

October 31, 2022

Federal Housing Finance Agency (FHFA)
400 7th Street, SW
Washington, DC 20024

Re: Open data sharing for better, fair, and responsible fintech solutions. BrightUp's response to Fintech in Housing Finance Request for Information (RFI)

We would like to begin our response by thanking you for the Fintech in Housing Finance RFI request for information. This RFI is evidence of your interests and emblematic of your desire to expand access and discover how best to leverage fintech innovation. We will begin also with our end in mind and state that we very much welcome the opportunity to continue this conversation and to work with you in on our mutual goals. BrightUp is a fintech company focused on democratizing wealth building and well-being, primarily by offering expanded access to fairly-priced capital, which we call, "Compassionate Capital." We know that by leveraging artificial intelligence (AI) assisted behavioral and econometric credit risk models we can expand access to credit for underserved markets and populations, and better predict an applicant's credit behavior. While artificial intelligence and machine learning models may be complex, these models can, and should be independently audited and validated, to satisfy regulatory standards.

Below is a brief overview of who we are and how we believe fintech companies like BrightUp can improve access for underserved markets.

This is Who We Are

At BrightUp we blend technology and behavioral science to support those not typically supported on how to become more financially healthy. We're not your average financial wellness company. We put a twist on finances by mixing money with mindset. After all, true wealth starts with knowing that you are worthy, capable, and deserving of wealth. We give individuals the wealth-building and well-being tools they want and need to provide for their families, and to support their personal and professional goals.

Our leadership team consists of subject matter experts in technology, credit, and underwriting. Valerie Mosley, founder and CEO, has over 30 years as a leader in the credit markets; Rashad Moore, Chief Architect, has a master degree in AI and has designed, developed, and deployed systems for federal government agencies and private companies; and Patrick Reily, Chief Credit



Officer, has over 30 years of banking, financial services, credit policy, economics and advanced decision-making expertise and was instrumental in the creation of the Vantage score.

Our differentiated compassionate capital operationalizes AI-assisted behavioral and econometric credit risk algorithms to underwrite credit and expand access, offering attractive risk adjusted returns. Our credit risk algorithms have underwritten the equivalent of \$1.5 trillion USD throughout the world. Our secret sauce is our approach that pairs capital with content and science-based support and worth reinforcement.

Our contextual models accurately measure the influence that local economic and market conditions have on customer behavior. The same is true for pricing and structure. Within our models, we understand that behavior influences pricing just as pricing influences behavior. Our methods and performance have been independently audited and validated, and can satisfy any regulatory standard.

In addition to our underwriting models, Brightup has a portfolio management solution that predicts not only the probability of loan default, but also the timing of default, the probability of early repayment, the timing of early re-payment, and other factors such as bankruptcy, repayment consistency, recovery, or macroeconomic impact. The ability to predict when someone is “going” to have a problem is important and this toolset allows BrightUp to work with financial institutions, if applicable, to monitor borrowers’ analytics and to intervene up to 12-months “prior” to them missing a payment to avoid loan defaults.

Equitable Access

Housing is one of the most critical aspects of life for all Americans, yet many people struggle to obtain a mortgage. The U.S. Department of Housing and Urban Development (HUD) estimates that millions of homeowners are underwater on their mortgages and millions more are at risk of losing their homes due to economic hardship or other factors. In addition to these challenges, racial bias in lending practices has resulted in many minority borrowers being shut out from credit altogether or receiving higher interest rates than white borrowers with similar credit scores. To address these problems, new technologies are emerging that could further equitable access to mortgage credit and sustainable homeownership, but they require collaboration among lenders, community organizations, third-party service providers like BrightUp, consumer advocates and researchers.

FHFA - FinTech Data Sharing Program

It is in the FHFA's interest to use anonymized data from its own loan portfolios to improve the ability of fintech companies to build and apply new lending models. A deep collaboration and data-sharing program should be formed in partnership with fintech companies to further



support the development of new lending models and products for underserved communities. This program would allow fintech companies to access anonymized data from FHFA's loan portfolio, which will improve their ability to build and apply new AI-based lending models. The goal of this collaboration is to develop better, more efficient lending models that can be applied by lenders across the industry.

There are several benefits to such a data-sharing program

- Fintechs would have access to a larger pool of data, which would improve their ability to build and apply new AI-based lending models.
- Fintechs would be able to develop better, more efficient lending models that can be applied by lenders across the industry, particularly in underserved communities.
- The FHFA would be able to improve the accuracy of its own lending models.
- The FHFA would be able to identify areas where fintechs could potentially improve the efficiency of the mortgage process.
- The FHFA would be able to gain insights into how fintechs are using its data to develop new lending models.
- Partnering with fintech companies can help FHFA assess new AI model-building techniques such as machine learning and deep learning that can more precisely assess borrower credit risk. This enhanced understanding of borrower risks would enable lenders to better tailor products and services specifically for borrowers in underserved communities.

What new fintech tools and techniques are emerging that could further equitable access to mortgage credit and sustainable homeownership?

There is a great deal of potential for using artificial intelligence and machine learning to help achieve equitable access to mortgage credit and sustainable homeownership. These technologies can be used to improve credit risk measures and underwriting, which could enable lenders to extend credit to the unbanked and underbanked. Additionally, advances in fair lending testing and analytics hold tremendous promise for identifying less discriminatory alternatives that serve more borrowers without materially degrading accuracy.

Currently, FICO scores discreet events and does not factor in the context surrounding those events. Leveraging technology to factor in contextual data elements and more information provides the opportunity to evaluate the real risk and credit worthiness of applicants. Our research indicates that understanding the nature of an applicant's income stream – steady / constant every two weeks vs. variable such as with tradesmen and contractors – matters. We blend the nature of an applicant's income stream with the rationale for a payment delay and other macro data elements, to properly assess risk. For example, when lending in farming



communities not only is the income stream variable, income is heavily dependent upon other macro-economic data and weather pattern data, e.g. likely crop outcomes.

Similarly, a business manager who is paid regularly is different from a local plumber who is paid based on project completion. All income streams are not created equally. If both the manager and the plumber make \$70,000 annually and both have regular occurring bills, it is highly possible that the plumber may miss payments because of his variable income stream. However, if the plumber always catches up on delayed payments, does this make him a higher credit risk than the manager? We do not believe so. The farmer, the plumber, or an individual with an unexpected medical occurrence, are responsible with their bills and catch up when they can be much better applicants than what their FICO scores portend.

We utilize multi-factor models that blends top down and micro considerations to generate a better assessment of risks. We have done this type of thoughtful underwriting that considers multiple factors that traditional models do not. This has allowed us to have de minimis losses with our underwriting. Notably, we have found that individuals with FICO scores below 680 have a much lower risk profile than the FICO score indicates. Yet these same individuals are typically charged higher rates which adds stress and overcharges them. In the early 1980s banks were not lending to companies with below BBB ratings. And similarly, most banks won't lend to individuals with credit scores below 680 because the perception of risk is quite high.

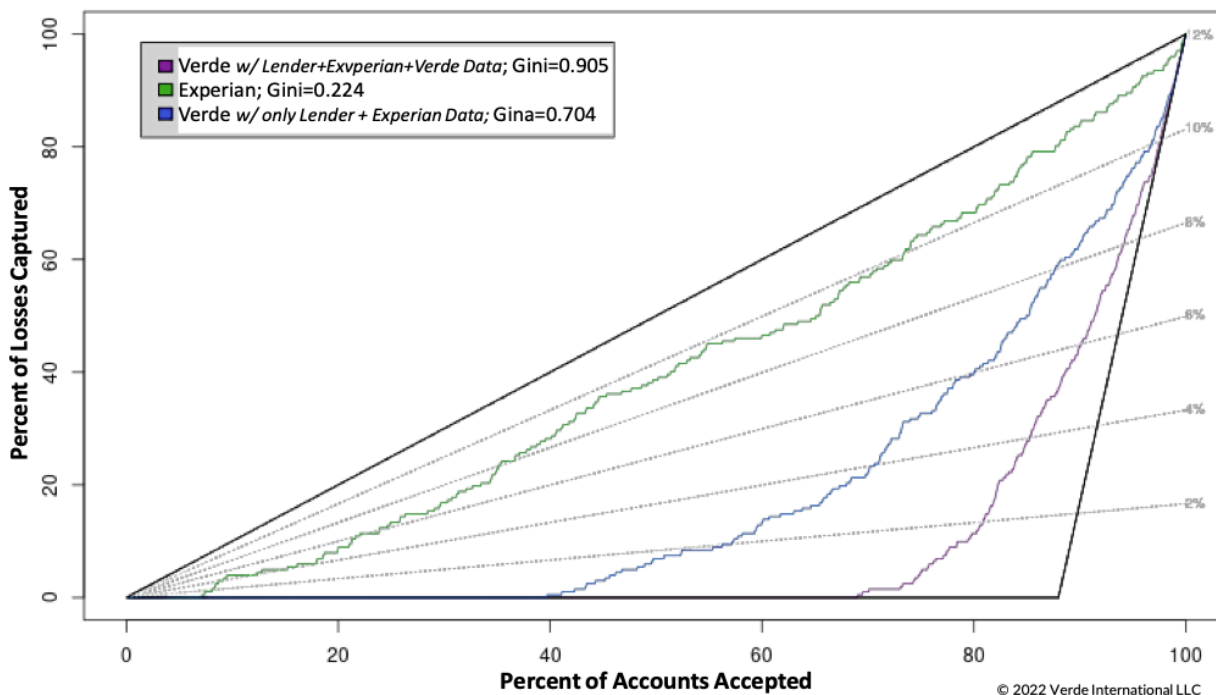
The graph below shows the performance of our innovative approach when compared to Experian's client specific, custom-built credit risk model (green line). The Lorenz Curve below shows that capping the losses at 4% would limit the percent of accounts accepted to be less than 20%. Whereas using our methods and only Experian and lender data, the results are more than 2 times better than Experian (blue line compared to green line). In this instance, capping losses at 4% would increase the percent of accounts accepted to approximately 70%.

If we add more relevant data to our methods and Experian and lender data improves the outcome by a factor of 8, importantly with very low defaults. This is due to the fact not only that Experian's use of data has changed little in 30 years, but also that our additional data incorporated improves underwriting and removes errors resulting from missing or unreliable information. In this instance, capping losses at 4% would increase the percent of accounts accepted to approximately 85%!



Underwriting Performance – Ex. National Subprime Lender w/ Avg. FICO = 622

Model Power Comparison - Lorenz Curve



We have proven that the FICO scores for this population only explains 6% of the actual risks. Our underwriting models, built to SR11-7 and Basel III standards, have been tested over the past 10 years with strong results. Holding fintech companies to these standards as well as regulatory standards ensure manageable risks when utilizing new and innovative methods.

Conclusion

At the end of the day, we believe that access to homeownership should be more equitable and accessible for all Americans. As our country continues to face an affordable housing crisis, new tools that help consumers find their way into sustainable homeownership are going to be crucial. While there is still much work ahead in understanding how these tools can be used best by consumers and lenders alike, we're excited by what's coming down the pipe!

Sincerely,

Valerie Mosley

Valerie Mosley
Founder, CEO