Alfred M. Pollard, General Counsel
Attention: Comments/ RIN 2590–AA98
Federal Housing Finance Agency
Eighth Floor
400 Seventh Street SW, Washington, DC 20219

March 6, 2019

Dear Mr. Pollard:

The purpose of this letter is to respond to FHFA's request for comments on the Validation and Approval of Credit Score Models, presented in the attached. My comments are based on my more than 25 years of research on mortgage lending and access to credit for lower-income and disadvantaged consumers.

The key issues raised in the proposed rule related to the process for validation and approval of credit score models by the Enterprises. This proposed rule has been informed by several years of scorecard assessments by the GSEs and FHFA as well as responses to the 2017 Credit Scoring RFI.

In my response to the 2017 Credit Scoring RFI, I expressed skepticism about the benefits of adding a new credit score to the mortgage market. One concern was that adoption of a new score would increase the pool of consumers with poor credit scores who either could not qualify for a mortgage or would enter the subprime market. Another fear was that adopting a new score would expand the already widespread level of confusion among consumers about credit scores. In my opinion, FHFA has done a thorough analysis and careful consideration of these issues and should now proceed without delay to identify new credit scoring models that can expand homeownership opportunities for those who are currently underserved by the status quo.

Going forward, FHFA should consider the following:

- To support competition and encourage innovation, a credit score provider should be independent from the suppliers of credit data;
- Going forward, to expand homeownership opportunities, FHFA should enable opportunities to innovate using alternative, non-CRA data;
- To create an incentive to innovate via alternative data sources, there must be a viable opportunity for pilot testing of new models, and incentives for Enterprises to consider them;
- FHFA should consider carefully the implications for fair lending and expanding access to homeownership when evaluating and testing new scores.

Best of luck to you and the members of your dedicated team as you consider these alternatives.

Sincerely,

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Comments on Proposed Validation and Approval of Credit Score Models Rule

(RIN) 2590–AA98[1]

The following discussion includes comments on specific aspects of the proposed rule, as indicated by section and sub-section, and arranged by topic.

Independence and Fair Competition

The FHFA should avoid increasing the industry's reliance on data from the credit reporting agencies (III.D). Access to CRA data is essential for competition to occur in the market for credit scores. An unfair advantage in terms of access or pricing of credit data would inhibit innovation, resulting in increased risks to investors and higher costs to consumers. Alternatively, the industry should be moving towards adopting non-traditional data used in credit scoring models, such as bank account information, rent, utility and telecommunications payments, remittances and digital transactions.

Need for Alternative Data Sources

The proposed rule includes a Credit Score Assessment as part of the validation and approval process (IV.D.), as well as a proposed integrity standard (IV.D.4.). FHFA's proposed rule would establish a standard for integrity that must be met as part of the Credit Score Assessment (IV.D.4.). The goal of the standard is to ensure that the credit score model developer utilized available data elements that are relevant and legally permissible, acknowledging that credit score model developers in the future may use consumer credit information outside of the CRAs or the CRAs may expand

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the breadth of consumer credit information collected. The proposed integrity standard is designed to encourage credit score model developers to innovate. Significant advancements in credit scoring models will only be possible by looking outside existing credit repository data.

For example, an important yet under-utilized source of data on consumer financial behavior is banking activity, including digital transactions, which are significant among Millennials and other younger consumer segments, who rely on mobile phone applications and FinTech (e.g. PayPal, Venmo,) in lieu of more traditional credit accounts. These data, which track incidences of negative account balances and transaction irregularities, can be incorporated into credit scoring models, and is already taking hold in the industry. [2] For example, instead of relying on credit scores, the Petal credit card model relies on 'cashflow underwriting,' which tracks inflows and outflows from bank accounts, and measures of payment consistency and volatility (petal.com).

A recent study in Germany examined the use of data on digital 'footprints' which track access to websites to predict loan defaults. The authors found evidence that digital footprint data can not only enhance the predictive accuracy of traditional credit scores but could be a viable alternative to credit reporting data that is used in credit scoring models.[3]

There is evidence that other types of payments could be used in credit scoring models. For example, prior research suggests that utility and telecom payments are predictive of mortgage delinquencies.[4] There is also evidence that regular remittance transfers can be used to predict loan

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[2]For examples of models including banking transactions, see The Petal Card, https://www.petalcard.com/the-company and UltraFICO https://www.fico.com/ultrafico/.

[3] On the Rise of the FinTechs—Credit Scoring using Digital Footprints, Tobias Berg, Valentin Burg, Ana Gombović Manju Puri, Federal Deposit Insurance Corporation Working Paper Series, National Bureau of Economic Research September 2018, FDIC CFR WP 2018-04, https://www.fdic.gov/bank/analytical/cfr/2018/wp2018/cfr-wp2018-04.pdf

[4] Turner, Michael A. and Patricia Walker (2015), "Predicting Financial Account Delinquencies with Utility & Telecom Payment Data," Policy and Economic Research Council, May, http://www.perc.net/wp-content/uploads/2015/05/Alt-

performance,[5] and that deposits made to prepaid Visa accounts often mimic credit card payment behavior.[6] Data on payday loans and club memberships can also be used to assess credit risk.[7] There are also efforts underway to expand credit scoring by tracking payments made to mobile phone carriers, mobile phone applications, and other online money transfer systems.[8] Sources such as smartphone records, including location, call and text information, are also being investigated for potential inclusion in credit scoring models.[9] Although less common in the U.S. than in other countries, innovations in credit scoring involving social network and social media data have the potential to be used to predict future repayment behavior.[10]

In addition to alternative data sources, credit scoring should take advantage of advanced analytical techniques, such as those which rely on artificial intelligence, machine learning, and agile modeling, which can leverage multiple data sources to analyze complex combinations of predictive factors. Traditional credit scoring algorithms are largely based on regression models which require that all predictors be applicable for all consumers; we now have much more sophisticated analytical capabilities that can better account for missing data and capture the influence of complex

Data-and-Traditional-Accounts.pdf

[5] CFPB Report on remittance transfers, Report to the President, the Senate Committee on Banking, Housing, and Urban Affairs, and the House of Representatives Committee on Financial Services, July 20, 2011, https://www.consumerfinance.gov/data-research/research-reports/report-on-remittance-transfers/

[6] "Prepaid-to-Credit Pathway: Building Credit for America's Underbanked," Banking Up, TOS-14-F-0018 November 1, 2016

[7] Hardekopf, Bill (2015), "Your Social Media Posts May Soon Affect Your Credit Score," *Fortune*, October 23, https://www.forbes.com/sites/moneybuilder/2015/10/23/your-social-media-posts-may-soon-affect-your-credit-score-2/#22e35f4bf0e4

[8] Martin, Emmie (2017), "The most important thing you don't know about your iPhone bill," CNBC Money, https://www.cnbc.com/2017/09/08/your-wireless-carrier-can-affect-your-credit-score.html.

[9] Kharif, Olga (2016), "No Credit History? No Problem. Lenders Are Looking at Your Phone Data," Bloomberg Markets, November 25, https://www.bloomberg.com/news/articles/2016-11-25/no-credit-history-no-problem-lenders-now-peering-at-phone-data

[10] Wei, Yanhao, Pinar Yildirim, Christophe Van den Bulte, and Chrysanthos Dellarocas (2016), "Credit Scoring with Social Network Data," *Marketing Science*, 35(2):234-258; National Credit Educational Services (2016), "How Social Media Affects Your Credit Score and Financing Opportunities," http://ncesnow.org/how-social-media-affects-your-credit-score-and-financing-opportunities/

combinations of variables.[11] For example, as it stands consumers who do not possess an active credit account are often unable to receive a traditional credit score due to lack of sufficient data on which to base the assessment. In an enhanced, agile credit scoring model, a credit score for a consumer without a traditional credit account could be based on a history of digital transactions, including rental and insurance payments, regular remittances, utility payments, bank account balances, or combinations thereof. These factors have been shown to be predictive of repayment behavior but have yet to be incorporated in a comprehensive manner in credit scoring models. Accounting for the well-documented concerns about hidden biases in AI and counter-intuitive findings from ML, credit score modelers can apply these tools to identify substantive and transparent model improvements.[12]

These examples suggest that looking outside the data that are currently maintained by the credit repositories would be an important shift in credit models. These efforts would expand credit access by relying on transactions that are both predictive and reflective of the realities of the use of technology in today's financial marketplace. Until the FHFA establishes a process for piloting and assessing a new credit scoring model, there is little opportunity for credit score providers and the industry to innovate.

Pilot Testing

The proposed rule (IV.C.4) requires that new credit scoring models demonstrate prior use in credit decisions, including non-mortgage credit. FHFA also acknowledges in the proposed rule that

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[11] Crossman, Penny, "Is AI making credit scores better, or more confusing?"
https://www.americanbanker.com/news/is-ai-making-credit-scores-better-or-more-confusing
[12] Bacham, Dinesh and Janet Zhao, "Machine Learning: Challenges, Lessons, and Opportunities in Credit Risk Modeling," Moody's Analytics Risk Perspectives, Managing Disruption, Volume IX, July 2017; Zoldi, Mark, "How to Build Credit Risk Models Using AI and Machine Learning," https://www.fico.com/blogs/analytics-optimization/how-to-build-credit-risk-models-using-ai-and-machine-learning, April 6, 2017.

this requirement may impede innovation. *To create an incentive to innovate via alternative data sources, there must be a viable opportunity for pilot testing of new models, and incentives for Enterprises to consider them.* One incentive would be an expanded mortgage market which would be enabled if credit scores could incorporate a broader range of non-credit payment data. Many currently unscoreable consumers do not have credit cards, mortgages, or auto loans from traditional lenders. However, in these cases, banking activity, rent payments, telecommunications services such as mobile phones, internet, or cable, digital transactions, online and mobile phone activity could be used to reliably estimate repayment likelihood.

The proposed rule (IV.G.) would allow FHFA to approve pilot testing programs for new credit scores, and FHFA has requested input on the pilot process. Pilot testing would be an essential step in reducing the costs and risks of implementing a new credit scoring model, particularly one which relies on non-CRA data sources or other traditional approaches. To evaluate the effects of a new credit scoring model, a viable pilot would need replicate all aspects of the mortgage underwriting process, without disrupting existing operations of the market. The Enterprises could use the newly proposed and existing models simultaneously in a 'parallel' underwriting approach (This pilot testing process would be similar to that used to adopt Freddie Mac's Loan Prospector© automated underwriting system). Since this approach would not affect existing underwriting or securitization systems, pilot programs of limited scope and duration could be exempted from the data-specific requirements otherwise stipulated the regulation. Adopting these parameters would further facilitate and expedite the pilot testing process.

Consumer Confusion

The FHFA's proposed rule would state that an Enterprise can replace an existing credit score model with a newly approved model and would have the option to use both models simultaneously

(Section IV.A.). The proposed rule would also stipulate that the use of a credit score by an Enterprise does not create any right or expectation of continued use. *An additional credit score would further confuse consumers about mortgage loan requirements and provide new opportunities for credit repair scam artists and others who stand to benefit from misleading consumers.*

There is considerable evidence of widespread misunderstanding among consumers about credit scores. A recent study found that 14 percent of Americans don't know their credit score or know they had a credit score, and 12 percent made inaccurate estimates of their credit score.[13] Another study found that 45 percent of consumers mistakenly believe that rental payments affected their credit score, and 47 percent believed that credit scores capture cell phone payments.[14] The internet is replete with advice from consumer advocates and popular media sources about credit scores; however, scams and misleading claims are also common.[15] A Google search and cursory review of articles on this topic from credible sources (e.g., forbes.com; bankrate.com) revealed a plethora of vague and contradictory information available to consumers (e.g. 'manage your credit utilization,' 'leave old debt on your credit report'). In addition, marketing messages provided by credit reporting agencies themselves may have exacerbated consumer misunderstanding about credit scores. In 2017, the CFPB fined TransUnion and Equifax for deceptive claims in which these firms "represented, directly or indirectly, expressly or impliedly, that the credit scores it marketed and sold

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[13] Castillo, Nancy, Aliza Gutman, James Schintz & Rachel Schneider (2015), Consumers & Credit Scores: Understanding Consumer Confusion to Target Solutions, Center for Financial Services Innovation, June, https://www.metlife.com/assets/cao/foundation/consumers-and-credit-scores.pdf.

[14] What Actually Affects Your Credit Score? TransUnion Survey Reveals Consumer Confusion, https://newsroom.transunion.com/what-actually-affects-your-credit-score--transunion-survey-reveals-consumer-confusion/

[15] https://www.ftc.gov/news-events/media-resources/consumer-finance/debt-relief-credit-repair-scams

to consumers were the same scores typically used by lenders or other commercial users for credit decisions."[16] The CFPB subsequently fined Experian for a similar practice.[17]

According to Section IV.A., the proposed rule establishes that Enterprises are not required to use a credit score and can discontinue using a credit score. *If an Enterprise decides to discontinue use of a 3rd party credit score, there should be ample notification so that the industry can adjust existing consumer information and education.* A sudden change in the Enterprises use of credit scores, including adopting multiple credit scores or discontinuing the use of a score, would likely exacerbate confusion among consumers about lending requirements and responsible financial behaviors. According to a recent study of consumer knowledge about credit scores: "While alternative measures of creditworthiness can be extremely valuable for expanding access to high-quality credit, particularly for consumers who do not have traditional credit scores, the proliferation of scores and scoring methodologies can contribute to consumer confusion."[18]

At the same time, removing credit scores from mortgage underwriting models could have unintended consequences for consumers, who have been advised about the importance of those credit scores in the mortgage market. Consumers have been educated about credit scores and how to manage them as a key metric for many years; and having a standard metric helps simplify a complex set of requirements. FHFA should consider the impact on informational environment for consumers and for the primary market and other industry participants who bear the cost of raising

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[16] CFPB Orders TransUnion and Equifax to Pay for Deceiving Consumers in Marketing Credit Scores and Credit Products, https://www.consumerfinance.gov/about-us/newsroom/cfpb-orders-transunion-and-equifax-pay-deceiving-consumers-marketing-credit-scores-and-credit-products; https://www.smithdebnamlaw.com/2017/01/cfpb-consent-orders-with-consumer-reporting-agencies-focus-on-marketing-practices-not-credit-reporting/

[17] O'Shea, Beverly (2017), "Cutting Through Consumer Confusion After Experian Fine," https://www.usatoday.com/story/money/personalfinance/2017/03/24/cutting-through-credit-score-confusion-after-experian-fine/99566796/

[18] Castillo, Nancy, Aliza Gutman, James Schintz & Rachel Schneider (2015), Consumers & Credit Scores: Understanding Consumer Confusion to Target Solutions, Center for Financial Services Innovation, June, https://www.metlife.com/assets/cao/foundation/consumers-and-credit-scores.pdf

awareness and educating consumers about credit scoring. Pilot testing of new models on a subset of

loan applications would help the industry prepare for new model adoption and would allow

mortgage market participants to align their processes and to develop clear messaging to lenders,

consumers, investors, and other stakeholders.

Fair Lending and Expanding Access to Homeownership

The proposed rule would require that the Enterprises test for accuracy of proposed credit

scoring models on subgroups of loans (IV.C.1 and IV.E.3.). Fair lending testing should also be

included in this accuracy analysis. According to the proposed rule, "Fair lending assessment should

go beyond traditional fair lending risk and compliance testing to consider, in addition, whether the

credit score model has the potential to promote access to mortgage credit for creditworthy

applicants across all protected classifications." *FHFA should require that the Enterprises also assess*

disparate impact on protected classes of borrowers, the business justification for the inclusion of the new score and its

attributes; whether there are less discriminatory alternatives.

Access to credit has historically been a challenge for consumers in minority and lower-

income communities due to wealth effects as well as differential access to and higher costs for

financial services. Minority households have been slow to recover from significant losses in home

value and higher foreclosure rates experienced during the housing crisis. These patterns are

undoubtedly reflected in credit data and by extension existing credit scoring models. Many of the

credit-related challenges faced by these consumers result from cumulative disadvantage, and the

long-term effects of limited access to financial services, redlining and predatory lending practices.

Thus, *broadening the bases being used by credit scoring models to include non-CRA data would benefit minority and*

residents of low-income communities who pay higher rates and fees due to risk-based pricing.

Conclusions

There is no doubt that over time credit scoring has benefitted the mortgage market in important ways. Considering the effects that a new credit score would likely have on consumers, on the 'unscoreable' population, and on homeownership, the FHFA and other mortgage industry leaders should encourage and invest in the use of alternative data in credit scoring models. These data have the potential to revolutionize credit scoring models, and to expand and diversify access to credit scores. In addition, the industry should focus on developing an infrastructure that can more readily test pilots and adopt updates and improvements to underwriting systems.