FinLocker LLC, St. Louis, MO.
Oct 15, 2022

To
The Honorable Sandra L. Thompson
Director. Federal Housing Finance Agency
Constitution Center; 400 7th Street, SW
Washington, D.C. 20219

Dear Director Thompson

RE: Response to Fintech in Housing Finance Request for Information. Input submitted electronically at https://www.fhfa.gov/AboutUs/Contact/Pages/Request-for-Information-Form.aspx

It is a great time for responsible data and technology enabled innovation for our industry. FinLocker appreciates your recent announcement RE creation of the Office of Financial Technology within FHFA, and your invitation for feedback. As a FinTech ourselves, we are pleased with FHFA's focus on this matter, and the emphasis on driving **responsible innovation** for our industry. We support your efforts. Your triple objective of advancing innovation in a safe and sound, responsible, and equitable manner are laudable, and something we see as an imperative for our industry.

FinTech innovation comes from all our market participants, big and small, established enterprises and new entrants, large institutions, and startups alike. FinLocker shares the view that broad engagement with market participants and collaboration between FinTech's and the agency will move the needle in bringing emerging technology driven innovation into the mainstream in a responsible and constructive way, while also **leveling the playing field**.

FinTech's in the US Mortgage market are truly diverse, and as the RFI rightfully points out, range from consumer experience tech, all the way through workflow automation, risk and scoring models, and regulatory/compliance tech. With that 'power' of data & technology comes the responsibility, and necessary oversight for this innovation to create meaningful **positive impact on our housing**.

In today's market, Consumers do not derive a fair share of the true value of their data. Too often, under the guise of innovation and experimentation, we see examples of exploiters playing fast-and-loose with consumer's data and associated regulations. Clever marketers discuss how FinTechs are providing better offers to consumers while profiting from the very consumer's data, at the consumer's expense, often leading them to products they do not need, or services they cannot sustainably benefit from. FinLocker believes that **consumer-permissioned (& transparent) FinTechs** are essential to drive innovation in our industry.

We once again thank you and your team at FHFA for the bold move in creating an office of financial technology and inviting community participation. Our detailed responses to the RFI's questions follow. We would be glad to answer any questions or provide clarifications your team may have on this letter.

Sincerely,

Henry Cason, Prabhakar Bhogaraju, and Brian Vieaux

FinLocker LLC. August 2022

A. Fintech and Innovation

- **How do primary and secondary mortgage market participants define fintech in the housing finance sector? What key factors should be considered?**
  a. *FinTech broadly refers to firms that enable or are otherwise engaged in financial services using technology as the primary source of revenue. This would mean FinTechs are technology companies first, with a financial services focus. Primary market, esp. the VC market views startups in the realms of payments, crypto, lending/crowdfunding, AI/ML based risk models, and finally InsurTech, Real Estate tech as FinTechs. However, large financial institutions and enterprises also deploy technology in myriads of ways and derive a large portion of the value they create to their customers via Technology. Established institutions like Capital One consider themselves to be FinTechs.*
  b. *Within our industry, largely driven by valuations, a large number of Independent Mortgage Banks associate themselves as FinTechs, since the venture and equity markets of the last few years favored technology companies or companies that are built on technology as scalable higher margin investments than traditional lending businesses.*
  c. *We embrace the broad Wharton school definition of FinTech as "an economic industry composed of companies that use technology to make financial systems more efficient".*
  d. *In defining a housing finance Fintech, here are the key factors that we believe should be considered:*
     i. *Core offering of product or service should be technology driven.*
     ii. *Technology should enable one or more portions of the housing value chain directly.*
     iii. *FinTech should demonstrate good faith implementations of all housing finance related protections (ECOA, FCRA, CFPB requirements etc.,) independent of products/services that 'trigger TRID'.*
  e. *We propose the following set of fundamental questions for a housing FinTech:*
     i. *Is technology being used/applied in a fundamental way for the mortgage business where the entire value-chain is fully digitized or is technology merely an efficiency driver in certain portions of the value-chain with manual processes still prevalent?*
     ii. *Are direct-to-source data being applied to improve transparency and inclusion for all stakeholders?*
     iii. *Are high-quality electronic validations of data and workflows implemented to reduce/eliminate fraud?*
     iv. *Are consumer consent, privacy management and data governance front-and center of the product/service offered by the FinTech – not as a once and done event - but as an intuitive on-going engagement with consumers on their data and privacy?*

- **How could FHFA facilitate adoption of "responsible innovation"?**
    a. *FHFA is in a unique position to facilitate adoption, given their broad policy reach, and direct management oversight of two of the largest producers and consumers or mortgage technology in the industry, the GSEs. We tranche FHFA's facilitation recommendations in three buckets.*
    b. *Education & Guidelines*
        i. *FHFA can bring forward key elements of definitional guidance on emerging technology trends, baseline core use-cases to highlight application, and provide guidance on risks/constraints associated with the technology in addition to highlighting the opportunities. This education and guidance can be just informational with no additional enforcement or be a framework for potential audits and inspections. A good example is the model risk management AB FHFA published for the GSEs.*
    c. *Engagement & Feedback Loop*
        i. *FHFA can enable periodic forums with industry participants, VCs, and technology thought leaders for free and open exchange of ideas, policy implications and consumer benefits. The forums can be (i) invited – aka FHFA's Fintech Advisory Board, and (ii) open – orchestrated as part of large industry events like MBA Tech conference.*
        ii. *FHFA can use these forums to solicit feedback (e.g., RFI like the one we are now responding to) and accelerate feedback and validation loops with direct participation and active engagement of the industry*
    d. *Encouragement & Direct Investments*
        i. *FHFA can create a 'Fair Housing Incubator' funded by the office of FinTech with small grants ($250K-$750K) to under-invested problem areas, with no endorsement, and enable rapid incubation of high impact, mission-focused areas*
        ii. *The incubators can be 'distributed' incubators embedded in the GSEs or in larger mortgage banks, 'centralized' within FHFA, or with the GSA's OCIO/CTO office*

- **What factors currently inhibit the adoption of fintech and innovation in the primary and secondary housing finance sector? Are there specific challenges related to privacy laws, industry standards, or current practices?**
    a. *There are number of economic and regulatory factors that inhibit adoption of FinTech and innovation in the industry.*
        i. *Economic: Housing Finance industry, esp on the home-ownership side, is very cyclical. Investments in technology & innovation, consequently, are cyclical as well. Post great recession, there was a near-stoppage of all technology innovation in areas of origination, with more technology*

investments in servicing and loss mitigation. Mid 2010s saw an explosion of origination Fintech innovation and investments (POS, eDocs, eClosing), and the post-covid era has put cost optimization investments in focus.

ii. *Change Management: FinTech development is expensive, and adoption/implementation requires change management activities. For a transactional business that works on volume-margin combinations, adoption of new technology takes an effort in re-tooling job-aides, training users and consumers alike and in rebuilding workflows and audit processes.*

iii. *Compliance & Regulation: Clarity on regulatory guidance and application of compliance requirements on FinTechs is a major inhibitor of adoption. CFPB has done a great job of establishing consumer protections via the TRID/CD requirements. However, a number of FinTechs, esp those that work in areas like Self-Serve Financial Literacy, Consumer Readiness like FinLocker, are subject to uncertainty on the applicability of current regulations and compliance requirements. For example: In a full self-serve model where a consumer can use their direct to source financial data and assess their readiness for a mortgage (lender is not involved yet), what, if any, of the current Loan Origination focused regs and disclosures apply? In an era of widespread adoption of consumer facing credit (your free credit report!), what is the applicability of FCRA guidance on consumers reviewing their own credit scores and reaching out to apply for a mortgage vs a lender offering them a mortgage? Similar constraints of ambiguity in regulation apply to alternate scoring models (cashflow based models), propensity models that predict pre-pay or delinquencies using alternative data sources like income stability and bank transaction data.*

iv. *Established Tech Platforms and access to consumers: Independent of any/all of the adoption inhibitors above, FinTechs in housing finance cannot be viable without GSE's certification, and deep integrations with the dominant industry technology platforms (e.g., ICE Mortgage Technology). This is a chicken-and-egg problem. GSEs are perennially capacity-constrained in reviewing approving & certifying the numerous startups out there in the market. Dominant industry technology platforms have potentially conflicting business interests with most of the startup housing FinTechs and therefore FinTechs may not benefit from access to the consumer and consumer adoption.*

B. Identifying Fintech Opportunities in the Housing Finance Ecosystem

- What kind of fintech activities have the greatest potential to positively impact the housing finance sector? Describe several situations in which a product or service has been or could be used, the factors considered in determining importance, and associated impacts.

a. *In our opinion, the top three categories of fintech activities with greatest positive impact are as follows.*
    i. *Consumer Financial Literacy & Engagement*
        1. *Demographic shifts indicate 4-5 millennials enter the median home hying age each year over the next decade. These individuals have poor financial literacy and are often laden with student-debt. Engaging these consumers early, often and in a contemporary intuitive manner is an industry imperative. While a bit hyperbolic, lack of effective financial engagement has the same potential to inflict economic damage a consumer's life as lack of substance abuse education or lack of health education. Our current FTHB counseling should evolve digitally with mandated self-service solutions (in privacy of a consumer's own digital space with no marketing!) financial literacy, options, and simulations to ensure the true spirit of preparing the borrowers for homeownership. Advice from such platforms should remain objective and provide realistic solutions for rent vs buy – and not mislead or overly direct consumers towards taking mortgages when that may not be the best for their life situation*
    ii. *Risk and scoring models*
        1. *Predominant risk/scoring models in the industry are backward-facing and have proven to be not as inclusive as we need them to be. Models that do not fully utilize modern financial activity, or alternate proof of willingness-to-pay are ripe for transformation. Several FinTechs are working on newer and alternate sources of data including Gig Economy sources, cash flow analytics, income stability, rent/utility/subscription based recurring payment histories and more. GSE's adoption of alternate model FinTechs should be accelerated with a safe harbor to encourage innovation. Without test and learn, there will be no alternative to status quo and that is a missed opportunity for our industry. Example: Vantage Score & score boosts with rent and utility payments*
    iii. *RegTech*
        1. *FinTechs that can automate workflows and tasks, especially those that require data reconciliation, loan quality & due diligence, can improve consumer and lender confidence in mortgage originations.*

- What are the typical time requirements of each process within the mortgage lifecycle? What are the "critical path" activities that drive the mortgage timeline and borrower expense? How could fintech be applied to improve efficiency, reduce costs, reduce time requirements, or facilitate equitable outcomes for borrowers?

   a. *Cycle time requirements vary by product (purchase vs refi), by consumer segment (first-time home buyer vs repeat), employment type (salaried vs self-employed etc.,). Critical path activities that drive mortgage timeline are loan underwriting and processing. This activity has the potential to create quite a bit of back-and-forth between the investor-lender-consumer*

- What are the typical drivers of repetitive requests to borrowers or reevaluation of underwriting information by the lender in the mortgage process, and what opportunities exist to automate processes?
   a. *Technology (& service provider) fragmentation, elapsed time and investor stipulations are typical drivers of repetitive requests to borrowers. There are upwards of 12-15 participants in the mortgage origination process. Each of them have their needs for consumer information, consent capture and tracking. Not all of them share the same technology platforms and solutions. Realtors, mortgage brokers, loan-officers, loan processors, shippers etc., all employ different methods of working on their portion of the supply chain. This can be resolved with industry data and technology integration standards.*
   b. *Investor stipulations on documentation and conditions based on loan characteristics, and 'recency' of documents (e.g., 30-day VOE) are another reason for repetitive requests. This can be resolved via FinTechs that support direct to source data.*
- What are the existing data challenges that most prevent data-driven decision-making in the mortgage lifecycle?
   a. *Lack of enough adoption in direct-to-source data. Entry for new FinTechs that provide alternate sources of data into the Mortgage technology ecosystem is difficult. Existing technology platforms of both origination systems as well as those of GSEs cannot rapidly absorb new entrants due to the technology integration costs, business process change cost, and the lack of adequate track record on the new data sets when it comes to fair lending and risk implications. Income and employment, followed by asset data are some of the key data challenges for our industry, especially for self-employed and gig-economy workers*
- What are the existing regulatory and policy barriers to adopting and implementing fintech within the mortgage lifecycle?
   a. *Privacy legislation, fair lending requirements and disclosures all contribute to the uncertainty FinTech's face.*

C. Equitable Access to Mortgage Credit

- What new fintech tools and techniques are emerging that could further equitable access to mortgage credit and sustainable homeownership? Which offer the most promise? What risks do the new technologies present?

   a. *Advances in AI/ML, distributed ledgers, and API/Platform economy (including open-banking) are three key emerging tools and techniques that could further equitable access.*
   b. *Of these, API/Platform economy offers the most promise – with direct to source data that opens new pathways of uncovering borrower's credit worthiness based on cashflow, net-worth, and alternate forms of validating willingness and ability to pay*
   c. *AI/ML can help enable discovery of newer patterns, but the technology is still early in its 'veracity' – of being able to defend blackbox model decisions in a compliant manner*
   d. *Blockchain has a lot of promise, but also one fraught with implementation constraints and business model frictions*

- What emerging techniques are available to facilitate or evaluate fintech compliance with fair lending laws? What documentation, archiving, and explain-ability requirements are needed to monitor compliance and to facilitate understanding of algorithmic decision-making?
   a. *Inclusive sampling, stochastic modeling are two techniques to improve the 'explain-ability' requirements. Inclusive sampling refers to practice of deliberate and intentional selection of 'signal' and 'noise' data sets – to ensure adequate distribution of credit and asset performance conditions that represent the best socio-economic outcome. FHFA's GSE modeling guidance (AB) has some strong recommendations on this front. Stochastic modeling refers to technique of applying unconventional data sets to developed models to monitor unknown-unknowns and disparate outcomes.*
   b. *We don't believe there is a magic bullet for algorithmic decision making to be instantaneously compliant across the board. Much like current credit models and automated underwriting systems that employ them, a period of curation, monitoring and refinement will be necessary. FHFA can foster safe model development by offering guidance, safe-harbor, and limits/frameworks for applicability of models to offset unintentional impact*

- Are there effective ways to identify and reduce the risk of discrimination, whether during development, validation, revision, and/or use fintech models or algorithms? Please provide examples if available.
   a. *There are three methods to identify & reduce risk of discrimination with algorithmic decision-making solutions:*
      i. *pre-model development: Much like how we have objective measurable guidance on Fair lending examinations and guidance, developing quantitative metrics on the data sets that go into the development of algorithms*

ii. *model validation and verification: extensive testing of models with a wide variety of test data sets (not training data sets) that represent pre/post crisis credit population, pre/post redlining data and data through economic booms and recessions*
iii. *post model development: real-world monitoring of model performance and rapid refinement/adjustments or 'variance' provisions to accommodate for model's shortfalls in inclusivity*

D. Identifying and Mitigating Fintech Risks

Responses to this section have been included in our responses in sections A-C

E. Regtech

- What are the most promising areas for applying technology to regulatory and compliance functions? Please describe opportunities for "regtech" to simplify or improve compliance with FHFA, Enterprise, or FHLBank requirements.
  a. *RegTech can be an excellent vehicle for FHFA/GSE/FHLBs to create uniformity of compliance and risk management across the ecosystem*
  b. *Building on the work like the AI/ML Model Advisory Bulletin issues by FHFA – if the agencies and regulator collaborate on specifying a set of guidelines and quantitative parameters to establish validity* ***of training data sets, testing data sets****, and a* ***performance monitoring plan*** *for models – regTEch can rapidly innovate and automate those guidelines and rules for the industry to absorb*

F. Office of Financial Technology Activities and Stakeholder Engagement

- What forms of stakeholder engagement are most effective in facilitating open, timely, and continuous discussion on the challenges and opportunities presented by the application of fintech to housing finance?
  a. *An advisory board, invitation only, of FinTechs that bring a diversity of experience across technology and industry expertise*
  b. *Quarterly forums with FinTech founders and their GC's*
  c. *Bi-annual surveys of the landscape to identify latest developments, risks and constraints*
- What are some topics for a housing finance-focused "tech sprint" and how could FHFA encourage participation?
  i. *Direct-to-source data and alternative forms of establishing credit worthiness*
  ii. *Technology solutions to improve financial literacy and preparedness for homeownership*
  iii. *How can FHFA help foster more innovation and clarity in areas of risk and compliance management?*

About the Authors

Henry Cason is Chief Executive Officer of FinLocker LLC. Henry brings a wealth of leadership and financial services experience to FinLocker, having served in several executive capacities during a successful 27-year tenure at Fannie Mae. Prior to joining FinLocker, Henry was Fannie Mae's Senior Vice President and Head of Digital Products and served as Fannie Mae's Chief Data Officer. While at Fannie Mae, Henry oversaw the design, development, and launch of the company's digital products and services across the residential mortgage loan life cycle. He was also responsible for fostering the integration of Fannie Mae's technology and business infrastructure with that of its customers. Earlier in his career at Fannie Mae, Henry helped design, build, and distribute Desktop Underwriter, which is the most widely used automated underwriting platform in the mortgage industry today.

Brian Vieaux is President and Chief-Operating Office of FinLocker, LLC. Brian has over 25 years bank lending and mortgage experience. He was SVP Third Party Originations, Wholesale & Correspondent Lending at Flagstar Bank. Brian was SVP at Aurora Bank; SVP at Indymac Bank; and National Sales Director at CitiMortgage

Prabhakar Bhogaraju (PB) PB is Executive Vice-President leading Strategy, Product and Application Development at FinLocker, LLC. PB has over 20 years of mortgage technology and consulting experience, with ten years in executive leadership positions at Fannie Mae in product development, data management, and digital business architecture. PB also has extensive experience in customer engagement, design thinking, digital business strategy, and in underwriting, pricing, and servicing technologies.

About FinLocker

FinLocker is a secure financial fitness tool that aggregates and analyzes a consumer's financial data to offer a personalized journey for the consumer to achieve loan eligibility for a mortgage and other financial transactions. Consumers benefit from personalized recommendations, homeownership and mortgage education, credit score, credit report and monitoring, cash flow analysis, budgeting, goal planning, data sharing, real estate search, and more. Mortgage lenders, originators, and other financial institutions can private-label FinLocker to generate and nurture leads, streamline the loan process, cross-sell value-added products, reduce costs, and create customers for life