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Dear Mr. Jones:

Attention: Comments/Regulatory Review [No. 2023–N–5]

Thank you for the opportunity to comment on the Federal Housing Finance Agency Regulatory Review; Request for Comment. XBRL US is a nonprofit standards organization, with a mission to improve the efficiency and quality of reporting in the U.S. by promoting the adoption of government and business reporting standards. XBRL US is a jurisdiction of XBRL International, the nonprofit consortium responsible for developing and maintaining the technical specification for eXtensible Business Reporting Language (XBRL). XBRL is a free and open data standard widely used in the United States, and around the world, for reporting by public and private companies, as well as banks and government agencies.

Since the Federal Housing Finance Agency's (FHFA) last regulatory review in 2018, changes in legislation, technology advances, and broader use of data standardization worldwide provide important opportunities for the FHFA to improve the efficiency and reduce reporting burden in FHFA data collection. Below are responses to several of the questions raised in the RFC.

RFC Question (1) Legal or regulatory developments—including new laws, executive orders, or judicial decisions that have been adopted since the promulgation of a regulation—that make a regulation inefficient, obsolete, contrary to controlling legal precedent, or unduly burdensome;

The Financial Data Transparency Act (FDTA) was signed into law on December 23, 2022, as part of [H.R. 7776, the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023](#). The FDTA calls for the use of data standards by member agencies of the U.S. Financial Stability Oversight Council, including the FHFA. Data standards required to be established under the final rules are defined as:

- Including common entity identifiers
- Being open and nonproprietary
- Able to render data searchable and machine-readable
- Documenting financial reporting requirements in machine-readable taxonomies
- Incorporate standards developed and maintained by voluntary consensus standards bodies
- Consistent with applicable accounting and reporting principles

While the FDTA does not explicitly name the data standard or entity identifier required to be adopted, we encourage FHFA to investigate the use of XBRL and the Legal Entity Identifier (LEI)

to modernize its data collection process and to comply with this legislation. XBRL and the LEI both meet the requirements as described in the FDTA as well as the goals of the legislation to make data more accessible and understandable.

Why XBRL

XBRL is an open, nonproprietary data standard that concretely represents the semantic data model so that it can render facts unambiguously machine-readable. It is managed by a global, voluntary consensus standards body called XBRL International. Open standards, as required in the FDTA, are important for regulatory implementations because they ensure the lowest cost for all stakeholders. Some standards may be widely used but are not open. The CUSIP and the DUNS number for example, are widely used, but they are proprietary and not open, because they are owned by commercial entities and require licensing fees for use.

XBRL is already required for entities reporting to other FDTA agencies including the Securities and Exchange Commission (SEC), the Federal Deposit Insurance Corporation (FDIC) and the Board of Governors of the Federal Reserve. The Federal Energy Regulatory Commission (FERC), while not an FDTA agency, is also a user of XBRL. Every public utility reports their financial data to the FERC in XBRL format.

XBRL is used worldwide in 213 regulatory programs¹ for reporting by public companies, private companies, financial institutions, utilities, and banks. Widespread use is important for any kind of standard because it ensures that there is a large competitive marketplace of applications to support the standard for reporting, collection, extraction, and analysis.

The XBRL standard provides a framework (semantic data model) that defines data unambiguously. The figure below for example, shows how a fact like 303,519 is concretely defined by the metadata in the corresponding orange and blue bubbles. While a human reading this chart of data in Excel can understand what the fact represents, a computer can only read the fact if it is accompanied by the metadata that explains that the fact represents Median Sales Price for the state of Arizona; it has a monetary data type with an instant (rather than duration) period type; the fact is represented in US dollars for the period 2020.

When this fact is prepared in XBRL format, all the information contained in the orange and blue bubbles is transported along with it so that when it is received by a computer, it is unequivocally understood, and data extraction and analysis can be automated.

¹ XBRL Project Directory: <https://www.xbrl.org/the-standard/why/xbrl-project-directory/>

Enterprise Housing Goals Demographic Data

State	2018	2020	2021
Alaska	\$304,319	\$323,228	\$349,569
Alabama	\$176,805	\$206,601	\$232,570
Arkansas	\$145,889	\$167,257	\$191,897
Arizona	\$251,294	\$303,519	\$370,275
California	\$577,558	\$639,548	\$702,375
Colorado	\$406,036	\$449,328	\$541,396
Connecticut	\$290,294	\$332,258	\$387,218
District Of Columbia	\$550,032	\$617,241	\$704,103
Delaware	\$242,229	\$275,605	\$313,469

XBRL is a semantic data model that relies on a “taxonomy” which is a digital dictionary of terms. The FDTA requires the use of a data standard that is documented in a machine-readable taxonomy because it is the most efficient and cost-effective approach. The taxonomy is a “single data model” that represents everything that can be reported, how the data should be presented, and how data relates to other data. Use of a taxonomy means:

- All stakeholders (reporting entities, data collectors, data users) have the same information about how to report, what to report, and what the data means.
- The data model is intricately linked to the data reported which eliminates the need for instruction documents which can become outdated.
- Reporting requirements are easy for regulators to change. Updates require limited IT involvement.
- Enables adaptability to technology changes.
- Reduces reporting duplication and burden; streamlines the ability to extract and analyze data.
- Use of a taxonomy can also reduce the size of data files because the report file only needs to carry reported facts and other information specific to the report; it references the taxonomy which contains much of the additional explanatory information.

Why LEI

There are over 2.2 billion LEIs registered worldwide². There are 275,899 in the United States. The LEI is a 20-character, alpha-numeric code that connects to reference information that enables clear and unique identification of legal entities. Use of the LEI enhances the ability to understand and evaluate business and investment risk. The LEI is open, nonproprietary and meets the stated criteria of identifiers required per the FDTA.

² Global LEI System Statistics Dashboard; <https://www.gleif.org/assets/components/global-lei-system-statistics-dashboard/tableau-dashboard.html>

We encourage the FHFA to explore XBRL and the LEI to begin the transition required by the FDTA legislation.

RFC Question (2) Marketplace developments, technological evolution, and related changes that may have rendered a regulation, in whole or in part, inefficient, outmoded, or outdated;

Increasingly widespread use of data standardization among US and non-US regulators demonstrates the need for modernization of FHFA and other agency data collection.

Data collected by FHFA is made available to the public in different formats including CSV and text files. Each data set requires users of the data to review technical documentation and stand-up custom data extraction applications that fit that dataset. A single user may be able to set up a tool that can be re-used to extract the same data with updates. But it is important to note that there is a significant burden across all data users with each establishing a unique system to collect that single dataset. Furthermore, if there is a change in what data is collected, each custom data extraction application must be re-created to adapt to the change.

This issue can be illustrated by the FHFA Enterprise Public Use Database. The visual below shows the data represented in a large text file provided to the public, with a view of part of the technical documentation that accompanies the text file. The documentation explains the meaning of the data which interprets a row in the provided text file. The first row on the file below represents a single-family property with various characteristics as described in the technical documentation (note that the documentation starts with field 11 in the text file row.)

Data users that rely on this data file must build a tailored extraction application to understand the data. If there is a change to the data collected, they must rebuild their application to accommodate the change.

Data

2 2 1 3 1 3 1 1 4 5 7 1 2 1 4
 2 3 1 1 2 3 2 1 4 5 9 1 5 1 4
 2 4 1 3 1 3 1 8 4 9 9 1 2 1 4

Semantic Data model

Enterprise Public Use Database
 Single-Family Properties
 National File A
 RELEASE OF 2021 DATA

Field #	Field Width	Field Name	Values	Description / Comments
11	1	Co-Borrower Race or National Origin, and Ethnicity	1 = American Indian or Alaska Native 2 = Asian 3 = Black or African American 4 = Native Hawaiian or Other Pacific Islander 5 = White 6 = Two or more races 7 = Hispanic or Latino 9 = Not available/not applicable	Categories 1-7 consolidate information on co-borrower race and ethnicity reported by the Enterprise. Categories 1 through 6 include only co-borrowers not identified as Hispanic or Latino. Categories 1-5 include non-Hispanic or Latino co-borrowers identifying only one race category. Category 6 includes non-Hispanic or Latino co-borrowers identifying two or more races. Category 7 includes co-borrowers identified as Hispanic or Latino, of any race. Category 9 includes mortgages for which no co-borrower race or ethnicity is identified, originally coded as information not provided by the co-borrower in a mail or telephone application, no co-borrower, not applicable, or not available.
12	1	Borrower Gender	1 = Male 2 = Female 3 = information is not provided by the borrower in a mail or telephone application 4 = not applicable 9 = Missing	
13	1	Co-Borrower Gender	1 = Male 2 = Female 3 = information is not provided by the co-borrower in a mail or telephone application 4 = not applicable 5 = no co-borrower 9 = Missing	
14	1	Number of Units	1	Always 1 in this file
15	1	Unit - Affordability Category	1 = Low-income family (but not very low-income) in a low-income area 2 = Very low-income family in a low-income area 3 = Very low-income family not in a low-income area 4 = Other 9 = Not available 0 = Missing	

When a data standard like XBRL is used, the structure of the data files is articulated in the taxonomy. That means that a data extraction tool used to pull data from an SEC filing can also be used to extract data from an FDIC call report or a FERC public utility filing. Data submitted in all these regulatory programs is identically structured even though the reported facts are quite different. Using off-the-shelf tools is significantly less expensive for data users than building specialty tools for each dataset.

In the FHFA case above, rather than defining the data model in a PDF document, it would be expressed as an XBRL taxonomy. The concepts in the taxonomy would be related to the columns in each row of the associated data file. Users of the data can automate the inspection of the taxonomy to understand the related datasets. This means changes in the data submitted can be published in the taxonomy and can be automatically picked up by data users and data providers.

If FHFA data were structured in the same fashion as SEC, FERC, and FDIC filings, data users could leverage the same tools, lowering their extraction and analysis cost significantly.

Broader use of data standardization around the world has made it clear that FHFA data collection today is outmoded and could be modernized to benefit the entire supply chain.

RFC Question (5) Demonstration of a better alternative method to effect a regulatory purpose or requirement, supported by compelling evidence of significantly less intrusive means or of a substantially more efficient method of accomplishing the same supervisory purpose.

Data collection has increased over time as financial instruments become more complex and the need for timely, granular data with high integrity becomes increasingly critical. The collection process can be significantly improved by standardizing the structure of what is reported. The value of standardized data incorporating the data model is evidenced by the increasing use of data standards like XBRL by regulators worldwide. In the US, the SEC currently requires the XBRL standard for 14 form types for entities ranging from investment management to public companies, with two more form types coming online in the next few years. The SEC has also published rule proposals that, if passed as proposed, will require the XBRL standard for additional forms and reporting entities including broker dealers, exchanges, clearing agencies and securities associations.

The FERC today requires XBRL for 8 form types and is expected to require XBRL for electric quarterly reports as well.

From the standpoint of data users, structured, machine-readable (XBRL) data is superior to other form types because of the speed and accuracy of processing. As noted by the Global Director of Equity Data at Morningstar³, *“Extracting data from an HTML document takes at least 20 minutes, from a good quality PDF, takes around 30 minutes, from an image around 50 minutes. Data pulled from an XBRL file though, can be extracted in 1 to 2 seconds... let’s us focus on better analytics rather than scraping data from documents.”*

Thank you again for the opportunity to comment on the FHFA Regulatory Review. Please contact me if you have any questions or would like to discuss our comments further. I can be reached at (917) 582-6159 or Campbell.Pryde@Xbrl.us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Campbell Pryde', is positioned above the typed name and title.

Campbell Pryde
President and CEO, XBRL US

³ Video XBRL for Analysts and Investors: <https://xbrl.us/news/analyst-video/>