Veros™
2333 North Broadway, Suite 350
Santa Ana, California 92706 USA
714 415 6300 fax 714 415 6360

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Dear Chairman Clayton:

Veros Real Estate Solutions is pleased to provide this response pursuant to the Securities and Exchange Commission's (SEC) Request for Public Input from Investors and Other Market Participants on Asset-Level Disclosure Requirements for Residential Mortgage-Backed Securities, dated October 30, 2019.

Veros Real Estate Solutions (Veros) is a proven leader in enterprise risk management and collateral valuation services. Since 2001, Veros has combined the power of predictive technology, data analytics, and industry expertise to deliver advanced automated solutions that control collateral risk valuation throughout the mortgage industry, from loan origination to servicing and securitization. Veros' services include automated valuation models (AVMs), fraud risk detection, residential loan portfolio analysis, home value forecasting, and next-generation collateral risk management platforms. Veros is the primary architect and technology provider of the Uniform Collateral Data Portal® (UCDP®) to the government-sponsored-enterprises (GSEs) Fannie Mae and Freddie Mac. Veros also works closely with the Federal Housing Administration (FHA) to support its Electronic Appraisal Delivery (EAD) portal and U.S. Department of Veterans Affairs (VA) for their Appraisal Management System (AMS). Our proven experience positions Veros as unique subject-matter-experts related to both collateral valuation and the flow of mortgage data through the U.S. Housing Finance system. Since the Commission revised its ABS rules in 2014, thus creating Reg AB II, there hasn't been a single SEC-registered residential mortgage-backed securities (RMBS) offering. Instead, the RMBS market has leveraged private 144A transactions. The main driver of this is the difference in disclosure requirements. This highlights the need to explore appropriate modifications to the SEC-registered RMBS disclosures to breathe life into what should be a vital tool for the U.S. Housing Finance system.

The request for revisions relating to disclosures is a necessary and critical step to accomplish the stated goals of reviving the market for SEC-registered RMBS. This request becomes even more important considering the administration-led drive for mortgage finance reform. Indeed, the Director of the Federal Housing Finance Agency (FHFA) has communicated that the Agency will be taking several steps to modify the roles of the GSEs vis-a-vis the rest of the market. The FHFA has indicated these steps are likely to include a reduction in the GSEs' footprint (Fannie Mae and Freddie Mac combined have the largest market share of the mortgage industry and, as the SEC indicated in the RFI, have issued approximately $4.47 trillion in face amount of MBS in the five years ended June 30, 2019). In the event these measures are realized, the private-label securitization market needs to be ready and able to absorb more volume and scale safely and soundly well in advance of any proposed changes going into effect.

A robust and well-functioning securitization platform is critical to maintaining liquidity in the U.S. Capital Markets, without the need for the Federal Reserve to inject liquidity into the markets to make up for perceived shortfalls[1]. RMBS can play a significant role in normalizing liquidity and must continuously be explored for enhancement. The role of RMBS becomes even more critical if either the FHFA shrinks the GSEs' footprint or the mortgage credit box expands beyond what the GSEs or Ginnie Mae are willing to purchase or securitize.

Aligning and expanding the disclosure requirements between the SEC-registered RMBS and the private 144A offerings is a critical first step to bringing back the overall RMBS market. Over time, there should be complete disclosure alignment between RMBS and the agency market. If the overall SEC goal is creating a more vibrant RMBS market to compliment the footprints of Fannie Mae, Freddie Mac, and Ginnie Mae, other investments are required beyond modifying the disclosure requirements. Given that, this response will address:

1. Specific feedback on collateral valuation data disclosures.
2. Recommended adoption of standardized datasets and the investment in technology for data transmission and collection.

Collateral Valuation Data Disclosures

Veros is a leading expert in the residential mortgage collateral valuation market. With respect to other data disclosures, we will let other experts in the mortgage industry comment on the non-collateral valuation fields. In this response, we limit our comments to the fields relevant to our expertise.

Collateral valuation is critical when evaluating the overall risk of a loan. Adhering to a standardized dataset, which will be described in more detail later in this response, is vital for all mortgage stakeholders. Our response in this section will be limited to the collateral data disclosure fields. The broader data issues relating to data standards, the validation against those standards, and data transmission between stakeholders will be discussed later.

Veros strongly recommends that there is complete alignment in collateral valuation data requirements for both the SEC-registered RMBS and the private 144A offerings. In the long-term, all disclosures from the RMBS and agency MBS should be aligned. However, in the short-run, Reg AB II and the private 144A offerings should contain the following data elements:

- Five-digit ZIP code – limited to the investors of record, thus providing the detailed data necessary for robust collateral valuation analytics (the SEC's EDGAR website, containing

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[1] See The Wall Street Journal, Demand For Fed Liquidity Rises, New York Fed Injects Nearly $100 Billion, published January 2020.

basic disclosure information should be limited to 3-digit ZIP codes for privacy related protections)

- Property type
- Most recent property value & associated data
  - Most recent property value
  - Most recent property valuation type
  - Most recent property valuation date
- Most recent sales price & associated data
  - Most recent sales price
  - Most recent sales type
  - Most recent sales date
- Most recent listing price & associated data
  - Most recent list price
  - Most recent list date
  - Most recent listing status
- Original appraised property value & associated data
  - Original appraised value
  - Original property valuation type
  - Original property valuation date
- Most recent automated valuation model (AVM) data
  - Most recent AVM model name
  - Most recent AVM estimate of value
  - Most recent AVM confidence score
  - Most recent AVM value range (high, low)
  - Most recent AVM date
- Original automated valuation model (AVM) data
  - Original AVM model name
  - Original AVM estimate of value
  - Original AVM confidence score
  - Original AVM value range (high, low)
  - Original AVM date
- Loan-to-Value (LTV) data
  - Original loan-to-value ratio (LTV)
  - Original combined/total loan-to-value (CLTV/TLTV) ratio

This disclosure data, for both the SEC-registered RMBS and private 144A offerings, will create consistency and provide the necessary information for investors and other authorized participants to adequately and efficiently analyze and manage collateral risk.

Standardized Datasets and Data Transmission/Collection

A significant update to the non-agency secondary market is necessary for private-label RMBS to play any meaningful role in U.S. Housing Finance *safely and soundly*. The mortgage market landscape drastically changed after the market collapse more than a decade ago. The RMBS industry disappeared virtually overnight, FHA volume sharply increased to help fill the void left by the collapse of RMBS, and the GSEs experienced a spike of volume at the same time of going into conservatorship. The mortgage industry learned a hard lesson that the opaque boundaries between the primary and secondary markets were exposed by various unintentional, negligent, and, in several cases, very suspect forces that knew how to exploit the then existing system. The industry and the entire U.S. economy painfully learned that the promise of Representations and Warranties was not all that it was previously thought to be without proper controls in place to verify that all actors were reading from the same script.

After the mortgage market collapse in 2008, the GSEs started to make significant changes to their business model. Some of those changes were fairly easy to implement and focused on strengthening credit policies (elimination of low/no documentation loans, higher down-payment requirements, raising the FICO score minimum, and implementing a more granular risk-based approach to acquisition pricing). Other material changes required investment in their systems infrastructure to help support and strengthen their Representation and Warranty business model. These changes helped to validate, at the loan-level, that mortgages they purchased were underwritten in accordance with GSE requirements and industry best practices. This was the beginning of creating new loan-level data and transmission standards while mandating submission of that data at loan delivery to help the GSEs identify issues with the loans *prior to acquisition and/or securitization.*

One of the critical areas where the Representation and Warranty business model failed to protect the GSEs focused on collateral valuation (appraisals). The reality was both GSEs relied too heavily on the lender's Representation and Warranties resulting in: (1) a failure to collect meaningful appraisal data at the time of loan acquisition to properly assess valuation risk; (2) a reliance on non-standardized appraisal data when loan files were actually reviewed; and, (3) minimal due diligence (1-2% random sampling) post loan acquisition. This process naturally and inherently led to far too many loans with actual loan-to-value (LTV) ratios at the time of loan delivery substantially greater than reality and expectations. Conservatorship resulted from both the wide credit box (frequency of default) AND the higher than expected credit losses (severity of default). Inflated or overstated LTVs at the time of loan acquisition (especially on cash-out refis) were only exacerbated by ongoing home depreciation, causing high severity levels.

Immediately after the mortgage market collapse, there was a fundamental shift in the GSE's approach to their Representation and Warranty business model. Specifically, the GSEs moved toward creating standardized loan-level datasets, validating that data against those standards, collecting the standardized data on a fully electronic and automated basis, and analyzing the data to strengthen their knowledge of the loans they were acquiring prior to and at the time of acquisition. The Representation and Warranty model continued to exist, but there would now be complementary data to verify and validate that standards were being followed in order to further reduce their credit risk. At the direction of FHFA, the GSEs jointly **created** (2010) and **mandated** (2012) the Uniform Mortgage Data Program® (UMDP®).

Initially, there were three legs to the UMDP stool. They included

1. The Uniform Loan Delivery Dataset (ULDD) - a common set of standardized data elements required by the GSEs for single-family loan acquisitions.

2. The Uniform Appraisal Dataset (UAD) – standardized data fields required for an appraisal submission for specific appraisal forms and standardized definitions and responses for a key subset of fields.

3. The Uniform Collateral Data Portal (UCDP) - a single portal for the electronic submission of loan-level UAD-compliant appraisal data files from originators and aggregators to the GSEs.

Besides taking the leadership role of introducing UMDP, the GSEs should also be recognized in mandating the adoption of the Mortgage Industry Standards Maintenance Organization (MISMO) file format standard. In effect, for UMDP, the GSEs created a process to standardize datasets as well as the file format for data transmission. Many stakeholders recognized these efforts as what would ultimately be referred to as the first critical step of "non-legislative reform" and represented paradigm shifts in how mortgage data flowed between the primary and secondary mortgage markets.

The GSEs were very strategic in why they focused on creating ULDD, UAD, UCDP and mandating MISMO in the initial creation of the UMDP. First, ULDD helped to reduce the frequency of severity by standardizing the data required at loan delivery, enabling the GSEs to validate the data against their selling guidelines. This was especially important given the numerous credit policy changes to tighten their credit box and implement more granular risk-based pricing.

Second, to address the severity of credit losses, the GSEs knew they needed to make fundamental changes to assessing valuation risk and validating property values at the time of loan purchase. In other words, the GSEs needed to standardize the appraisal data such that the data could be used for risk modeling and analytics on 100% of all loans prior to delivery. The UAD was designed to reduce "free-form" information on the appraisal and standardize the most critical data elements for risk modeling purposes. The FHA, VA and USDA recognized the value of the standardized appraisal dataset and immediately adopted the UAD standard (although they did not initially have a means to validate whether the standard was being followed).

Third, the UCDP was created to have an industry-wide mechanism to transmit the data from the primary market to the secondary market as well as validate the data met the newly created appraisal standard. The GSEs and FHFA understood that a standard without the ability to verify whether it has been met is rendered virtually meaningless.

Finally, leveraging MISMO set the foundation for using a file format that could easily be modified and support changes in data requirements as they evolve. Specifically, MISMO took the existing rigid file formats and converted them into flexible data sources.

A key and foundational assumption underlies the primary objective of these new standards and systems – the GSEs essentially agreed not to compete on the *facts* of the loan. Investors, insurers, and guarantors should compete on their assessment and pricing of risk associated with the loan facts. The implementation of UMDP shows that even though the GSEs worked together in unprecedented fashion to create new industry standards and joint systems, they continue to operate as unique and separate businesses and are able to use independent judgment in the use of loan-level data. Both Fannie Mae and Freddie Mac remain free to exercise the analysis of this data to continually review and improve operations as well as determine individual thresholds of risk tolerance.

There is little doubt that the components of UMDP have contributed significantly to the GSEs' financial recovery. The standardized ULDD has enabled the GSEs to verify and validate specific critical data elements at the time of loan delivery. Additionally, the GSEs have strengthened their loan acquisition delivery edits to ensure alignment with their selling guide eligibility requirements. Today, this is all done prior to the loan purchase or securitization allowing the appropriate stakeholders to resolve issues much further up in the loan life cycle (more often than not, any deficiencies are cured during the loan manufacturing process and prior to the closing of the loan).

Similarly, the UAD and UCDP have had very positive results. Appraisal issues contributed heavily to the mortgage market collapse. Inflated home values, especially on cash-out refinance loans, resulted in minimal or even negative equity home values. The UAD and UCDP were implemented to allow the GSEs, in part, to build an appraisal database and process that would enable significantly greater collateral risk analysis at the time of loan acquisition. **To date, UCDP has processed tens of millions of appraisals, enabling the GSEs to significantly improve their collateral risk management capabilities.**

The GSE's implementation of the UMDP has enabled them to make significant changes to their Representation & Warranty business model, thereby reducing a lender's risk of loan repurchase due to collateral-related defects. Today, approximately 60% of the loans purchased by the GSEs have valuation Representations and Warranties waived at the time of acquisition (Fannie Mae's Day 1 Certainty and Freddie Mac's Collateral Representation and Warranty Relief). This provides increased liquidity to the U.S. Housing Finance system safely and soundly – a direct result of the standardized appraisal data they have collected and the analytics they are able to perform.

With a robust database containing standardized appraisal data, the GSEs were also able to implement proprietary tools for valuation analysis. Fannie Mae created Collateral Underwriter

(CU) and Freddie Mac introduced Loan Collateral Advisor (LCA). Both tools offer a method of communication between the GSEs and their sellers regarding the particular GSE's view of valuation risk or related issues prior to loan acquisition. And, because standardized appraisals have been collected over the last eight years, the GSEs have reliable data on a vast number of properties, enabling them to offer appraisal waiver programs in controlled scenarios and where appropriate (Fannie Mae's Appraisal Waiver program and Freddie Mac's Automated Collateral Evaluation).

It is important to note that although the operations of Fannie Mae and Freddie Mac are often summarized as GSE activities, both institutions operate independently. The complete and standardized loan-level data allows each GSE to confidentially complete their risk modeling and analytics. For example, for appraisal evaluation, there is 100% automated due diligence performed separately by each GSE with targeted reviews for the higher risk appraisals. With the implementation of UAD and UCDP, the GSEs went from a model of random sampling 1-2% of appraisals after acquisition to 100% due diligence before loan delivery. The GSEs' ability to automate and perform due diligence on all of their acquisitions is an excellent blueprint for the RMBS market.

Each of the GSE's tools, though operated independently, offer identifiable and quantifiable collateral risk prior to loan purchase, and an opportunity to correct deficiencies and validate data for full securitization transparency. Messaging from these tools helps originators cure deficiencies during the loan manufacturing process leading to better execution in the secondary markets and a much safer, more transparent U.S. Housing Finance system. In fact, a subset of the UMDP data ultimately feeds the Common Securitization Platform (CSP) and provides the necessary confidence to private investors who purchase the Uniform Mortgage Backed Security or participate in the very successful Credit Risk Transfer (CRT) programs. Such unique and positive access would be valued if extended to SEC-registered RMBS pools. There should not be a vastly different process for the manner in which loans flow into non-agency RMBS vs. agency-driven securitization. The primary mortgage market should be originating loans in accordance with the same standards and processes regardless of where the loans end up residing.

In 2014, following the lead of the GSEs, FHA began the development of its own appraisal portal. FHA's Electronic Appraisal Delivery (EAD) portal was implemented in 2015 and ultimately mandated in 2016. Consistent with the GSEs, FHA put itself in a position to collect (via EAD) and analyze standardized appraisal (UAD) data. For FHA, this is all done before the loan endorsement. FHA deserves tremendous credit by improving its risk management capabilities while minimizing the operational burden to their lenders. FHA did this by aligning with the GSEs by leveraging UAD and MISMO, and creating EAD in a way that is closely aligned with UCDP.

FHA, leveraging their EAD portal, has had similar positive results. One specific success story on how the UAD and EAD implementations have shown broad benefits is with the 2019 FHA Mutual Mortgage Insurance Fund (MMIF). The once-suffering fund is now at the highest level (5.44%)

since 2007 despite higher debt-to-income levels (greater than 25% of loans are above 50% DTI), lower credit scores (11% of loans are below 620 FICO), and LTVs close to 100% (due to the financing of the insurance premium).[2] The data standardization and data collection efforts along with associated risk analysis of that data on 100% of all FHA loans pre-endorsement contributed significantly to the improved health of the MMIF.

Since the initial and very successful UMDP rollout in 2012, the GSEs have expanded the program to include three additional standardized datasets. They include:

1. The Uniform Closing Dataset (UCD) - a common industry dataset supporting the Consumer Financial Protection Bureau (CFPB) closing disclosures. This data provides important information to help increase the ability to detect fraud and misrepresentation at loan delivery, thereby reducing the repurchase risk. In doing so, the UCD now provides additional transparency into the mortgage loan transaction file to help assess whether the loan, as closed, meets the GSEs' eligibility requirements.

2. The Uniform Residential Loan Application (URLA) - a standardized document used by borrowers to apply for a mortgage (currently reported November 2020 mandate).

3. The Uniform Loan Application Dataset (ULAD) - a standardized dataset that will comprise the majority of information the GSEs use to make decisions through their automated underwriting systems (currently reported November 2020 mandate).

Each of these new standardized datasets will enable each of the GSEs to continue strengthening their risk modeling and analytic capabilities as well as improve their ability to broaden loan level disclosures. Over time, the new data standards will provide greater data consistency by promoting better and more efficient data integration and exchange between business partners. This is allowing for improved data accuracy by eliminating otherwise costly, proprietary and inconsistent formats that can lead to missing or incomplete information and misinterpretation of the data.

Now, eight years after the UMDP mandate, the mortgage industry adoption of the new standards, the EAD mandate, and the resulting improvements in risk analytics, it is time for the RMBS market to follow what the GSEs, FHA and VA have put in place and continue to advance. The RMBS market would greatly benefit if it were to adopt the same UMDP data standards that already exist in the market (or will soon be) and make similar investments to the system's "plumbing" for the transmission of that data. The UMDP dataset (UAD, UCD, URLD, and ULAD) adoption would be very easy for the RMBS market. Given there is a significant overlap between the lenders in the conventional and RMBS markets, it is incredibly likely that RMBS lenders

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[2] See U.S. Department of Housing and Urban Development 2019 annual report to Congress. https://www.hud.gov/sites/dfiles/Housing/documents/2019FHAAnnualReportMMIFund.pdf

wouldn't have to make any changes to their existing operational processes to also adopt the standards created by the GSEs and adopted by the rest of the agencies.

At a symposium hosted by the Structured Finance Association (SFA) at the end of 2019, a panel of high-profile investor representatives and related stakeholders were asked the same question proffered at the outset of the preceding paragraph. The answer was expected but not encouraging because, as was noted on several occasions, the private-label market was missing a key and foundational element that had been built by the agencies over the past decade or more – the infrastructure or the "pipes" for the flow of standardized data and related risk analytics do not exist in PLS. We will leave to a later date the discussion pertaining to the creation of an RMBS portal, similar to UCDP and EAD, for the transmission of various standardized loan level datasets, but that is the answer. Simply follow: Step 1, the flow of standardized loan-level data submitted through agency portals for verification, validation, risk analysis and messaging; to, Step 2, a subset of these datasets used to populate accurate and reliable disclosures for the purposed of securitization. It is very difficult accomplish Step 2 on any scale without first achieving Step 1. In other words, don't put the cart before the horse. We welcome the opportunity to discuss the details of those thoughts and ideas with the proper stakeholders at a later date.

In the years leading up to the last financial crisis, mortgage volumes grew, without the benefit of industry-wide data standards and electronic data collection. Instead, the mortgage industry relied on marginal sampling of loans and the life of loan Representations and Warranties business model. The U.S. Housing Finance model was pushed well past its limits resulting in the Great Recession. In the aftermath of the housing crash, Fannie Mae and Freddie Mac led the effort to make the necessary policy changes and investment in technology infrastructure that has put the overall mortgage market in a significantly better place. The agencies now employ a robust and transparent data-centric infrastructure to identify and mitigate risks based on new industry data and transmission standards. We have also seen other key market stakeholders (FHA, VA, and USDA) adopt many of those standards. In contrast, the non-agency side of the secondary market has done little to address the very same gaps that existed for the agencies before 2007. It stands to reason, in a reform environment, the RMBS market should employ similar and proven tools and processes to facilitate a reenergized SEC-registered RMBS market.

In just over a decade following the 2008 market crash, the agencies, led by Fannie Mae, Freddie Mac, FHA and VA, have forged a complete transformation of their business processes. These efforts have led to the safest and most robust U.S. Housing Finance system in history. The track record is clear, and the model is proven. If the ultimate question posed by the Chairman is how can private-label RMBS play a more meaningful and safer role in the U.S. Housing Finance system, the answer has been played out right in front of all of us over the past decade.