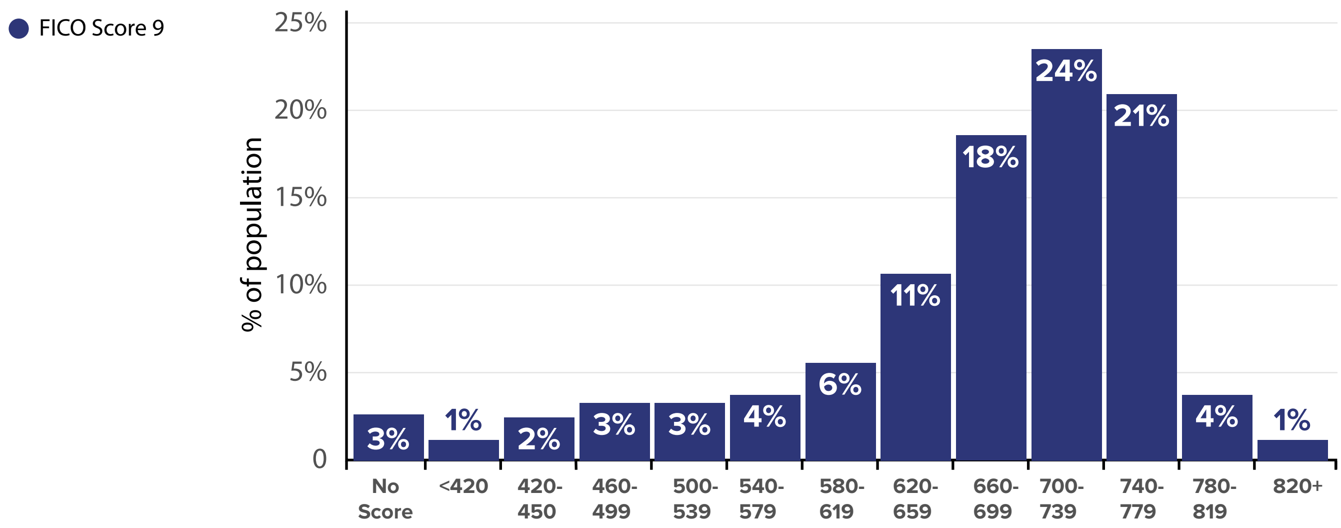
FICO classifies the newly scorable into Credit Retired, New to Credit and Lost Access to Credit. As Exhibit 4 shows, for many of those previously unscorable who go on to obtain credit, near term performance is not good. As expected, the Credit Retired segment performs better than the broad traditional population as this cohort is largely composed of people who do not need and are not seeking credit as they tend to be older and wealthier than the general population. The New to Credit group, however, has more than twice the bad rate of the general population. This group, generally younger and less financially flexible, is just beginning to develop credit habits. The Lost Access to Credit group has previously shown their inability to handle credit.

Exhibit 4:

Category	Bad Rate in Next 24 Months	Percent of Segment Scorable
Traditional Scorable	7.2%	100%
Credit Retired	6.20%	43%
New to Credit	18.40%	76%
Lost Access to Credit	34.20%	47%

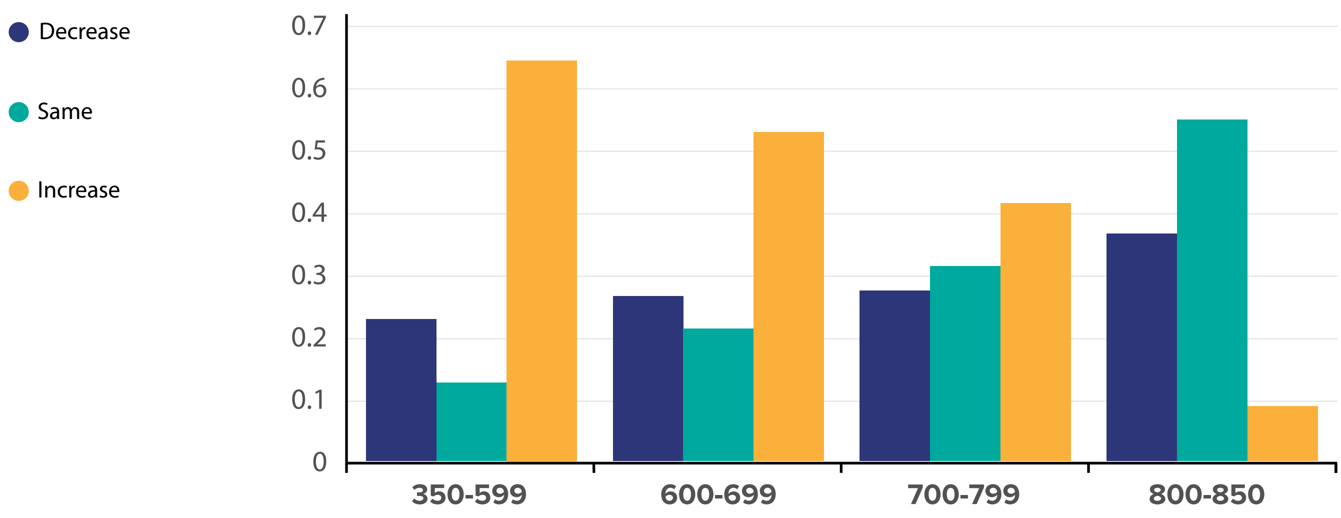
Translating these numbers into a credit score on the usual FICO® Score scale of 300-850, approximately two thirds of the newly scorable have scores below 620 so they will tend to have problems securing affordable credit even with a score in hand. As mentioned previously, FICO® Score XD is only used for decisions on credit card accounts.[15] A score, even if it is low, can offer young or immigrant populations who are new to credit a way to establish a pattern of consistent payments. In fact, as shown in Exhibit 5, FICO found that of all the previously unscorable who scored 620 or higher and obtained credit, 78% remained above 620 two years later and 67% had a score of 660 or higher after two years. Note, however, that the group who obtained credit are likely skewed towards the higher end of the new scores to begin with.

Exhibit 5: FICO® Score Distribution Two Years after Obtaining Credit For Consumers with a FICO® Score XD >= 620 at Time of Application



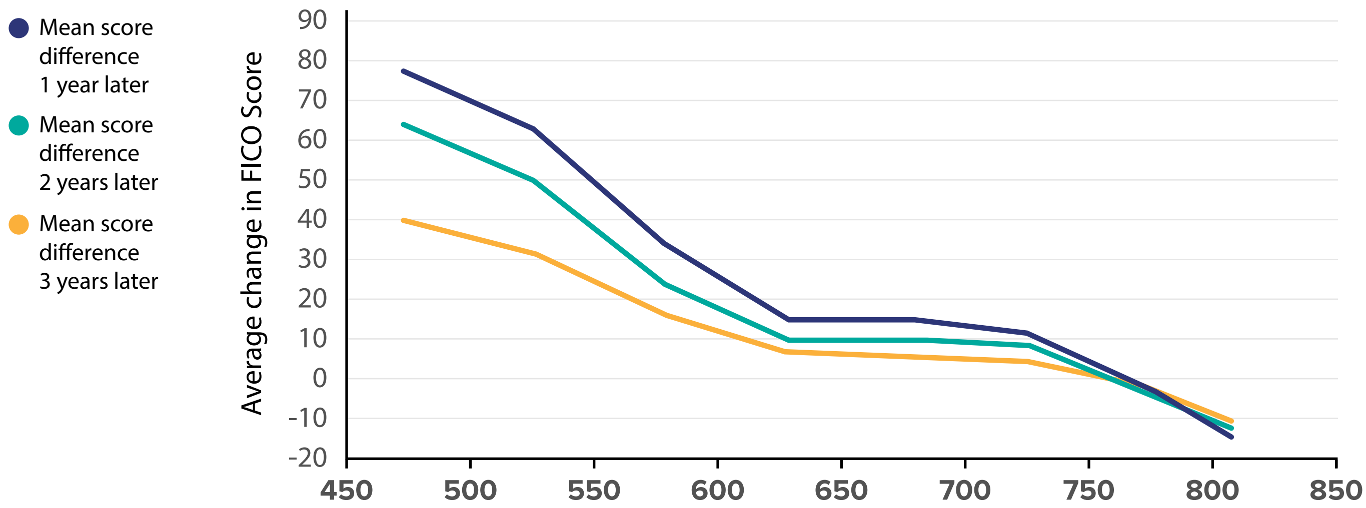
For consumers who opened a mortgage, the results are even better. Exhibit 6 shows the movement in score by FICO® Score bucket over a one year period following a new mortgage. 64% of borrowers in the 350-599 bucket showed improved scores with an additional 13% maintaining their score (+/- 9 points). This is remarkable given that borrowers in this score range had persistent, serious credit problems prior to opening the mortgage. The next higher bucket, 600-699, shows 74% maintaining or increasing their score.[16]

Exhibit 6:Change in FICO 5 Score 1 Year After Mortgage Opening



Scores for mortgage customers improve even more as time passes. Exhibit 7 shows the score progression for one, two and three year time periods. The largest movement occurs for the lowest scoring cohorts as they reestablish good payment patterns. Note that the scores in the super prime segment drop slightly but not because of poor payment history. Missed payments would have dropped their scores significantly more.

Exhibit 7: Mean FICO 5 Score Differences for Consumers Who Opened a Mortgage April - July 2013



As mentioned earlier, VantageScore's expanded scored population tends to perform rather poorly with only 7% of those initially scoring below VantageScore 620 improving to above VantageScore 620 two years later – and this is by far the largest segment of their newly scored population. How can this be, given the FICO® Score results shown above? There are several possible explanations. First, as mentioned earlier, a VantageScore of 620 represents higher odds of default than a 620 FICO® Score. A careful reading of Exhibit 7 shows that borrowers below 620 do improve their score but in many cases not by enough to get above 620. Second, the FICO® Score data above focuses on mortgage borrowers whereas the VantageScore information is for all customers below VantageScore 620. Finally, and most importantly, the FICO® Score and VantageScore models are simply different and drawing direct comparisons without detailed information on the model differences is invalid.

HOW MANY NEW MORTGAGES ARE CREATED BY SCORE EXPANSION?

VantageScore claims that up to 10 million consumers previously unscored would have access to credit if standards for score creation were loosened to include very thin and very stale files. Quantilytic analyzed VantageScore, FICO, HMDA and GSE data to estimate how many new mortgages might be originated out of that population.

VantageScore refers to the group of 10 million consumers with a VantageScore above 600 as "near-prime and prime." In fact, at least 2 million of the consumers are subprime even by VantageScore's definition as they fall under VantageScore 620.

Not every consumer who has a credit score obtains a mortgage every year. Especially in the lower end of the credit score spectrum, many consumers are rejected for loans due to excessive debt to income ratios and other underwriting criteria. The presence of a score above 620 does not guarantee a mortgage approval. Of course, many consumers simply choose not to take out a mortgage because they prefer to rent or already own a home. We estimated likely mortgage origination rates by looking at the proportion of consumers in each FICO® Score bucket who actually obtained mortgages in 2015. We included only purchase loans as refi customers are likely to have credit records and increased refi volume does not constitute expansion of the borrower universe. Applying the appropriate origination percentage in each score bucket to the number of newly scored consumers under VantageScore's loose requirements resulted in slightly less than 48,000 new mortgages per year.

The 48,000 figure is still almost certainly overestimated. VantageScore does not break down their 10 million number by age or other characteristics but it is reasonable to assume that the newly scored are disproportionately young. That could dramatically reduce origination rates amongst this group. Finally, many of these newly scored consumers may live in a household owned by someone who is already conventionally scored. There is no need to obtain a new mortgage in that case and, in fact, many of these households would be worse off with the new score factoring into a mortgage application because this group is predominately at the lower end of the credit spectrum and their new scores could drag down the credit score on a joint application for a mortgage.

Even if our estimate of 48,000 new purchase mortgages resulting from VantageScore's credit universe expansion is off by a factor of two, it is still a very small fraction of the millions of new consumers that VantageScore touts. We also must not lose sight of the fact that every one of these consumers is newly scored simply because VantageScore implemented very loose, lower guidelines that deteriorated the explanatory power of their model. We cannot be confident that these consumers will perform similarly to more established consumers with similar scores.

Exhibit 8

FICO® Score 9	Consumers	2015 Conventional Purchase Originations	% of Consumers Taking Out Mortgage	Vantage Score Expansion	Estimated Annual New Mortgages
[300,500)	8,071,000	2	0.00%	-	-
[500,520)	3,853,307	2	0.00%	-	-
[520,540)	4,565,970	2	0.00%	-	-
[540,560)	5,362,604	9	0.00%	-	-
[560,580)	5,939,896	30	0.00%	-	-
[580,600)	6,477,399	70	0.00%	-	-
[600,620)	6,902,273	110	0.00%	-	-
[620,640)	7,562,839	14,253	0.19%	2,800,000	5,277
[640,660)	8,409,539	29,182	0.35%	2,000,000	6,940
[660,680)	9,596,552	57,012	0.59%	800,000	4,753
[680,700)	10,603,811	102,079	0.96%	1,200,000	11,552
[700,720)	11,045,816	151,747	1.37%	400,000	5,495
[720,740)	11,473,678	197,558	1.72%	800,000	13,775
[740,760)	12,371,305	276,935	2.24%	-	-
[760,780)	13,425,074	425,906	3.17%	-	-
[780,800)	15,637,536	616,978	3.95%	-	-
[800,820)	20,279,588	453,045	2.23%	-	-
[820,840)	20,334,313	19,594	0.10%	-	-
[840,850)	8,087,499	5	0.00%	-	-
Total	**190,000,000**	**2,344,521**		**8,000,000**	**47,792**

Assumptions

1. Originations were estimated by taking FNMA's 30 year fixed rate distribution of purchase loans by FICO score and then grossing up by the total FNMA and FHLMC purchase originations for 2015
2. VantageScore expanded population was estimated from the U.S. Population Score Distribution chart in the publication "VANTAGESCORE 3.0: Better predictive ability among sought-after borrowers"
3. GSE purchase loan counts sourced from HMDA 2015 Table A1

CAN CREDIT SCORES HURT CONSUMERS?

While obtaining access to credit can lead to better future performance, the mere provision of a credit score is but one factor taken into account in underwriting. Much of the improved performance is likely due to factors uncovered in manual underwriting of low scoring consumers. Thus we are looking at a biased sample of the low credit scores when evaluating performance. An underwriter (or automated underwriting model) has chosen to extend credit to the highest quality of the low scoring cohorts based on factors not included in the CRA files.

Most consumers with FICO® Scores below 620 (or the VantageScore equivalent) will be rejected for long term or high balance credit given their propensity to default. Simply producing a score for a consumer does not make them creditworthy.

In fact, having an inaccurate credit score can hurt consumers in two different ways. First, if a score produced with insufficient information ranks a consumer too high, they may be granted more credit than they can handle and potentially push them into default behavior that will restrict their credit for years to come. On the other hand, a score that overstates the risk of a consumer because it does not have enough information can unfairly restrict their access to credit. These consumers would have been better off with a manual underwrite and no credit score at all.

Underwriters can take into account information that is not available to the credit scoring models. For instance, one time or temporary events such as the death of a family member, temporary unemployment, illness or even natural disasters are much better evaluated by an underwriter than a model. Of course credit scores provide tremendous insight for an underwriter but only if they are based on sufficient information to accurately score a customer.

We must also accept the conclusion that sometimes the best thing for a consumer in the long run is denial of credit in the short term. Traditionally unscorable consumers do not automatically receive low scores simply because they are new. The low scores reflect characteristics that have generally led to poor performance in similar populations.

HOW MUCH DO SCORES MATTER?

Credit score directly impacts interest rates on mortgages. As the following table demonstrates, the difference in monthly payment for a $300,000 loan with a 30 year fixed mortgage is more than 20% higher for the lowest score group compared to the highest. That's over $100,000 difference in payments over the life of the loan.

Exhibit 9

FICO® Score	APR	Monthly Payment
760-850	3.517%	$1,350
700-759	3.739%	$1,387
680-699	3.916%	$1,418
660-679	4.130%	$1,455
640-659	4.560%	$1,531
620-639	5.106%	$1,630

Source: 9/21/2017 http://www.myfico.com/loan-center/home-mortgage-rate-comparison/

CREDIT SCORE CONFUSION

While competition can drive useful innovation and keep the pressure on traditional score providers to continue improving their models, it can also create confusion. FICO alone has over 25 different scores, including industry-specific scores. They also maintain multiple versions of their base score because some lenders have been slow to update to the latest scoring models. Meanwhile, VantageScore is stated on the same 300-850 scale as the FICO® Score but the odds ratios at each point on the spectrum are different than the FICO® Score, rendering the scores incomparable. Finally, non-affiliated score retailers such as Credit Karma generally provide scores to consumers that may bear only a passing resemblance to the FICO® Scores that lenders overwhelmingly use to make credit decisions.

Even if a consumer is especially careful in obtaining a score, there can still be differences between the credit bureaus. For instance, a FICO® Score used to qualify for a mortgage loan can differ because the three bureaus have different data on each consumer. As an example, if there is a credit inquiry initiated by a lender at one credit bureau when prequalifying a borrower, the other two bureaus are unaware of the inquiry and so do not factor it into their score. As inquiries are generally negative factors with respect to FICO® Scores, the bureau with the inquiry on record may report a lower score. Other differences occur due to data timing issues between the bureaus. These factors, taken together, can result in FICO discrepancies of up to 100 points although, in practice, they are much tighter than that. FICO compensates for differences between the bureaus by using slightly different algorithms for each one. This allows them to maximize the distinct value of data at each CRA.

VantageScore, on the other hand, uses the same algorithm with each bureau and reports that this gives them tighter agreement, by definition, in VantageScore across the credit reporting agencies. VantageScore follows this process because it is owned by the CRAs, and wants less visible differentiation in scores even when the data may be remarkably different between the CRAs on any given consumer. Smoothing over these data inconsistencies, through the "characteristic leveling" process described earlier, reduces the statistical differentiation that additional data can provide.

Furthermore, mortgage lenders do not average the scores they receive. For most loans originated for sale to the GSEs, lenders must attempt to obtain FICO® Scores from all three CRAs.[17] The GSEs require the middle score or, if only two were obtained, the lower of the two. Adding even more confusion and surprise to the loan applicant is the fact that joint applications use the score from the lower credit person on the application.

The real problem for consumers is that they think they are getting "the credit score" when in fact they are getting a number that has little meaning without quite a bit of context. This leads to surprises when a lender tells them they have a significantly lower score than they were led to believe.[18]

Adopting a new credit scoring model is a significant undertaking for lenders, investors and others in the market. As an example, the GSEs still use a version of the FICO® Score from 2005. Although significant improvements have been made by FICO since then and the reach of their models is broader than ever and the GSEs have evaluated the new scores several times, various non-score related issues have delayed adoption of the new scores.

While there are certainly systems issues and extensive testing necessary, upgrading a FICO® Score version is simple relative to implementing whole new model frameworks from new vendors, yet nearly a decade has passed without upgrading the model. Validating, testing and implementing a different type of score would take years of work by all parties concerned. Adjusting systems, policies and practices to accommodate a multi-score paradigm would take even longer.

CREDIT SCORING FUNDAMENTALS

One common misunderstanding about credit scores is that they mean the same thing regardless of the time period or economic environment in which they were calculated. This is simply untrue. In order to understand why, some background on scoring algorithms is helpful. Traditional credit scoring follows a fairly straightforward process but with many nuances that differ between providers and algorithms. We focus on the similarities here.

FICO® Score and VantageScore attempt to predict the relative likelihood of default, defined as a credit obligation 90+ days past due, occurring within two years of the date of the score.

Relative likelihood of default is key to understanding the score. Scores are designed to rank order this relative likelihood, NOT predict the ultimate probability of default. Therefore, when we judge a score's effectiveness at its designed purpose, we are simply looking at how well it rank orders groups of borrowers. Each score represents an odds ratio which tells us how many "goods" versus "bads" are expected in a population segment. A "good" is a person who pays all debts as agreed over the next two years while a "bad" is one who has at least one payment late by at least 90 days. Exhibit 9 presents representative odds ratios and associated probabilities of default for a range of FICO® Scores.

Exhibit 10A

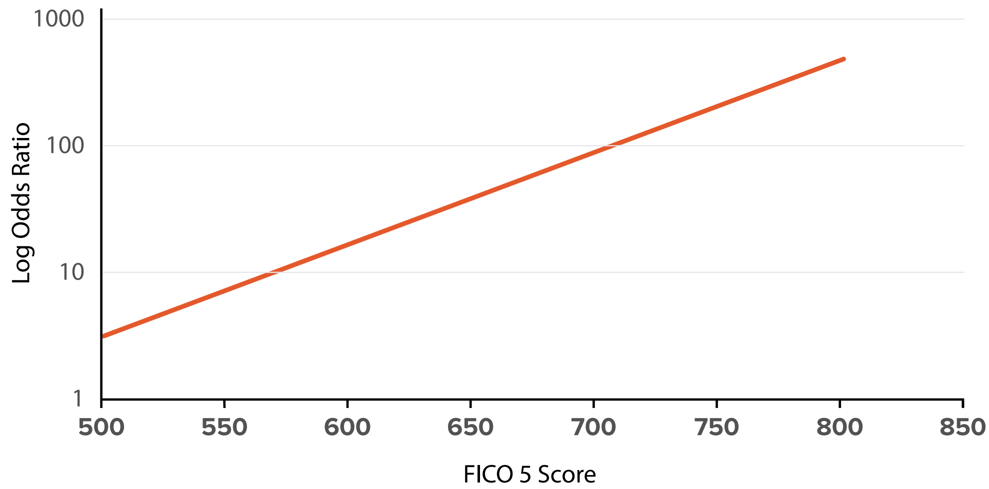
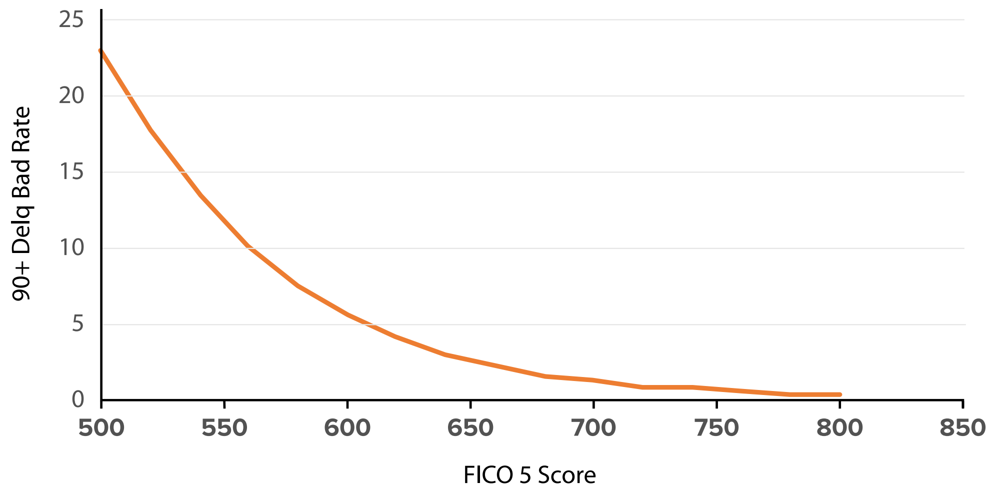


Exhibit 10B



It is important to note that the probability of default (PD) is an estimate expected to hold only in a "normal" environment. Under economic distress, the PD is expected to increase for all score levels and in a period of robust economic expansion, PDs are expected to be lower across the spectrum than those implied by the odds ratios. What does not change, regardless of environment, is the rank ordering of default rates by score level. Exhibit 10a shows that the rank ordering was maintained throughout the period from 2005 to 2016.

Exhibit 11a: FICO® 5 Bad Rates Over Time

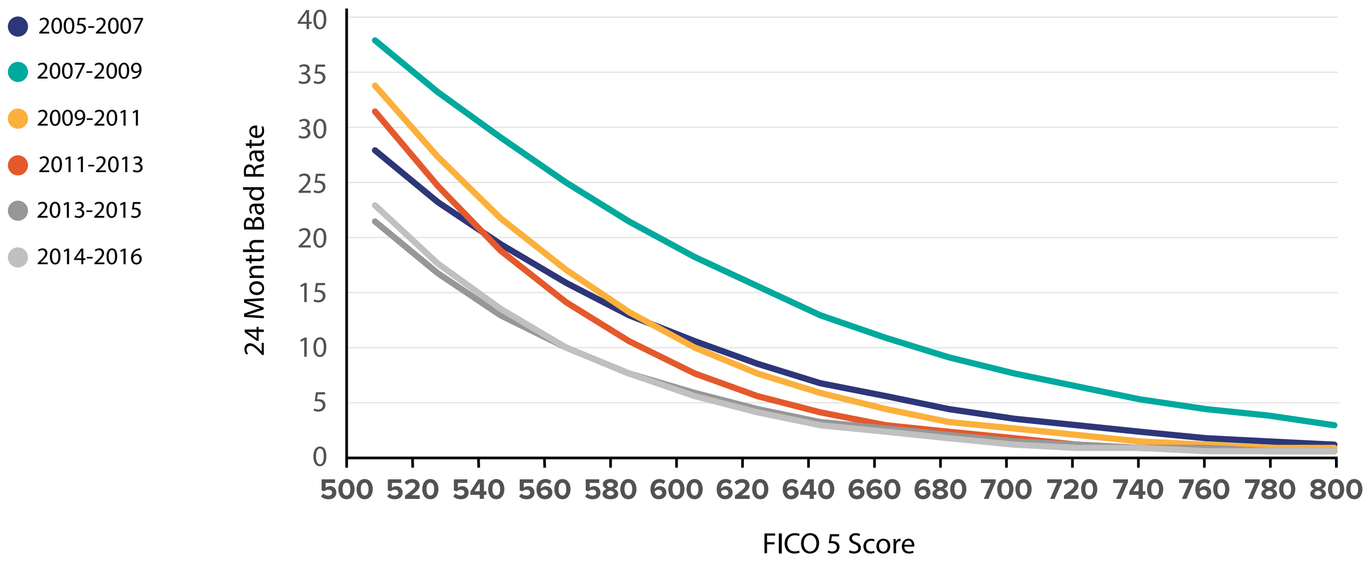
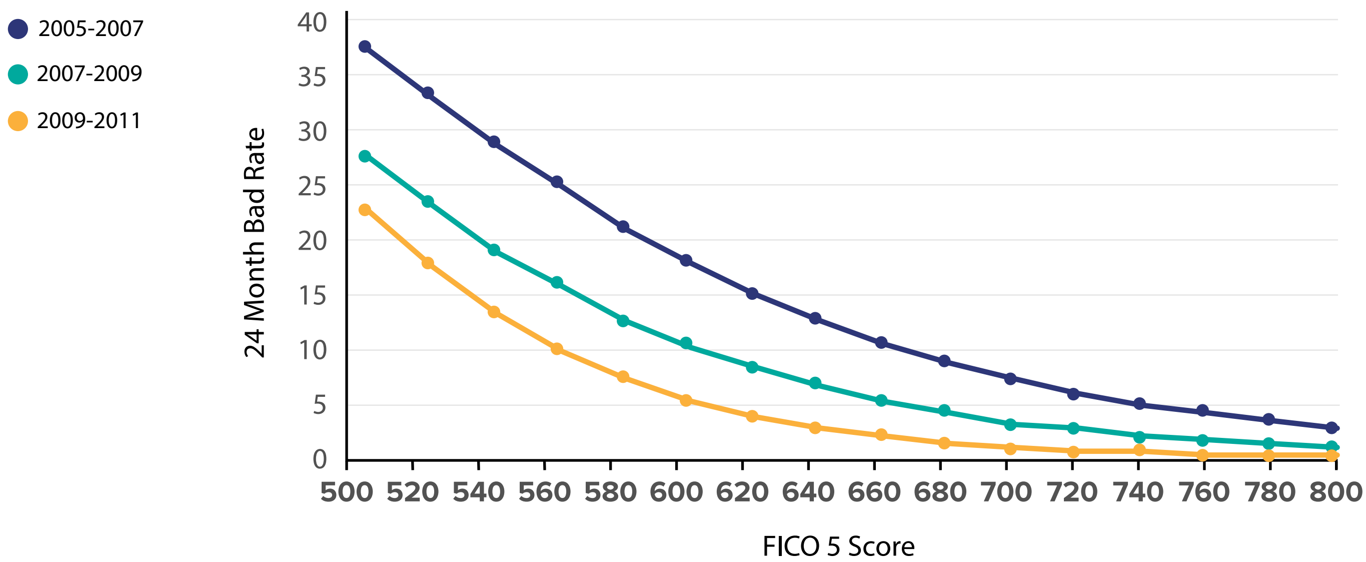


Exhibit 10b takes a closer look at how environment and other factors such as underwriting affect default levels along the score spectrum. In the 24 month period starting in 2007, consumers scored as 640 FICO® Score had a 24 month bad rate of 12.8%. Two years earlier, the same default level was seen by consumers with a 580 FICO® Score. In the 2005-2007 period, economic distress had not yet developed broadly.

By 2014, with recovery in full swing and far better underwriting practices, scores around 540 were experiencing defaults similar to the 640 cohort from 2007. This variance of default rates due to a changing economic environment and underwriting practices highlights the critical need for lenders to validate how credit scores map to their customers' behavior in the current environment.

Exhibit 11b: FICO® 5 Bad Rates Over Time



SECONDARY MORTGAGE MARKET ISSUES

We have concentrated so far on scoring issues related to consumers, lenders and the GSEs. We now move on to secondary market investors who use credit scores as a critical input to their risk and portfolio management models.

The secondary mortgage market includes Agency residential mortgage backed securities (RMBS), non-Agency RMBS and credit risk transfer deals in both reinsurance and bond form. Private mortgage insurers are also increasingly involved in the secondary market through reinsurance and cat bond[19] transactions.

The secondary market has recently picked up volume substantially following nearly a decade of stagnant activity after the failure of so many subprime AAA rated deals during the credit crisis. Participants are once again looking to take credit risk but remain appropriately skeptical about the power of ratings to explain all of the risks inherent in credit exposed transactions. Investors have moved towards more detailed in-house analysis of risk. Credit score distributions are a vital input to their models.

Investors have different needs than lenders and consumers. One of the most important is ready access to regularly updated scores on the loans underlying bond pools. While credit scores at origination are useful, an investor must know how that risk has evolved in order to accurately price secondary issues. They also need information on score migration at a granular level so they can match up performance against different drivers at various points in time. Issuers currently provide updated FICO® Score distributions and new scoring firms must be able to offer similar services if they hope to gain acceptance in the market.

Investors have spent tens of millions of dollars modeling FICO® Score behavior and the impact on returns. Many regulated investors such as banks and insurance companies have also subjected their models to rigorous independent validation. This process has taken years to complete and we expect more years of such vital background work will be necessary before widespread acceptance of any new models occurs. In fact, if acceptance does not follow such a process, we would be very worried that the risks of such new models are poorly understood. Beyond the modeling and validation issues, simply changing risk and portfolio systems to accommodate new scores will be lengthy and costly.

While investors are free to use or discard new scoring approaches as they see fit, policymakers must be keenly aware of the effect that new regulatory mandates in the market could have on access to and the cost of credit. For instance, if FHFA decided that lenders could submit any scores they wanted to GSEs for new loans and not be required to submit standard scores, the GSEs would likely be disappointed in the tepid reaction of the market to any transactions that included loans not scored by traditional credit models. Investors would likely eventually implement models and return to the market but a period of score confusion could be very costly in terms of yield required on non-standard scored loans. To be clear, investors hold the credit risk on the deals they purchase. They do not have the policy objectives that regulators promote. Investors will require excess return in order to bear the risk associated with unproven or poorly fit models and that cost will be passed on to consumers.

Stopping the healthy momentum that has built up in the past three years in the credit risk transfer space could actually serve to restrict credit availability until models and systems are adjusted to accommodate new scores. Likewise, introducing change now just as the GSE single security platform is finally approaching completion could set that program back years.

Investors will happily consume innovative analytics if they contain important new insights, but rolling out mandates of such models is unwise as this could disrupt segments of the market that cover the vast majority of credit risk, and function very effectively at present.

COMPETITION IN THE CREDIT SCORE MARKET

Competition is almost always good for consumers as it tends to bring about better pricing, greater efficiencies and important innovations. In the case of the market for credit scores, the situation is more complex as competition may also have the unintended consequences of market confusion, high implementation costs, delays to wider availability of credit and the potential for a dangerous system-wide race to the bottom in credit scores. How these positives and negatives are balanced will have far reaching effects in the credit markets.

FICO has long lead the market for consumer credit scoring in the U.S. FICO was formed in 1956 and began producing credit scoring services several years later. Acceptance and use of the FICO® Score for mortgages became extremely widespread once the GSEs began using the scores in 1995 following many years of use in non-mortgage credit markets. The first tri bureau score designed to compete with FICO began in 2006 with the creation of VantageScore by the three major credit bureaus. Although VantageScore has made some inroads, FICO remains the only score required by the GSEs.

While we might normally expect competition to increase innovation while reducing prices, the structure of the credit scoring industry is anything but normal. VantageScore is owned by the three credit bureaus who control access to and pricing of their data. As this data is an absolutely critical input to traditional credit scoring models, the ownership structure of VantageScore could result in either limited or very expensive access to the data for competing firms such as FICO. Thus, increasing the use of VantageScore, particularly through a GSE mandate, could dangerously obstruct true competition.

Beyond competitive issues, implementation costs of entirely new credit scoring methods are extraordinarily high in terms of both time and money. The GSEs' ongoing reliance on prior models provides evidence of that even when FICO has worked hard to ensure seamless compatibility, industry participants find there is still ample model management work to be done in order to adopt the latest models. New models with new sets of inputs, new score ranges and, most importantly, completely different ways of interpreting scores will be far more difficult to adopt on a widespread basis.

RACE TO THE BOTTOM

While all of the issues mentioned above are serious, the most important issue in a multi-score world is the potential for a race to the bottom for credit scores. There is only so much score providers can do in terms of accessing new populations of creditworthy borrowers. Our fear is they will be tempted to adjust their models in ways that make current borrowers look less risky. After all, loan officers and realtors are primarily concerned with closing the deal and looser score criteria helps that happen.

If this race to the bottom scenario seems unreasonable, all we have to do is look back at the pre-crisis days to see ample evidence of risk misrepresentation throughout the mortgage system from realtors to lenders to rating agencies to the GSEs. While everyone was involved in that fiasco, the role of the rating agencies is perhaps the closest parallel to a possible race to the bottom in credit scores. In the years immediately preceding the crisis, getting a AAA rating on subprime mortgage bonds was essential for marketability; when deal arrangers could not convince one rating agency to issue a AAA, they simply went to the next agency. This “rating shopping” became the norm so quickly that all of the major rating agencies quickly lost sight of the true risk of the bonds as they became caught up in the race for revenues. The same could happen very easily with an uncontrolled move towards multiple credit scores when the score is selected by an entity that doesn’t necessarily assume the risk of the loan.

Some may argue that a race to the bottom is unlikely in the current environment which is enjoying very low default rates and good property appreciation. However, robust markets are often where such behavior begins because good macroeconomic conditions can temporarily mask the effects of emerging bad practices. We have 2006 in the residential market as a prime example of such behavior, where poor risk management was covered up by increasing property prices. In fact, in 2006 many people were loudly calling for a policy of increasing access to affordable credit – just as they are today.

How can we benefit from valuable innovation with new data sources and analytic techniques and still avoid the drawbacks mentioned above?

First, we must recognize that the vast majority of Americans are very well served by the current credit scoring paradigm. A far greater proportion of people in the U.S. are scored in a fair and compliant manner than anywhere else in the world. This is due to the long term collection of data by the three credit bureaus and the consistent performance of the FICO models through all environments in properly rank ordering default risk. The consumer protections provided throughout the credit ecosystem, while not perfect, are extremely advanced and offer consumers the opportunity to be fairly judged on their performance as credit customers – and to correct errors when they find them.

Second, scores provided as a result of responsibly using new alternative data sources beyond the traditional credit files can help expand the scorable universe through the addition of data not contained in CRA files. However, these scores should be used as on ramps to mainstream credit participation by consumers with thin or stale files. Rather than simply immediately granting mortgage credit to these consumers, we suggest a more measured approach. FICO essentially does this by offering FICO® Score XD for credit in the credit card industry. This approach is not very burdensome when you consider that a consumer only has to have one trade line open for six months and one trade line reported in the last six months in order to be traditionally scored.

We are not suggesting that FICO should not be subject to competition on credit scoring. However, competition should be fair, transparent and evidence based in order to avoid a race to the bottom. Given FICO's success in consistently rank ordering mortgage borrower performance across all economic cycles, the GSEs must have a truly compelling reason to even consider replacing or supplementing FICO® Scores.

Simply expanding the universe of scorable consumers through the use of less robust models does not justify upsetting a well working market, especially when very few of those additional consumers would qualify for conventional mortgages.

Investors are of course free to choose any tools they find helpful in identifying, pricing and managing risk. However, they should also be acutely aware of just what they are evaluating. Bonds and other investments such as reinsurance deals should continue to receive the consistent reporting of traditional scores as they have for over a decade.

CONCLUSION

Millions of Americans lack access to valid credit scores. Sitting outside the mainstream credit market can restrict their personal economic growth and potentially lock them into a cycle of borrowing from predatory lenders in order to meet their credit needs.

While some and perhaps most of these credit invisibles may not yet be ready to carry the burden of long term debt, leaving them out of the system will ensure that they never develop that capacity.

Recent data and analytic advances have opened up new possibilities for scoring the previously unscorable and beginning their transition to fully participating in mainstream financial services. However, these innovations come with significant risks. Widespread implementation must be done carefully to avoid the reemergence of systemic risks to the very system that could benefit the currently unscored.

The credit system works well for the vast majority of credit seeking Americans by accurately portraying their propensity to pay their credit obligations. We can and should expand the universe but not at the cost of harming the hundreds of millions who are well served today.

Policymakers should move cautiously to ensure that the advantages offered by innovation are realized without kicking off a risky race to the bottom in credit scoring as competing firms grab for market share. To the extent it occurs, expansion must be safe, sound and strictly evidence based.

Policymakers also must remember that a credit score is but one input into the underwriting decision. While lack of score can be a barrier to entry, when looking at the unscored population, we must be careful not to overestimate the access to affordable credit that the mere presence of a score would generate. Most of the newly scored would be rejected for credit based on perfectly legitimate underwriting. While expanding the availability of credit to those who can handle it is good, burdening people with credit they cannot handle is counterproductive for both consumers and investors.

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3. Fair Isaac Corporation (FICO) is an independent software and data analytics company. FICO first introduced the FICO® Score in 1989.
4. VantageScore Solutions (VantageScore) is jointly owned by the CRAs – Equifax, Experian and TransUnion. We use "Vantage" and "VantageScore" to refer to either the company, VantageScore Solutions, or the credit scores produced by VantageScore.
5. Vantage may overestimate the unscorable population by including consumers who have less than three trade lines as unscoreable by traditional models. In fact, FICO® Scores those consumers. The three trade line issue arises with regard to Freddie Mac's general requirement for three trade lines. That's an underwriting requirement, not a scoring requirement. This could result in Vantage also overestimating the lift in scoreable consumers they get with their new approach.
6. "Can Alternative Data Expand Credit Access?" FICO Decisions – Insights White Paper No. 90
7. www.ficoscore.com/about/
8. We focus on VantageScore version 3.
9. "Exclusionary Credit Score Modeling Limits Access to Credit for Millions of Consumers … Even Perhaps Your Next Door Neighbor", VantageScore, November 2016, page 3, https://www.vantagescore.com/resource/144/exclusionary-credit-score-modeling-limits-credit-access
10. "Maximizing the Credit Universe" June 2015, VantageScore, www.VantageScore.com page 4
11. "Better predictive ability among sought-after borrowers", March 2014, https://www.vantagescore.com/images/resources/American%20Banker%20Insert%20-%20March%202014.pdf
12. We give the Gini score as a range because it is unclear whether the quoted newly scored Gini is for originations or account management.
13. "Exclusionary Credit Score Modeling Limits Access to Credit for Millions of Consumers" November 2016
14. http://www.fico.com/en/blogs/risk-compliance/impact-medical-debt-fico-scores/
15. We can see a path for the GSEs to accept a new score to be used as a "waterfall" score in the event a traditional FICO® Score is unavailable, similar to how FICO® Score XD can be used in the credit card market. However, this approach in the credit card market is unique, as the odds ratios for traditional FICO® Scores and FICO® Score XD are designed to be the same. It would not be wise to waterfall to another score with potentially different odds ratios. Furthermore, secondary market investors would have to be informed which loans in a pool were accepted based on a new score so that the investors could perform their own analysis.
16. Note that these are FICO® 5 scores, the score version generally used by the GSEs.
17. Differences in the data held by each CRA can result in scores not being available from all three for a particular consumer. For instance, a potential borrower might have only very recent trade line activity and one CRA may have a timing lag in obtaining and posting that information compared to the other CRAs.

18. Consumers can find out where to get their FICO® Scores on ficoscore.com. This site shows consumers how to get FICO® Scores directly from an authorized FICO® Score retailer to ensure they are actually getting their FICO® Scores — and not any other type of credit score.
19. Private mortgage insurance "cat" or catastrophe bonds are similar to property and casualty catastrophe bonds which investors buy in the hope that actual losses turn out to be less than expected losses. This is a capital markets form of tradeable reinsurance and helps establish a market price of risk.

ALTERNATIVE CREDIT SCORES AND THE MORTGAGE MARKET:

OPPORTUNITIES AND LIMITATIONS

Ann B. Schnare

EXECUTIVE SUMMARY

This paper addresses the question of whether it makes sense to require Fannie Mae and Freddie Mac (otherwise known as the Government Sponsored Enterprises, or GSEs) to accept the VantageScore as a substitute or replacement for a traditional FICO® Score. Based on an analysis of the likely costs and benefits, it concludes that such a policy would have little, if any upside, and troubling potential downsides for the U.S. mortgage market.

Both scores are based on data obtained from the consumer's credit file—not on the kinds of "alternative" data sets envisioned by many consumer advocates. Since the two scores are based on the same underlying data, use of the VantageScore is unlikely to lead to a significant—or sustainable—expansion of the mortgage market. Indeed, the major difference between the two scores is that the VantageScore drops its minimum scoring requirements regarding the length and recency of the consumer's credit history, which appears to result in a significant reduction in the score's predictive power. Less reliable credit scores would undermine the ability of lenders, investors and insurers to manage and price their credit and interest rate risk, which would eventually lead to higher mortgage rates.

At the same time, allowing the FICO® Score and VantageScore to be used interchangeably would threaten the standardization that is key to the efficient operations of the secondary market, including the all-important To-Be-Announced (TBA) market. It would also introduce significant operational and systems costs for market participants, raise the risk of adverse selection, and conceivably lead to a general "race to the bottom" as loan originators gravitate towards the score that produces the highest rating. One need only look at the years immediately preceding the 2008 housing crisis to realize that this last possibility is a real one.

The ownership structure of VantageScore also presents various problems. FICO is a standalone analytics firm that generates its score independently, based on data from each of the credit bureaus. In contrast, VantageScore is owned and distributed by the three credit bureaus—Equifax, Experian and TransUnion. The credit bureaus not only control access to consumers' credit files, they also control the distribution and pricing of competing credit scores, including the FICO® Score. If the GSEs ultimately determine that the VantageScore is a valuable substitute or replacement for a FICO® Score, they should take steps to ensure that the credit bureaus do not use their control over credit reports and the pricing of competing products to consolidate their power and steer the market to any particular score, including their own.

In the end, the decision to use a particular score (or scores) should rest squarely with the GSEs and their regulator--not with originators, who hold no credit risk, or other interested parties. The industry's development and application of commonly accepted measures of risk, including but not limited to FICO® Scores, has been key to the creation of a broad and liquid secondary mortgage market. It may well be time for the GSEs to move to an updated version of the FICO® Score or to consider an alternative metric. However, any changes should be made with caution, and implemented in a way that ensures continued transparency and consistency over time. Otherwise, despite the best intentions, consumers will ultimately pay the price in terms of higher mortgage rates, inappropriate products, and reduced access to mortgage loans.

1.0 INTRODUCTION

Recent concerns over seemingly low volumes of mortgage originations[1], while multifaceted in nature, have focused renewed attention on how best to assess the creditworthiness of "non-traditional" borrowers.

Such borrowers include recent immigrants with limited access to the traditional banking system, younger households who have yet to establish sufficient credit histories, and other consumers who for a variety of reasons have no recent credit activity that can be used to construct a traditional credit score.

For more than 20 years, the mortgage industry has relied on FICO® Scores to measure a consumer's willingness and ability to handle debt, often referred to as their "creditworthiness". The score, which was created by FICO, has gone through a number of iterations to reflect changing consumer behavior, lending standards, and data reporting practices. Although there is now a special version of a FICO® Score that incorporates additional data sources[2], the versions currently used by the mortgage industry are solely based on data obtained from a borrower's credit file[3].

Credit files are assembled and maintained by three publicly-held corporations: Equifax, Experian and TransUnion. These companies, which are commonly known as the "credit bureaus" or "credit reporting agencies" (CRAs), compile information on the credit profiles of individual consumers and then sell the data to potential creditors and other qualified entities such as insurers, employers and landlords[4]. The credit files provided by the three bureaus are similar in content, but differ somewhat due to differences in their coverage and data reporting cycles. All data are supplied on a voluntary basis or collected from public records, and typically provide detailed information on an individual's various credit lines (e.g., payment history, outstanding balances, credit limits, etc.), any reported collections, tax liens, bankruptcies, or foreclosures, and a list of entities that have requested the reports (otherwise known as "credit inquiries"). In some cases, credit files also contain some information on a consumer's payment history on other recurring bills (e.g., utility, telecom, rent), but the coverage is extremely limited.

Some have recently argued that the industry's long-standing reliance on traditional FICO® Scores has stifled innovation and made it more difficult for otherwise-qualified borrowers with unscoreable or non-existent credit profiles to qualify for a mortgage. In fact, both industry and consumer groups have recently urged the Federal Housing Finance Agency (FHFA) to require Fannie Mae and Freddie Mac to take steps to ensure "needed competition to the scoring system" and to "update the outdated credit scoring system" by exploring alternatives to FICO® Scores.[5] They have also supported proposed legislation that would require the GSEs to consider the use of alternative credit scores.[6]

The most frequently mentioned alternative to a FICO® Score is the VantageScore, which is jointly owned and produced by the three credit bureaus. The VantageScore is similar to the traditional FICO® Score in that both are based on data obtained from an individual's credit report. However, unlike the FICO Score, the VantageScore drops its minimum scoring requirements regarding both the length and recency of a consumer's credit history.[7] According to the credit bureaus, dropping these requirements would lead to a 30 to 35 million increase in the number of consumers who can be scored.[8] However, as described in more detail below, the ability to be scored does not necessarily translate into increased mortgage demand or to a larger number of borrowers who ultimately meet Fannie and Freddie underwriting standards.

There is no doubt that ongoing innovation in credit scoring is both desirable and necessary in order to meet the evolving needs of consumers and credit markets. The demographic and financial profiles of potential homeowners are very different today than they were 20 years ago, and the rise of big data has opened doors to new data sources that could potentially enhance the industry's ability to measure credit risk and score a broader segment of the population.[9] There is also no doubt that ongoing competition is a powerful way to ensure that such innovation occurs. However, when one takes a closer look at the issues that could arise if lenders were allowed to qualify applicants on the basis of either their Vantage or FICO® Score, the policy position that FHFA should take is not as obvious as it might at first appear.

The purpose of this white paper is to shed some light on whether or not it makes sense to require the GSEs to accept the VantageScore as a substitute for a FICO® Score. It begins with a brief review of the use of FICO® Scores in the mortgage market. It then examines the debate that has evolved over time regarding the need for "alternative" scores and what the term actually means with respect to the options that are available today. Finally, it looks at the potential benefits of requiring the GSEs to accept an alternative score(s), as well as the likely costs.

2.0 CREDIT SCORES IN THE MORTGAGE MARKET

FICO® Scores were introduced to the mortgage market in the early 1990s as part of Freddie Mac's automated underwriting initiative and were soon adopted by other industry participants, including Fannie Mae, FHA, and investors in non-agency loans.

Prior to that time, lenders were required to assess a borrower's creditworthiness by examining the numerous line items in the consumer's credit file. While there were some broad guidelines for this assessment—for example, no more than two 30-day or one 60-day delinquency in the past 12 months, no foreclosures within the past 7 years, etc.—given the wealth of information contained in these files, this was an inherently subjective process that was widely believed to disadvantage minorities.

The introduction of FICO® Scores to the mortgage underwriting process has led to a more efficient, consistent and objective way of evaluating the creditworthiness of individual borrowers and the credit risk of the underlying loan.[10] By relating the various line items that appear in a consumer's credit files to their subsequent performance on various forms of debt (measured by the presence of a 90 day delinquency), FICO® Scores provide a simple, statistically-based measure of one of the most important components of mortgage risk, namely, the borrower's willingness and ability to handle their financial obligations.[11] The use of FICO® Scores has been repeatedly tested over the years and found to be compliant with adverse impact rules. Indeed, several studies have found that when compared to manual underwriting, automated underwriting and the use of credit scores significantly increased the number of applicants who qualified for a mortgage, particularly minorities.[12]

While the use of FICO Scores in the mortgage evaluation process has produced considerable benefits, the score's reliance on data maintained by the three credit bureaus inevitably limits its applicability for the roughly 45 million US adults who do not have credit files or who have files that are either too sparse or too stale to produce a reliable credit score.[13] According to the Consumer Financial Protection Bureau (CFPB), 48 percent of these currently "unscoreable" consumers are either under 24 years old or over 65, making them unlikely candidates for a mortgage. However, for the remainder of this population, reliance on credit bureau data alone could limit their access to mortgage credit by failing to capture other potential indicators of creditworthiness, for example, the timely payment of rent, utility and telecom bills. Unfortunately, while some institutions (e.g., local utilities) provide such data to the credit bureaus on a voluntary basis, the coverage is relatively thin and often limited to negative events.

Numerous studies have concluded that the inclusion of such non-bureau data could increase the number of consumers who can be scored and expand their access to credit markets.[14] Both the FICO® Score and VantageScore now incorporate data on utility, telecom and rental payments when available from the credit bureaus.[15] However, the number of borrowers affected is relatively small due to the limited number of entities supplying such information in a comprehensive form. According to FICO, only about 2.5 % of credit files have meaningful utility or telecom data, while less than 1% of files have information on rental payments.[16] As a result, some have called for the adoption of an alternative score that would incorporate such "non-traditional" data on a broader basis in order to capture the creditworthiness of individuals who currently cannot be scored.

3.0 WHAT IS MEANT BY AN ALTERNATIVE CREDIT SCORE?

Any discussion of the role of alternative credit scores must begin by distinguishing between a "traditional" and a truly "alternative" credit score. While the two are very different, they are sometimes confused or used interchangeably.

A "traditional" credit score relies entirely on data that are captured by the three credit bureaus. Both the FICO® Score and the VantageScore fall into this category, along with numerous other scores that have been developed for specific uses in particular industries. While these "traditional" scores rely on the same basic set of data, the algorithms that are used to construct the indices are different, including the weights assigned to various events (e.g., past delinquencies, unpaid medical bills, etc.) as well as the minimum criteria for producing a score.

In order to be scored, FICO requires that a consumer have at least one trade line that is at least six months old, as well as one that has been reported within the last six months.[17] According to FICO, roughly 92% of applicants can be scored using these two criteria.[18] In contrast, VantageScore does not follow these minimum scoring requirements[19] but otherwise relies on the same bureau data that FICO employs. According to the credit bureaus, the use of the VantageScore would enable an additional 30 to 35 million individuals to receive a credit score.[20]

In contrast to traditional credit scores, there are also a number of truly "alternative" scores that incorporate data not typically found in a consumer's credit file as either a substitute or a supplement to bureau data.[21] Such "non-traditional" data might include rental, utility and telecom payments, as well as a broad array of other indicators thought to proxy a borrower's ability to meet their financial obligations, for example, residential stability, the regular payment of child support, performance on payday loans, the management of checking accounts, etc. While such considerations are often part of a manual underwriting process, a statistically reliable credit score that incorporates non-bureau data has yet to be used in the mainstream mortgage market.

There are numerous alternative scores in the market today, ranging from those that focus on a consumer's payment patterns on on-going bills to those that incorporate non-financial data, for example, information gleaned from social media accounts. In considering an alternative score that might be applicable to the mortgage market, one needs to take a number of considerations into account, including the nature of the data that is being used and whether its use would be compliant with the Fair Credit Reporting Act or have a disparate impact on protected classes.

FICO has laid out six broad principles for the use of alternative data, summarized in Table 1 below. Each guideline is highly applicable to the mortgage industry. In general, the most useful alternative data would appear to be the types of financial considerations that are often part of a manual underwrite, for example, the timely payment of utility and telecom bills. While non-financial data can sometimes serve as a proxy for a consumer's creditworthiness (e.g. time at current residence), use of such data is more likely to be problematic.[22] For example, whether a consumer holds a degree from Cal Tech or a local community college—or how often they use their cell phone during business hours—could conceivably be correlated with future defaults. However, the use of such data could serve to reinforce existing stereotypes, raise regulatory and disparate impact concerns, and conceivably hurt the very borrowers that the industry is trying to serve.

Table 1: FICO's Alternative Data Collections Guidelines

Regulatory Compliance	The data source must comply with all regulations governing consumer credit evaluation
Depth of Information	Data sources that are deeper and contain greater detail are often of greater value
Scope and Consistency of Coverage	A stable data base covering a broad percentage of consumers can be favorable
Accuracy	How reliable is the data? How is it reported? Is it self-reported? Are there verification processes in place?
Predictive Value	The data should predict future consumer repayment behavior
Additive Value	Useful data sources should be supplemental or complementary to what's in the credit files of the CRAs.

Source: FICO

Based on its review of several earlier versions of alternative credit scores, the Center for Financial Services Innovation concluded that the "widespread use of alternative data could dramatically broaden the reach of mainstream financial services companies."[23] If one is primarily interested in market expansion, this suggests that the most promising alternatives would be scores that incorporate financial data not typically found in a consumer's credit file, for example, FICO® Score XD.[24] However, whether or not an increase in the number of scoreable consumers would actually lead to an increase in qualified applicants or mortgage demand would still be an open question that would need to be resolved.

4.0 THE COSTS AND BENEFITS OF ALTERNATIVE SCORES

Any consideration of the potential costs and benefits that would flow from the use of alternative credit scores should recognize how FICO® Scores are actually used in the mortgage market today.

For example:

- FICO® Scores are used by the GSEs (and others) to determine the price of a loan. In general, consumers without a FICO® Score are generally put in the highest risk bucket and are charged the highest rate.
- FICO® Scores are also used for disclosure purposes throughout the secondary mortgage market. For example, FICO® Scores (along with other risk metrics) are used in the TBA market to specify the characteristics of loans that will eventually be delivered into a given pool. The TBA market, which is key to the ongoing liquidity of the secondary market, enables borrowers to lock-in their mortgage rates in advance of the actual closing of the loan. FICO® Scores are also used to evaluate the underlying credit risk of mortgage pools by investors and insurers participating in the GSEs' back-end risk sharing transactions, as well as to estimate pre-payment rates and interest rate risk by investors in mortgage-backed securities (MBS).
- Finally, FICO® Scores are used by the GSEs to establish minimum eligibility criteria for different types of loans. While the precise cut-off varies by loan type and the presence of other risk factors, both Fannie and Freddie have adopted minimum FICO® score thresholds of 620. In practice, however, lenders often use a higher cut-off through what are known as "credit overlays".[25]

Each of these functions is important—and each affects both the costs and availability of mortgage credit.

However, it is important to recognize that neither Fannie nor Freddie currently uses the FICO® Score as the sole determinant of a borrower's "creditworthiness" in its automated underwriting models. Freddie Mac's Loan Prospector (LP) uses the FICO® Score as one of several inputs drawn from the consumer's credit file.[26] Fannie Mae's Desktop Underwriter (DU) does not use a FICO® Score at all, but instead relies on its own statistical assessment of the information contained in a borrower's credit file, in effect creating its own credit score. Since both GSEs have also developed protocols for underwriting the “unscoreable” population, any benefits derived from the use of an alternative score may be less than might first appear.

Thus, while the use of an alternative score may affect a lender’s willingness to originate the loan and the mortgage rate that will be charged, the fact that a consumer can be scored and has a score that falls within a generally acceptable range does *not* imply that he or she will actually qualify for a GSE mortgage. Indeed, according to FHFA’s Director Watt:

> ***“…both Fannie and Freddie are using a lot of information other than credit scores to increase access to credit anyway. They have probably as much information about people’s ability to pay as the two credit scoring companies (i.e., FICO and Vantage Score)…have. We just didn’t find that there was significant difference in these credit scores from an access perspective.[27]”***

4.1 POTENTIAL BENEFITS

With these caveats in mind, there are at least two types of potential benefits that could arise from the use of alternative credit scores:

- More accurate measures of credit risk
- Ability to reach a broader segment of the population

A particular score’s ability to achieve these objectives will depend on how the score is constructed and the underlying data that are used. Any new score could potentially improve the allocation of mortgage credit by providing a better risk metric. However, alternatives that introduce additional data into the assessment of credit risk would be more likely to expand the universe of qualified borrowers and lead to an increase in mortgage originations.

4.1.1 IMPROVED RISK METRICS

There is always room for improvement and innovation in the scoring process, even if the underlying data (i.e., a consumer’s credit file) are the same. For example, the FICO® Score has gone through a number of revisions that have improved its predictive power while maintaining or increasing the number of consumers that can be scored. Despite these improvements, neither Fannie nor Freddie has adopted the latest version of the FICO® Score (FICO® Score 9), presumably due to the significant operational and systems costs that are associated with moving to a different metric (described in more detail below).

Whether or not the adoption of the VantageScore as an alternative or substitute for a traditional FICO® Score would lead to a significant improvement in the assessment of mortgage risk—and whether that improvement would be worth the costs involved—is an open question that is best determined by Fannie Mae, Freddie Mac, and other participants in the secondary mortgage market.[28] However, on the surface at least, it would appear that simply dropping FICO’s minimum scoring requirements would be unlikely to lead to more accurate measures of credit risk. If anything, the opposite appears to be true.

An analysis by FICO compared the odds-to-score ratios of its traditional FICO® Score with and without its minimum scoring requirements in order to estimate the predictive power of the VantageScore.[29] It concluded that eliminating minimum scoring requirements without the addition of non-bureau data for consumers with “stale” credit files or with files that contained collections data alone would lead to a significant drop in the score’s predictive power. A recent paper by Parrent and Haman comes to the same conclusion.[30] In particular, they note:

> ***“VantageScore published a Gini coefficient of 54.78% on the newly scored population that compares rather unfavorably to their overall VantageScore 3.0 Gini of 73.47-79.49%. The gap in goodness of fit is actually larger than the difference between the newly scored and total population Gini because the***

> ***total population includes the relatively poorly fit newly scored consumers. This fit degradation is not surprising given the sparse information available to fit the newly scored consumers…"***

Parrent and Haman also note that, despite their common range in values, the odds ratios that are associated with a FICO® Score[31] and VantageScore are not necessarily equivalent.

In the end, the threshold question that the GSEs must address is whether an alternative score will maintain, if not enhance, their ability to measure mortgage risk over the different stages of the credit cycle. An affirmative answer should be seen as a prerequisite to the adoption of any new score, even if that score would result in a larger number of scoreable consumers. As evidenced by the recent housing crisis, a general loosening of scoring standards would serve little, if any public purpose. Less reliable credit scores would undermine the ability of lenders, investors and insurers to manage and price their credit and interest rate risk, which would eventually lead to higher interest rates. And while some previously unscoreable consumers might experience an increase in their access to mortgage credit, they would generally face higher prices and receive loans that were either "lower than deserved or higher than safe."[32]

4.1.2 MARKET EXPANSION

The primary reason that some housing advocates support the use of alternative scores is that they believe it would lead to a significant increase in the number of qualified borrowers as well as in the overall volume of mortgage originations. Different segments of the population clearly differ with respect to their use of traditional credit, making appropriate yardsticks for measuring their likely mortgage performance undoubtedly different. For example, recent immigrants are frequently more difficult to score due to their limited use of traditional credit. While such borrowers can often qualify for a mortgage through a manual underwriting process, their inability to be scored by standard industry metrics has undoubtedly reduced their access to mortgage credit.

The challenge for the industry is to find an alternative way of scoring this and other segments of the population in a way that provides an equally accurate measure of credit risk but also results in a larger number of qualified borrowers. Documenting such an effect is not an easy task since it requires a retrospective analysis of the acceptance rates of both successful and unsuccessful mortgage applicants. However, a better understanding of the potential magnitude of these effects can be found by taking a closer look at both the numbers and characteristics of adults who cannot be scored under current FICO® Score guidelines.

A recent FICO report[33] divided the unscoreable population into three broad groups:

- Individuals without a credit file (i.e., "no file")
- Individuals with active credit lines that are less 6 months old (i.e., "sparse files");
- Individuals with a past credit history, but no currently active credit lines (i.e., "stale files").

According to FICO, the unscoreable population is about evenly divided between consumers with no credit files (25 million) and consumers with either sparse or stale credit files (28 million) that fail to meet FICO's minimum scoring criteria.[34] While the VantageScore may be able to score some of the currently "unscoreable" consumers with sparse or stale credit files, it can do nothing for the 25 million consumers without any credit record at all.

Moreover, a closer look at the characteristics of the 28 million "unscoreable" consumers with limited credit records suggests that changes to the scoring formula will be unlikely to produce a significant increase in access to mortgage credit, particularly without the addition of non-bureau data. The following table divides this unscoreable population into three mutually exclusive groups:

- Consumers with stale credit files with no derogatory data ("voluntary inactive")
- Consumers with stale credit files with derogatory data and/or sparse credit files that contain only collections/public records data ("involuntary inactive")
- Consumers with less than 6 month credit history ("new to credit")

For each of these groups, it shows their estimated size, median age, and typical application rates (i.e., the share of consumers in each category who apply for credit in a given year.) It also presents FICO's estimates of the percent of newly scoreable consumers who would receive a FICO® Score above 620 and above 680 if its minimum scoring criteria were dropped.

Table 2: Characteristics of Consumers with Sparse and Stale Credit Files

Segment	Size (Millions)	Median Age (Years)	Application Rates	Impact of Eliminating Minimum Scoring Requirements	
				% >620	% >680
Involuntary Inactive	18.2	43	20-30%	6%	0%
Voluntary Inactive	7	71	1-4%	94%	52%
New to Credit	2.8	24	35-40%	42%	20%

Source: FICO, Minimum Score Research and Innovation, August 2017

The "involuntary inactive" group accounts for the great majority (65%) of all "unscoreable" consumers with either sparse or inactive credit files. Consumers in this category have either experienced a bankruptcy, tax lien, or collection event that has likely made them ineligible for additional credit. While many of these consumers may well be in the process of financial recovery, the information contained in their credit bureau files does not enable one to determine whether or not this is in fact occurring—regardless of the methodology employed. As a result, one can reasonably argue that receiving a traditional score would actually hurt these consumers since, without additional data, their resulting credit scores would likely be very low—an outcome that would likely preclude a manual underwrite. Indeed, according to FICO, only about 6 percent of all consumers in this group would score above the 620 cut-off typically seen as determining eligibility for a mortgage and virtually none would have scores above 680—a threshold that is more characteristic of GSE loans in recent years.

Likewise, it seems unreasonable to expect that scoring the next largest group—the voluntarily inactive—would lead to a significant increase in mortgage demand. As shown in the chart, the median age of these consumers is 71 years and the rate at which they apply for additional credit is extremely low—typically between one and four percent per year. Presumably, many in this group may have chosen to pay off their debts in anticipation of retirement, and many may be homeowners who own their homes free and clear. As a result, although their scores would be relatively high—94 percent would score above 620 and about 52 percent above 680—it seems unlikely that producing a score for this group would have a noticeable impact on mortgage demand.

Finally, the median age of consumers in the smallest group—those who are new to credit—is only 24 years—considerably below the 32 year median age of first-time homebuyers.[35] For many of these 2.8 million currently unscoreable consumers, the ability to be scored is only a matter of time, i.e., no more than 6 months away.

Although roughly 42 percent of these consumers would have scores above 620 if minimum scoring criteria were dropped and 20 percent would score above 680, the relatively small numbers involved would be unlikely to lead to a significant increase in mortgage demand.

Table 3 presents FICO's estimates of the number of additional consumers who would be potential candidates for a conforming mortgage if its minimum scoring criteria were dropped. It begins with the 7.4 million consumers who would have scores of 620 or higher. It then eliminates consumers who are younger than 25 or older than 65, as well as homeowners and consumers with a 90 day delinquency or foreclosure. After making these adjustments, it finds that roughly 2 million consumers could conceivably be candidates for a mortgage—a conclusion that is roughly the same as VantageScore estimates.[36] However, a closer look at this population suggests that the actual number would most likely be considerably lower.

Table 3: Impact of Eliminating Minimum Scoring Criteria

Begin	7.4 million consumers with 620 or higher	Remaining Count
Exclude	Younger than 25 and Older than 65	**3.2 million**
Exclude	Any indication of current homeownership	**2.05 million**
Exclude	Any 90 day delinquency or foreclosure in prior two years	**2 million**

The remaining 2 million consumers are composed of two groups:

- 1.8 M have stale credit files; 65% of whom have not had an update within the past 48 mos.
- 200 thousand are new to credit; 59% have a revolving credit limit of less than $1000

Source: FICO, op. cit., August 2017

To begin with, 90 percent of these seemingly eligible consumers (1.8 million) have stale credit files and most of their files are very old; in fact, some 65 percent of these stale file consumers have had no reported trade line activity within the last 4 years. It seems highly unlikely that these consumers would qualify for a mortgage in the absence of additional data; in fact, one can reasonably argue that such consumers would be better off with a manual underwrite. Of the remaining 200 thousand consumers who are new to credit, almost 60 percent have a revolving trade line that is less than $1000. Again, without additional information, it seems unlikely that such consumers would be viewed by the GSEs as either ready or able to handle the responsibilities of a mortgage.

Thus, while the VantageScore could conceivably qualify some additional borrowers by dropping FICO's minimum scoring requirements, the impact would likely be relatively small—certainly well below the numbers that have been cited in the past. FHFA Director Watt has apparently come to the same conclusion, noting that:

> ***"we believe that, regardless of the decision we make on credit score models, the short term impact on access to credit will not be nearly as significant as was first imagined or as the public discourse on this issue has suggested. Credit scores are only one factor the Enterprises use to evaluate loan applications and the Enterprises currently use the same or even greater levels of credit data in their underwriting systems as the credit scoring companies use."***[37]

If meaningful progress is to be made, the most promising approach would be to move beyond the data currently available from a consumer's credit file by considering an alternative credit score that incorporates non-bureau data.

4.2 POTENTIAL COSTS

Even assuming that an alternative score expands the number of qualified borrowers, introducing a new risk metric would not be without considerable costs. As noted earlier, the ability to provide a comparable measure of credit risk should be a pre-requisite for the adoption of any new score, whether it is based on traditional or non-traditional data. Otherwise, the resulting degradation in a score's ability to distinguish between good and bad credits would undermine the industry's ability to manage and price its mortgage risk. The net result for consumers would eventually be higher mortgage rates and riskier mortgages.

However, even if predictive power of the score is maintained or even enhanced, there are a number of other factors that need to be considered before adopting an alternative score. FICO® Scores have become the industry standard for assessing and pricing credit risk in both the conforming and the non-conforming mortgage markets. Since such standardization is key to the efficient functioning of the secondary market, any changes should not be taken lightly. As noted earlier, FICO® Scores play a critical role in the TBA market, which enables borrowers to lock-in their mortgage rates before actually closing on the loan. FICO® Scores are also used by MBS investors to estimate pre-payment speeds and the resulting interest rate risk. Finally, FICO® Scores are used in the GSEs' "back-end" credit risk transfers to enable private investors and insurers to assess and price for the underlying risk on a pool of loans.

Introducing a new credit metric as either a substitute or alternative to FICO® Scores will force the GSEs and all of these other entities to re-evaluate and, if necessary adjust their risk assessment and pricing models—and it is by no means certain that investors will ultimately accept this change.[38] At a minimum, it seems likely that separate pools would have to be formed for loans underwritten with FICO® Scores and Vantage scores, and that VantageScore pools would most likely trade at unfavorable rates until their risks were better understood. In the short term, at least, this would inevitably hurt the liquidity of the secondary market and most likely lead to higher mortgage rates.

Requiring the GSEs to accept a VantageScore as an alternative to FICO® Scores will also require major systems, software and process changes for virtually every mortgage market participant, including loan originators.[39] For example, if the GSEs chose to accept multiple credit scores, they would have to recalibrate their predictive models, reprogram their loan delivery platforms, update their seller servicer guides, train originators on their new policies, and revise their compliance processes. Much the same would be true for loan originators. While these changes might well be justified, past experience suggests that the upfront costs would be significant. For example, the mortgage industry undoubtedly spent billions of dollars to prepare for Y2K. It seems reasonable to expect that the costs of adding an additional credit score would rival, if not greatly surpass, the costs of adding two additional digits to every date

In addition to these upfront costs, accepting an alternative score will require the GSEs and other mortgage investors to continually recalibrate their underwriting models to ensure that the two scores remain equivalent. As noted earlier, despite their common range, the risks associated with seemingly equal Vantage and FICO® Scores may not be the same, especially at the lower end of the credit risk spectrum. While the necessary adjustments could be made when the scores are first introduced, there is no guarantee that any equivalency will hold up over time as both market conditions and populations change.[40] And it is not at all obvious who would pay for the ongoing recalibrations that would be required to ensure that the scores continue to be interchangeable. Unless such ongoing equivalency is assured, allowing lenders to select an "appropriate" score for a particular borrower raises the risk of adverse selection and potential fair lending concerns.

Unless such ongoing equivalency is assured, allowing lenders to select an "appropriate" score for a particular borrower raises the risk of adverse selection and potential fair lending concerns. As Smith notes:

> ***"In a system where different credit scoring systems generate different results, the loan processor could control the outcome of the loan decision by determining which system to use for a particular borrower. Ironically, credit scoring systems were developed to help alleviate the problem of overt discrimination in lending. The addition of an array of credit systems would simply reintroduce the original problem in a different way."***[41]

The acceptance of multiple scores could also lead to a race to the bottom among competing scores as lenders inevitably gravitate to the score that produces the highest number. VantageScore recently suggested that one way to avoid this situation would be to require lenders to pick a score, and then stick with it for a fixed period of time.[42] While such a policy could eliminate continuous shopping for the highest score—at least during the initial adjustment period—it is hard to see how this would prevent lenders from choosing the most generous score to begin with or eliminate such behavior once the adjustment period was over. Moreover, monitoring for lender compliance would be difficult and would undoubtedly require extensive system changes to identify the particular score that was being delivered.

Finally, there are legitimate competitive concerns over the credit bureaus' current joint ownership of the VantageScore and their ability to control access to consumers' credit files. FICO has a licensing agreement with each CRA to produce and distribute FICO® scores, subject to the terms and conditions established under the Fair Credit Reporting Act. While FICO (or any other score provider) could conceivably go around the credit bureaus by attempting to replicate the credit data they provide—in effect, by creating a new CRA--this would not be an easy task. The systems of most financial institutions are now fully integrated with the credit bureaus, making monthly reporting a routine matter. Creating an additional CRA would force these providers to change their existing systems with little, if any improvement in the resulting data.

While recent concerns over the security breach at Equifax and the accuracy of bureau data could conceivably change this situation, the three national credit bureaus currently have a natural monopoly on the collection and provision credit data that would be extremely difficult to overcome. This basic fact raises serious issues regarding the organizational and ownership structure of companies in the credit scoring business and how this might ultimately impact competition.[43]

For example, under the terms of its licensing agreements with the three credit bureaus, Fair Isaac receives a royalty for each FICO® Score produced. However, as the primary distributor of FICO® Scores, the CRAs are able to set the retail price. It does not take much imagination to envision how the credit bureau could undermine FICO's ability to compete—or the ability of other potential new market entrants—by simply offering the VantageScore at a more favorable price, and then raising their price once potential competitors are eliminated. The bureaus could also attempt to stifle competition by restricting access to their credit files.

Concerns over the credit bureaus' potential anti-competitive behavior are not just theoretical. For example, the "free credit scores" that are currently offered by the credit bureaus and distributed to websites such as Credit Karma and credit.com are almost always VantageScores.[44] While this may make sense from the VantageScore's perspective, it has caused a great deal of confusion among consumers who think they are obtaining their FICO® Score. It also illustrates the bureaus' willingness and ability to favor their own scores over the scores of their competitors.

In another example, a recent article in the New York Times describes how Equifax has used its role as the primary "gatekeeper" to Freddie Mac's merged credit reports to bar an array of smaller competitors from providing data for the reports, citing "incompatible systems" as its rationale.[45] The article also documents how Equifax (unlike the other credit bureaus) charges more for "soft pull" credit reports that are used to counsel financially troubled consumers than it does for "hard pull" reports for lenders seeking to issue credit.

Neither of these two examples are particularly surprising given that the bureaus are for-profit companies seeking to maximize shareholder value. However, they do serve to illustrate the bureaus' control over the pricing of credit scores and their ability and apparent willingness to stifle potential competitors. This suggests that, if an alternative score is to be adopted, it should not be controlled by the three credit bureaus.

5.0 IMPLICATIONS

The industry must continue to evolve if it is to meet the needs of a rapidly changing population and exploit the advantages that will inevitably flow from the use of new technologies and data mining.

The challenge is to find a way to encourage continual innovation in the assessment of credit risk while preserving the strengths of the current system, including the standardization that has enabled the secondary market to thrive. While the issues involved are complex, a few things seem clear.

First, while it may well be time for the GSEs to update to another score, the numerous problems that would arise with the adoption of multiple scores would greatly outweigh the potential benefits—particularly if the additional score was just a reconfiguration of the same underlying data. While score providers should continue to compete to become the gold standard for measuring risk in the mortgage industry, they should not compete to become the primary vehicle that lenders use to generate larger volumes of loans.

Second, in considering the introduction of alternative scores, priority should be given to scores that incorporate non-bureau financial data. While credit bureaus provide an important window into a consumer's spending patterns and their ability to manage debt, the view is necessarily limited and will inevitably fail to capture other important factors that will ultimately influence a borrower's performance on their loan.

Third, before introducing an alternative score, it is best to experiment on a limited basis before making a wholesale change. The GSEs currently have a number of special lending programs designed to broaden access to credit. The use of alternative scoring techniques should be incorporated in such programs to test the viability of eventually incorporating these scores into their mainstream lending programs.

Fourth, in the event that the GSEs decide to "mainstream" an additional score, transparency is critical. Before implementing any change, the GSEs should release the results of their analysis to avoid market disruption. If they elect to introduce multiple scores, they should also continue to assess and compare the relative performance of alternative scores to ensure that the scores remain comparable over time. Without transparent and consistent risk metrics, critical institutions such as the To-be-Announced (TBA) market would be compromised.

Fifth, for competitive concerns, alternative score providers should not be owned or otherwise controlled by the three credit bureaus. While vertical integration makes sense in many markets, it makes far less sense when the CRAs have enormous power with respect to consumers' credit files. If the GSEs decide to accept the VantageScore, they should require the credit bureaus to spin it off as an independent entity—or take other steps to ensure equal access to credit data as well as fair and equitable pricing of alternatives scores at the retail level.

In the end, the GSEs and other mortgage investors should—and ultimately will—decide which alternative(s) best meets their needs. Congress should continue to give the GSEs and their federal regulator the authority to decide how to manage their credit risk, and not try to mandate which particular score (or scores) should be used. The same should apply to FHA and other government agencies. While expanding access to mortgage credit is an appropriate public policy goal, it should be done in a way that preserves the strength of the existing system, encourages sound lending, and minimizes taxpayers' risk.

About the Author

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ENDNOTES

1. For example, The Urban Institute found that tight credit standards following the mortgage crisis have disproportionately affected minority borrowers and suggests the use of alternative credit scores as a potential remedy. See https://www.urban.org/urban-wire/increasing-access-mortgages-minorities
2. FICO® Score XD, which was developed FICO, incorporates alternative data generally not available from a consumer's credit file at the CRAs. FICO® Score XD is used in the credit card industry, but is not currently made available for the mortgage industry. See http://www.fico.com/en/products/fico-score-xd
3. The GSEs require that lenders attempt to get FICO® Scores from each of the three credit bureau and then to submit either the middle score or, if only two scores are available, the lower score. They also require a FICO® Score based on a tri-bureau merge. While each credit bureau uses a different version of the FICO® Score, the most recent is FICO® Score 5.
4. Access to a consumer's credit report is governed by the Fair Credit Reporting Act (FCRA), which generally enables both current and potential creditors with "firm" credit offers to purchase these data without the consumer's express permission.
5. August 17, 2017 Coalition letter to FHFA Director Watt.
6. Credit Score Competition Act of 2017. See https://www.congress.gov/bill/115th-congress/house-bill/898/text
7. FICO requires at least one trade line that is at least 6 months old and at least one trade line that has been reported in the last 6 months. Note that these two conditions can be met with a single trade. VantageScore's lower standards require no minimum age of trade line and require that only one trade line that has been reported in the last 24 months.
8. VantageScore, "Exclusionary Credit Score Modeling Limits Access to Credit for Millions of Consumers…Even Perhaps Your Next Door Neighbor", November 2016.
9. For example, see "Big Data: A Tool for Inclusion or Exclusion?", Federal Trade Commission, January 2016
10. See, for example, Robert B. Avery, Raphael W. Bostic, Paul S. Calem, and Glenn B. Canner, "Credit Risk, Credit Scoring, and the Performance of Home Mortgages", Federal Reserve Bulletin July 1996, and John W. Straka, "A Shift in the Mortgage Landscape: The 1990s Move to Automated Credit Evaluations". Journal of Housing Research, Volume 11, Issue 2, 2000.
11. Other key indicators of mortgage risk include the borrower's equity in the home (measured by the loan-to-value ratio) and their total amount of debt in relation to their income (measured by so-called debt-to-income ratio).
12. For example, see Zorn, Gates and Perry, "The Effect of Improved Mortgage Risk Assessment on Under-served Populations" at http://escholarship.org/uc/item/6dm49385
13. See the Consumer Financial Protection Bureau, "Data Point: Credit Invisibles", May 2015. CFPB identified three groups of unscoreable consumers: "credit invisibles" who did not have a credit file (26 million); consumers with "insufficient" (or "sparse") credit files that contained either too few or too new accounts to be scored (9.9 million); and consumers with "stale" credit files that had no recently reported activity (9.6 million). According to the CFPB, Blacks and Hispanics are more likely to be unscoreable compared to Asians and Whites, as were consumers residing in low income neighborhoods.

14. See, for example, Consumer Financial Protection Bureau. 2014. Report on the Use of Remittance Histories in Credit Scoring. http://files.consumerfinance.gov/f/201407_cfpb_report_remittance-history-and-creditscoring.pdf; Experian. 2014. "Let there be Light: The Impact of Positive Energy-Utility Reporting on Consumers," Experian White Paper; Experian RentBureau. 2014. "Credit for Renting: The Impact of Positive Rent Reporting on Subsidized Housing Residents," Experian RentBureau White Paper; Schneider, Rachel and Arjan Schutte. 2007. "The Predictive Value of Alternative Credit Scores," Center for Financial Services Innovation Report, November; Turner, Michael A., Alyssa Stewart Lee, Ann Schnare, Robin Varghese, and Patrick D. Walker. 2006. "Give Credit Where Credit Is Due: Increasing Access to Affordable Mainstream Credit Using Alternative Data," Political and Economic Research Council and the Brookings Institution Urban Markets Initiative Report. While timely utility and rental payments were found to have a positive impact on access to credit, remittance payments were found to have the opposite effect.
15. Utility and telecom payments are included in the FICO® Scores that are being used by the GSEs. However, the inclusion of rental payments, along with other enhancements such as the treatment of medical collections, were not introduced until FICO® Score 9.
16. FICO Decisions, "Truth Blog Series Summary; Setting the Record Straight", 2017.
17. FICO also checks that the consumer is not deceased.
18. FICO Decisions, Insights White Paper no. 90, "Can Alternative Data Expand Credit Access?" 2015.
19. Like FICO®, the VantageScore retains the requirements that the consumer is not deceased and that the file contains more than just inquiries.
20. VantageScore, op. cit.
21. For an analysis of three alternative credit scores, including an early version of FICO®XD, see Rachel Schneider and Arjan Schutte, "The Predictive Value of Alternative Credit Scores", Center for Financial Services Innovation. 2007.
22. See Joseph A. Smith, Jr., "White Paper on the Adoption of New Credit Scoring Models by FHFA."
23. Schneider and Schutte, op cit., p.17
24. See https://www.fanniemae.com/content/guide/selling/b3/5.1/01.html
25. See https://www.fanniemae.com/content/guide/selling/b3/5.1/01.html
26. Freddie Mac also requires that the consumer has at least 3 trade lines. This is an underwriting requirement that is distinct from minimum scoring requirements.
27. https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=402338
28. See, for example, Chris Whalen at www.americanbanker.com/person/chris-whalen
29. FICO Decisions, Insight paper No.90, op. cit.
30. Tom Parrent and George Haman, "Risks and Opportunities in Expanding Mortgage Credit Availability through New Credit Scores", Quantilytic, December 1 2017. P.7
31. As a result, VantageScore's estimates of potential new mortgage demand would appear to be overstated.
32. FICO Decisions, Insight paper No.90, op. cit.
33. See FICO Decisions, Insights White Paper No.90, "Can Alternative Data Expand Credit Access?"
34. Note that FICO's estimate of the "no file" population is similar to the estimate (26 million) produced by the CFPB using an

unidentified "commercially available scoring model". However, CFPB's estimates for the number of consumers with sparse or stale credit files (19.5 million) is considerably lower than FICO estimates for these two groups (28 million), which may reflect the credit bureau that was used to derive the estimates and the process for removing duplicate files. Interestingly, VantageScore's estimate of the number of no file and stale file consumers that could be scored with its methodology (30 to 40 million) exceeds both CFPB and FICO estimates for the total size of these two populations (20 to 28 million). Parrent and Haman (2017, op. cit.) suggest that this might due to the imposition of Freddie Mac's required 3 trade minimum, which is an underwriting not a scoring requirement

35. https://www.nar.realtor/real-estate-story-ideas/median-age-of-home-buyers-trending-upward
36. VantageScore estimates that 2.3 to 2.5 million consumers would be eligible for a conforming mortgage. Its estimate was derived by estimating the number of newly scoreable consumers with VantageScores above 620, and then excluding homeowners, younger (< 25 years) and older (>70 years) adults, and consumers with a previous foreclosure or a serious delinquencies in the past two years. It also factored in the consumer's ability to afford the median priced home in their geographic area.
37. Prepared remarks of Melvin L. Watt, Director of FHFA, at the National Association of Real Estate Brokers, August 1, 2017
38. See Whalen, op. cit.
39. See Smith, op. cit.
40. See FICO Decisions, Truth Squad: Is FICO Score 700 the Same as Vantage Score 700?
41. Smith, op. cit., p.8
42. VantageScore Solutions, "New Credit Scoring Models: A smooth transfer to more transparent mortgage capital markets" October 2017. See www.vantagescore.com/resource/170/new-credit
43. Watt, op. cit.
44. http://creditcardforum.com/blog/vantagescore-vs-fico-score/
45. See Gretchen Morgenson, "Equifax's Grip on Mortgage Data Squeezes Smaller Rivals", New York Times, October 12, 2017

SHOULD FHFA ADOPT ALTERNATIVE CREDIT SCORING MODELS?

SUPERVISORY AND REGULATORY CONSIDERATION

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INTRODUCTION

The Federal Housing Finance Agency (FHFA) is the supervisor, regulator and conservator of the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac and, together with Fannie Mae, the Enterprises). FHFA is contemplating a potential change in the credit scoring models approved for use by the Enterprises.

The Enterprises use FHFA approved credit scoring models to underwrite the home mortgage loans that the FHFA guarantees. The credit scores are issued by three credit rating agencies (CRAs). The currently approved credit scoring model used by each CRA is the Fair Isaac Corporation (FICO) model. In furtherance of the goal set forth in its 2017 Scorecard for the Enterprises to "increase access to single-family mortgage credit for creditworthy borrowers, including underserved segments of the market," FHFA is exploring authorization of the use alternative credit scoring models.[1] This laudable goal is part of an overall goal to, "Maintain, in a safe and sound manner, credit availability and foreclosure prevention activities for new and refinanced mortgages to foster liquid, efficient, competitive, and resilient national housing finance markets."[2]

FHFA Director Melvin L. Watt has discussed the alternative credit scoring model issue in two recent addresses.[3] In discussing the possible adoption of alternative credit scoring models," Director Watt said that in spite of the surface attraction of allowing "choice" with regard to such models, the decision as to whether to allow them "is turning out to be among the most complicated decisions I have faced during my tenure at FHFA."[4] He went on to mention a number of questions that need to be addressed to make a determination on this issue and said that a request for information with regard to such questions would be published in the near future.

At the request of Fair Isaac Corporation (FICO), I have analyzed the regulatory, supervisory, and policy issues that will confront FHFA in the course of its alternative credit scoring model project. This analysis is based on a review of the legal and regulatory authority under which FHFA exercises supervisory, regulatory, and conservatorship powers with respect to the Enterprises. It also draws on my experience as a regional bank general counsel, North Carolina Commissioner of Banks, Chairman of the Conference of State Bank Supervisors, founding Member of Regulatory Registry LLC (operator of the National Mortgage Licensing System) and Monitor of the consent judgments commonly referred to as the National Mortgage Settlement. In addition, I have relied on the work of experts in housing finance and economics.[5]

On the basis of the foregoing, I have concluded and submit that the adoption by FHFA of alternative credit scoring models would not meaningfully increase the availability of home mortgage credit and could result in unnecessary losses to taxpayers and to borrowers who take on more mortgage debt than they can afford. During my time both as a state financial regulator and as Monitor of the National Mortgage Settlement, I have seen first-hand the damage that improvident lending has done to families, communities and financial institutions and markets. While expanding opportunity for home ownership is a laudable goal, it cannot be achieved by watering down credit standards.

A discussion of FHFA's alternative credit score project and the regulatory, supervisory and conservatorship issues relating to it is set forth below.

I. BACKGROUND

FHFA was established by the Housing and Economic Recovery Act of 2008 (HERA).[6] It came into existence as the result of years of struggle to establish a regulatory regime with sufficient authority and capacity to supervise two "too big to fail" firms that had a dominant position in the home mortgage finance market and, accordingly, were crucial to American families and to the economy.

In its supervisory role with respect to the Enterprises, FHFA is charged with ensuring that they operate in a safe and sound manner and that their operations "foster liquid, efficient, competitive, and resilient national housing finance markets."[7] Put another way, the agency's mandate is to facilitate the expansion of credit – with the significant caveat that this expansion extend only to consumers who are likely to be able to repay their loans.

Unfortunately, FHFA did not get to exercise its regulatory and supervisory powers on an arms-length basis for long. HERA was enacted precisely at the point in time when the consequences of "competition" and deference to unhindered "choice" in the home mortgage market led to near insolvency for the Enterprises and to chaos and destruction in the financial system. During the four years preceding enactment of the statute, the Enterprises' share of MBS issuance volume had gone from over two-thirds of the market to less than half, the decline being accounted for by a significant increase in market share of "private label" securities.[8]

As a state regulator during this period, I worked with colleagues around the country to regulate the non-depository origination channel and to reduce or eliminate the volume of loans made on predatory and unsustainable terms. Our efforts were commonly and constantly criticized for, among other things, preventing the extension of credit to low- and moderate-income people, thus denying them their chance at achievement of "the American Dream." Excesses in the market were exacerbated by the fact that the securities rating agencies, who were paid by the issuers and thus subject to obvious moral hazard, rated substantial tranches of subprime securitizations as investment grade.[9]

During the run-up to the Financial Crisis, the Enterprises guaranteed and purchased an increased amount of nontraditional and higher risk mortgages.[10] The rest, as the saying goes, is history. The deterioration of the housing market generally and the Enterprises' non-conforming loan books in particular led to a determination that their capital was unable to support continued operations and, accordingly, that their safe and sound operation was at risk.[11] On September 6, 2008, because of the financial distress of the Enterprises, FHFA invoked its statutory authority and placed them into conservatorship.[12] As conservator, FHFA has broad management and supervisory powers, authorizing the agency to take such actions as may be:

> (i) necessary to put [the Enterprises] in a sound and solvent condition; and
>
> (ii) appropriate to carry on the business of the [Enterprises] and preserve and conserve the assets and property of the [Enterprises].[13]

Since the institution of the conservatorship, the Treasury Department has provided essential financial commitments of taxpayer funding under Preferred Stock Purchase Agreements (PSPAs).[14] In their current iterations, the PSPAs authorize Treasury to sweep the net worth of each of the Enterprises that exceeds a Capital Reserve Amount.[15] As of January 1, 2018, the Capital Reserve amount for each of the Enterprises will be zero.[16] Treasury support of the Enterprises of just over $200 billion remains available so taxpayers are still at risk.

In exercising FHFA's conservatorship powers, Director Watt has decision-making power with regard to two financially and economically vital firms that are operating with little or no capital and a limited and shrinking Treasury backstop. The caution and care he is taking with regard to the alternative credit scoring project is both understandable and laudable.

Caution and care is particularly appropriate because of the impact that the Enterprises have on the health and operational standards of the entire housing finance industry. This is particularly so, given the fact that non-bank mortgage originators account for roughly half the GSE origination market and over half the market in total.[17] Although they are regulated at the state level and by some federal agencies, these firms are not subject to the same level of supervision as banks, particularly as regards capital adequacy. As these firms are originating loans at lower median FICO scores and higher median debt to income (DTI) ratios than bank competitors,[18] it is important as a matter of system soundness that the GSEs insure the maintenance of reliable and comparable measures of credit.

A second impact of the decision by FHFA to adopt alternative credit scoring models on system safety and soundness would extend beyond the conventional market because FHA would probably follow suit. Such a change would come at a time when FHA has seen a decrease in the Economic Net Worth of the MMIF and has noted a number of concerns in its lending programs. The just-released HUD Annual Report to Congress on the FHA Mutual Mortgage Insurance Fund[19] lists a number of "potential credit risk factors which bear monitoring" beyond the low down payments that characterize FHA loans:

- The average debt-to-income (DTI) ratio for FHA-insured purchase mortgages was 41.9 percent, and has generally trended upward since FY 2000.
    - 49.1 percent of FHA purchase mortgages had DTI ratios greater than 43 percent.
- The share of new purchase mortgages with some form of down payment assistance was 38.4 percent.
- $28.6 billion of new endorsements went to borrowers taking "cash out", representing 38.9 percent of FHA refinance volume.
    - $16.8 billions of cash-out refinance UPB served borrowers that previously had conventional financing and refinanced into a new mortgage with FHA insurance.[20]

Borrower profiles that have multiple additional risk factors such as those listed above underscore the importance of predictable risk tools to appropriately evaluate the individual loan. In this context, reliable and comparable credit scores are an essential aspect of FHA's being able to appropriately evaluate risk so that it can perform its mission, including meeting the needs of first-time home buyers, and remain solvent while doing so.

As with any other organizational decision, determining whether to adopt alternative credit scoring standards depends on whether the benefits of such a change outweigh the costs and risks. Given the fragility of the Enterprises, and their importance to the housing market, the economy and taxpayers, the standard for change should be rigorous and high. A discussion of two of Director Watt's questions regarding this decision are, to me, dispositive of the issue.

II. WHAT IMPACT WOULD AUTHORIZATION OF ALTERNATIVE CREDIT SCORING MODELS HAVE ON CREDIT AVAILABILITY AND THE ACCURACY OF LOAN PURCHASE DECISIONS BY THE ENTERPRISES?

In determining whether to permit alternative scoring models, FHFA should first ascertain that (i) such models are able to derive new or significant information from the data currently available to FHFA, FICO and the Enterprises; or (ii) if such models are based on new data, the new data is valid for purposes of credit analysis and consistent with FHFA mandates. Changes to credit scoring models must expand credit to creditworthy buyers while protecting the taxpayers and the Enterprises. In other words, the question is whether the introduction of additional credit scoring would "expand the credit box" in a financially responsible way.

There is a general consensus that the use of more sophisticated scoring systems would add to the number of qualified buyers. After all, almost by definition, the use of additional underwriting criteria expands the availability of credit to those specific individuals who measure well against that criterion. The question is how large the increase would be, and the impact of that increase. For instance, a currently proposed alternative model claims to be able to score 30-35 million additional customers.[21] But even if that claim is correct, an analysis of such change has found that the number of new purchase loans originated under the altered credit standards would be slightly less than 48,000.[22]

Should FHFA permit the use of alternative systems, it would run into one of two problems. First, the new system could rely on virtually the same data as the FICO method. In that case, it would be a needless and expensive redundancy, replicating what already exists. Use of the same data in a different system would have a marginal impact on increasing credit, unless standards were weakened.

Alternatively, the new system could rely on different criteria. Proponents posit that these criteria would be extensions of current financial factors. They point to the use of additional data points such as the time at current address. But this overlooks three key problems. First, FICO already offers models that utilize such features, but validated only for use in credit card lending.[23] Secondly, scores will not always distinguish between the various kinds of input data. For instance, a currently proposed alternative system does not indicate whether the score is generated from limited or old data.[24] In any event, the result is a degradation in the score's ability to distinguish between good and bad credit risks and undermine the industry's ability to manage and price mortgage risk.[25]

Third, it is true that alternative scoring systems have indeed been used in other credit contexts such as credit cards or payday lending. But they have a sparse record in the mortgage industry, where the complexity of the decision, and the scale of the corresponding risk, is orders of magnitude higher.[26] If alternative credit scoring systems indeed identify additional creditworthy borrowers, private label mortgage originators would rush to adopt them. They have not. This is instructive. Private label mortgage originators have strong business incentives to use every available tool to identify additional creditworthy customers. Their failure to embrace alternative scoring systems is powerful testament that the promise of alternative credit scoring is a hollow one.

In sum, there is no evidence that using alternative models will lead to the expansion of credit. Alternative models have been available for over a decade. If they represented an accurate barometer of credit risk, the market would have adopted them with or without federal mandates. The market's inertia is a strong indicator that alternative credit systems cannot deliver on the promise to reach a large hitherto untapped creditworthy borrowers market. The mortgage industry reflects economic reality. To the extent an expansion in credit is inflated by artificially grafted credit scoring systems, it will be temporary, and it will come at a long-term cost in terms of additional bad loans.

III. CAN FHFA ENSURE THAT COMPETITION IN THE CREDIT SCORE MARKET LEADS TO IMPROVED ACCURACY AND NOT A RACE TO THE BOTTOM?

Authorization of multiple credit scoring systems will inexorably lead to arbitrage between or among them. Indeed, if competition doesn't lead to arbitrage of some kind it is not clear why competition is needed at all. The issue is whether arbitrage would lead to more quality originations or to a dilution of credit quality and resultant damage to borrowers, investors and taxpayers. History suggests that the assumption of increased quality is at best optimistic and at worst naïve.

As mentioned above, arbitrage in the pre-Financial Crisis mortgage market led to disaster. When subprime mortgages were securitized, the sales of the securities hinged on their ability to obtain AAA ratings. Sellers rebuffed by one rating agency simply took their business to another one. Over time, the economic incentives of attracting and maintaining seller business incrementally but inexorably drove all rating agencies to lower their standards. In this ratings variant of Gresham's law, readily accessible AAA ratings drove credible AAA ratings from the market. FICO analysis has already determined that loosening standards to generate a credit score resulted in unacceptable model fits.[27]

It is hard to see why FHFA would allow multiple credit scoring systems if it was not prepared to countenance the same result that the ratings markets suffered. To some extent, the process has already started: the currently proposed alternative credit scoring system drops FICO's minimum scoring requirements regarding both the length and currency of a borrower's history.[28] This circumstance is particularly concerning, as the purveyor of the system is jointly owned by the CRAs.

Experience and economic logic indicate that market participants will use the tools available to them to increase volumes and maintain profit margins. Adverse selection would be inevitable. Since the mortgages would be sold, the accuracy or validity of specific models would not be a factor in market participants' behavior. Nor would the participants be driven by the desire to expand credit, the desire tempered by the need to ensure the expansion was prudent. In this regard, it is important to reiterate that non-depository originators are a significant portion of the current home mortgage origination market, as they were prior to the Financial Crisis.

The FHFA mandate requires any increase in credit to be offset by no change in risk. But there is no evidence that alternative credit scoring models can slice and dice the same data that FICO does and identify promising new borrowers without a commensurate increase in risk. If an alternative credit scoring system had this ability, it would have been the prevailing standard in the private mortgage industry. It is not. That is revealing.

Should the FHFA approve alternative credit scoring systems, a race to the bottom and watering down of underwriting standards via the same processes that played out in the ratings markets is inevitable. At the end of the day, the result will not be expanded or sounder credit practices, but watered-down credit scoring standards.

CONCLUSION

As North Carolina Commissioner of Banks, I worked with others in government and industry to target the worst excesses in the pre-Financial Crisis mortgage market, to less effect than any of us would have hoped. As noted above, these excesses were often couched in language extolling expansion of access to credit.

As Monitor of the National Mortgage Settlement, I have overseen attempts to redress at least some of the attendant damage and to nurse the market back to health. While I am sympathetic to the desire of Director Watt and his FHFA colleagues to address the needs of deserving borrowers who want to own a home, my sympathy is tempered by my experience in cleaning up after a poorly done credit expansion.

If the Financial Crisis has taught us anything, it is that a mortgage origination process that churns out loans to borrowers without factoring in their ability to repay them is no favor to the borrower, the housing market or taxpayers. The main impediment to further expansion of credit is not a particular credit scoring system. It is the hard reality that credit cannot offset the absence of wealth or income. An alternative credit scoring system that approves otherwise ineligible applicants is simply postponing the inevitable reckoning. And when the moment of reckoning arrives, it will undermine FHFA's mission. It will shrivel credit and the housing market. And the taxpayer will, once again, be left holding the bag.

I urge Director Watt and the FHFA to stay with established and tested credit scoring methods, expanding them slowly and in light of market knowledge built over decades, rather than pursuing the *chimera* of "alternative" models. FHFA is the *de facto* regulator of the American home mortgage market, including the infrastructure in which it operates. Credit scoring is an essential part of that infrastructure. Resisting the temptation to increase market access by altering the scoring system is a hard decision. Nevertheless, as Director Watt recently stated, "none of the decisions we make at FHFA are easy decisions."[29]

ENDNOTES

1. FHFA, 2017 SCORECARD FOR FANNIE MAE, FREDDIE MAC, AND COMMON SECURITIZATION SOLUTIONS, p. 3, available at, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2017-Scorecard-for-Fannie-Mae-Freddie-Mac-and-CSS.pdf
2. Ibid.
3. Prepared Remarks of Melvin L. Watt, Director of FHFA at the National Association of Real Estate Brokers 70th Annual Convention, August 1, 2017, available at https://www.fhfa.gov/Media/PublicAffairs/Pages/Prepared-Remarks-of-Melvin-L-Watt-Director-of-FHFA-at-the-NAREB-70th-Annual-Convention.aspx (hereinafter Watt NAREB Address); https://www.fhfa.gov/Media/PublicAffairs/Pages/Prepared-Remarks-of-Melvin-L-Watt-Director-of-FHFA-at-Mortgage-Bankers-Association-Annual-Convention-and-Expo-2017.aspx (Watt MBA Address).
4. Watt MBA Address.
5. Parrent and Haman, Risks and Opportunities in Expanding Mortgage Credit Availability through New Credit Scores, (November22, 2017) (Parrent); Schnare, Alternative Credit Scores and the Mortgage Market, [date and further cite to come] (Schnare).
6. Housing and Economic Recovery Act of 2008, Public Law 100-289 – July 30, 2008 (HERA).
7. 12 U.S.C. § 4513(a)(1)(B).
8. FHFA, Conservator's Report on the Enterprises' Financial Performance, Third Quarter 2010 (Conservator's Report) p.5. Available at https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/2010-3Q_ConservatorsRpt_508.pdf
9. See, e.g., United States Senate Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, WALL STREET AND THE FINANCIAL CRISIS: Anatomy of a Financial Collapse (April 13, 2011) p. 7; Parrent, pp.22-24
10. Ibid, p.6.
11. Statement of FHFA Director James Lockhart at News Conference Announcing Conservatorship of Fannie Mae and Freddie Mac. Available at https://www.fhfa.gov/Media/PublicAffairs/Pages/Statement-of-FHFA-Director-James-B--Lockhart-at-News-Conference-Annnouncing-Conservatorship-of-Fannie-Mae-and-Freddie-Mac.aspx
12. FHFA, 2016 Report to Congress (June 15, 2017) available at https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/FHFA_2016_Report-to-Congress.pdf , p. 1. (hereinafter Report to Congress)
13. 12 U.S.C. § 4617(b)(2)(D).
14. Report to Congress, p. 4.
15. Id, p. 5.
16. Ibid.
17. Urban Institute Housing Policy Finance Center, Housing Finance at a Glance (2017), p.12; available at https://www.urban.org/sites/default/files/publication/94006/housing-finance-at-a-glance-october_0.pdf
18. Ibid, pp. 13.14.

19. US Department of Housing and Urban Development, Annual Report Regarding the Fund Status of the FHA Mutual Mortgage Insurance Fund (Fiscal Year 2017), available at: https://www.hud.gov/sites/dfiles/CFO/images/2017fhaannualreport.pdf
20. Ibid, p. 11.
21. Parrent p. 3.
22. Parrent, p. 12-14.
23. Parrent, pp. 4,5.
24. Parrent p. 5.
25. Schnare p. 10.
26. The use of less reliable risk metrics can increase access to mortgage credit in some cases, but those borrowers face higher prices and receive loans either "lower than deserved or higher than safe." Schnare p. 7.
27. Parrent pp. 5-7.
28. Schnare p. 2
29. Watt MBA speech op cit note 1.