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October 14, 2022

Reg. 2022 Fintech in Housing Finance RFI

To whom it may concern,

As a technology service provider to the financial services sector in the U.S., we at Vendia greatly appreciate the Federal Housing Finance Agency’s commitment and openness to new fintech innovations and technologies. We are seeing increased interest from industry players in using business blockchain platforms like Vendia’s to enable secure, trusted, and automated exchange of data across the housing finance system. FHFA plays a critical role in helping accelerate the shift to a more modern, fair, and efficient industry and system through the endorsement and facilitation of new technology adoption. With this in mind, please find our response to the Fintech in Housing Finance RFI below.

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Section A: FinTech and Innovation

Question A.3. 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?

Fintech innovations are powered by data. Without access to the right data, innovation and its impact are inhibited. A central challenge facing the primary and secondary housing finance sector is that critical data is extremely fragmented, lacks shared standards, and is siloed across a complex network of industry participants. This limits innovation to incremental steps forward *within* organizations. However, in order to make greater leaps forward, we need to innovate *across* the system—making it more connected and automated. Data is the foundation we are building on, and in order to bring innovation to the wider industry, the system as a whole needs to share more common ground when it comes to data and how it is exchanged - only then are we as an industry able to rethink, modernize, and automate processes, workflows, and systems. A more connected and automated system would be able to help establish new industry standards and ensure greater compliance with privacy, security, and data laws. Vendia sees the use of a business blockchain platform as a critical component in enabling this type of system-wide innovation.

Section B. Identifying fintech opportunities in the housing and finance ecosystem

Question B.1: 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 impact.

The housing finance industry has invested billions in data and IT infrastructure within individual organizations. Yet despite that investment, the industry remains highly fragmented and dependent on partners. It is not enough to focus on the data and IT infrastructure *within* an organization, organizations need to put the same type of systems and workflows in place to work *across* business networks. Currently, the data the industry relies on is siloed, and therefore the process of sharing it safely is slow, manual, and linear. Processes and workflows are held back by the rigid nature of current systems where data is

difficult to share, difficult to track across parties, and difficult to change— especially when the change needs to be consistent across parties. As a result, mortgages are processed slowly, compliance is cumbersome to ensure, risk is costly to manage, and new data sources (such as rent history that can help create a more equitable housing finance system) are difficult to include.

It is important the industry considers the network as a whole and aligns around a shared source of truth that everyone trusts and relies on—where data is exchanged securely and with control. A platform like Vendia’s business blockchain, allows for multiple parties to easily exchange data in a secure and trusted way without sacrificing control. This opens up for opportunities to automate and accelerate data workflows and processes. Using a private business blockchain as a data orchestration mechanism provides benefits such as auditability (including back in time), clear lineage between each transaction, transparency for all parties, and makes the data tamperproof. It also avoids the complications and challenges associated with using public blockchains that lack in sharing control, scalability, and integration with enterprise systems, not to mention are costly to implement and run.

There is a big opportunity to rethink the housing finance system and it all starts with easy and secure exchange of data across multiple parties through the formation of data alliances underpinned by business blockchain technology.

Question B.2. 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?

One of the key limiting reagents in achieving high efficiency in the end-to-end mortgage lifecycle is the speed at which data can be seamlessly transferred and verified between parties. The current ecosystem is extremely expansive, with tens of thousands of participants across both the primary and secondary market ecosystems who manage their data across a multitude of software as a service and homegrown applications built on their preferred cloud service provider or on premise.

The volume of data and metadata that accumulates and compounds over the end-to-end lifecycle of a loan—from origination and underwriting through closing, GSE acquisition, securitization and administration—is significant. Furthermore, this information travels in a

linear fashion, with many hand-offs between organizations. In many cases, an organization may acquire then transfer then reacquire the same loan data several times over the course of the life of a loan.

Take for example the case where a major seller / servicer originates a loan, but immediately transfers servicing rights to another party, then reacquires servicing rights. Furthermore, once this loan is packaged into a mortgage backed security, the investment arm of the same seller / servicer may invest in the broader security of which the loan is a part, further necessitating access to the underlying data and loan history. All of this data is acquired and validated, sent, reacquired and revalidated, resent and then reacquired by the same party over the course of the life of the loan. Many of the costs associated with onboarding, audit, reconciliation, transfer, re-onboarding, etc. are superfluous and ripe for fintech disruption - all toward the benefit of the American homeowner who stands to benefit from a streamlined experience and reduced overhead costs associated with the current process.

For years, many have held that the promise of blockchain will solve all of the above. The reality is that public blockchains fall woefully short of this promise. While blockchain has undergone a notable hype cycle, public blockchain pilots have been one of the most failed technology pilots when it comes to enterprise experimentation. In particular, the solutions have fallen short in dealing with sensitive and regulated loan data in the complex and highly transactional multiparty ecosystem that is housing finance.

At Vendia, we have built a blockchain for business which addresses traditional blockchain shortfalls and excels beyond other solutions. The Vendia platform delivers an enterprise grade private, permissioned, blockchain suited for the housing finance ecosystem. Vendia combines the decentralization and trust of blockchains with the scale of public clouds wrapped in the compliance and security features required by the industry. Furthermore, Vendia was engineered for rapid adoption irrespective of an organization's technical maturity—it takes approximately 15 minutes to spin-up a blockchain ecosystem that leverages the full scalability and security of your cloud of choice.

With Vendia, a “golden loan record” can be created during origination and updated and shared with all relevant parties over the course of the life of that loan. Vendia's role-based access control features facilitate sharing all or parts of that golden loan record's data and

files with other parties in the ecosystem quickly and easily with the auditability of an immutable ledger.

In summary, the Vendia platform promises to eliminate the inefficiency of manual loan data reconciliations, expedite the end to end process from origination to bond administration and provide unprecedented transparency, as appropriate, to housing finance actors and regulators.

Question B.3. 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?

Data is the lifeblood of the housing finance industry. Data connects the entire ecosystem, from B2C interactions to evaluate borrower creditworthiness, to B2B interactions between partners across the breadth of loan administration activities. In order for data to be actionable and relevant, it must be accurate, verifiable, and up to date. One of the key technical challenges facing the industry today is around how to create a “golden loan record” to eliminate the burden of repetitive data requests and the cost of manual reconciliation. Borrowers are still tasked with duplicative requests during the application process and required to provide physical or digital documentation to originators despite the fact that this information could be shared programmatically with the borrower’s consent. The borrower’s experience is further complicated should they be evaluating rates across several originators concurrently, requiring that they respond to similar but slightly different data requests across different platforms.

Businesses operating across the ecosystem face similar challenges. The parties executing master servicing rights transfers manually exporting data from different systems, sending files back and forth trying to ensure that all parties have the same, current view of the data at any given time. The GSEs are wasting a lot of effort going back and forth with servicers trying to reconcile unpaid principal balances across a portfolio of loans. At the crux of this is the fact that the way the industry collaborates around data today is inefficient, point to point, and surprisingly manual. The moment data is shared from one entity to another it becomes stale, thereby triggering a sequence of repetitive asks across both the B2C and B2B networks, increasing the time, cost and headache associated with every step of the process.

Vendia has created a highly secure business blockchain that creates a golden loan record at origination. This record can contain both scalar data and files—all bundled together on an immutable ledger that allows authorized participants to collaborate around the data—reading and updating per role based access controls put in place by the participant who owns the data. Vendia eliminates the need for duplicative requests and reconciliation of stale data—all parties see the updated data they need, when they need it, and only that data.

Question B.4. What are the existing data challenges that most prevent data driven decision-making in the mortgage lifecycle?

The most common obstacle to data driven decision-making is the lack of access to business-critical data in a timely manner. The data often exists but is stuck in data silos within an organization or across multiple organizations. Even if the data is accessible, it can be difficult to combine multiple data sets into a single and trusted source of truth. Most data is shared manually or requires manual or scheduled processing—in either case it gets quickly out of date. The older the data, the less it can be trusted and the greater the risk of errors. Other challenges exist around trust and control. Data is often not shared at all out of fear the data owner loses control of the data and who can access it, this brings with it the risk of being out of compliance and liable for potential wrongdoings of other actors with access to the data.

This is why Vendia advocates for an approach to data exchange that removes these obstacles by ensuring the data is shared in real time, shared across and accessible to data alliance partners, while allowing data owners to exercise fine-grained control of their data at all times down to the individual data field or file. In our opinion a business blockchain is the right approach as it combines the benefits of blockchain while meeting the needs of enterprises and allows for greater flexibility of system and process innovation and expansion.

Section C: Equitable access to mortgage and credit

Question C.1. What new fintech tools and techniques are emerging that could further equitable access to mortgage credit and sustainable home ownership? Which offer the most promise? What risks do the new technologies present?

Blockchain technology has matured to the state where it is an excellent candidate for rethinking the mortgage and credit system. The rigid nature of existing housing finance systems makes it difficult to change the way decisions are made and processes are done because of the historical dependence of past technology implementations. Going forward a more holistic and flexible system that is able to combine varied and new data sources into the process with ease, opens up for new innovations and opportunities now and in the future.

The biggest risk with the adoption of blockchain technology is a lack of appreciation for the difference between public and private blockchains. Public blockchains were made infamous by crypto currencies and crypto trading and are designed in a way that makes public blockchains or technology derivatives thereof a poor, costly, and risky choice for most enterprise organizations. Services built on public blockchains do not meet the requirements of enterprises and often lead to failed adoption of the technology. Public blockchains fall short in the areas of privacy, security and compliance, the ability to store both data and files, fast processing speeds not dependent on mining, low cost, scalability and cost management following demand, access controls, and easy implementations.

Private blockchains built for business take into account the needs of enterprises while delivering the benefits of blockchain. A business blockchain is more flexible as it is not dependent on a public blockchain consortium to agree on system wide updates, new partners can easily be included into the network, and data models and schemas can easily be updated to reflect new data sources or approaches. The ability to implement smart contracts also allows for a high degree of automation, while allowing any partner to audit data including back in time.

Section E: Regtech

Question E.1. 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.

By connecting industry players and their data through a business blockchain the data is always up to date, giving everyone a real time view of the aggregate data and helping ensure actions and results are in compliance. The lineage that is created between every transaction allows for easier auditability and the tamperproof nature of the blockchain ensures the data can be trusted and verified. There is even an opportunity to implement additional checks and balances through the use of rule based smart contracts that can prevent or flag transactions or data that is outside the bounds of what is expected.

Ensuring immutable audit and regulatory oversight is straightforward with Vendia. Any auditor or regulator can simply provision a node on the network and, with participant approval, be granted full read access to all of the data in the network. Let’s take for example a scenario where CFPB would like to monitor servicing activities and servicing transfers. While servicers on the network may only have access to read/write loan data within their portfolios or specific loans shared with them by another servicer as part of a servicing rights transfer, CFPB could have read access across all servicer nodes, just to the data they need for regulatory purposes, including the full history and lineage of all transactions associated with that data.

Further information

Thank you for the opportunity to submit our recommendations. For further information please contact Ben Steward, Managing Director of Financial Services at Vendia, at ben@vendia.net or visit Vendia.net.