

Financial Research Advisory Committee Meeting February 23, 2017

Discussion Topic: Financial Instrument Reference Database

High-quality financial data are essential ingredients for risk management and for monitoring the resilience of financial institutions, markets, and the financial system as a whole. Improving the quality of financial data for the benefit of market participants and regulators was a key reason for establishing the OFR.

Providing and promulgating data standards are key mandates for the OFR. Data standards are the foundation for a ‘common language’ to align the terminologies associated with risk management and regulatory reporting. Promulgation is essential; common data standards are only beneficial with rigorous adherence to them by market participants and regulators. Their pervasive use drives data quality, improves risk data aggregation, and reduces reporting burden.

There is no shortage of financial data standards. But too many standards create overlap and variation in terminology, and expose gaps in their understanding, use and application. We have a ‘common language’ gap. To meet this challenge, the OFR will follow its mandate to produce and publish a financial instrument reference database that addresses the common language gap for financial instruments.

Business Impacts

Financial reference data are the data elements that enable participants to precisely describe who is involved in financial transactions (entities) and what is transacted (instruments). These reference data are essential for effective risk management by industry, and oversight, supervision, and financial stability monitoring by regulators.

While the financial services industry has long relied on reference data paired with transaction data to form the core of securities trading, processing, risk management, and regulatory reporting systems, there is no consensus on data standards to define them. Market participants, whether data vendors or consumers, have historically developed proprietary naming conventions, formats, and structures for the data elements that make up financial instrument reference data. This disjointed mix is inefficient and costly, leads to duplicate reporting and failed trades, and impedes the aggregation of data for risk management and reporting.

The Basel Committee on Banking Supervision confirmed this issue in the December 2015 report, “Progress in adopting the Principles for effective risk data aggregation and risk reporting” by noting that large institutions still face challenges in the “ability to formulate a common language, and develop ‘data dictionaries’ to align definitions across different frameworks, as well as to align finance and risk terminology.”

The OFR has been pursuing the development of the Financial Instrument Reference Database — a common language for financial instrument reference data — following an approach outlined at our February 2015 Financial Research Advisory Committee (FRAC) meeting that embraces best

practices for open data. Implementation will enable providers of reference data — that is, industry producers and private vendors — to create and provide standardized financial instrument reference data with consistent terms, definitions, formats and structures, and for them and government bodies to use those data.

Establishing a Common Language

The OFR will assess, adopt, and where necessary, define the structural components of a Financial Instrument Reference Database to establish a common language for financial instrument reference data. The structural components of a Financial Instrument Reference Database include (1) a common data dictionary, and (2) open data standards. Data providers, conforming to these components, will enable interoperable financial instrument reference data. These reference data are the actual values describing a financial instrument.

First, the Financial Instrument Reference Database will include a publicly available common **data dictionary** documenting the terms and their associated definitions for the data elements that describe each type of financial instrument. The foundation of standardization starts with agreement on these very basic properties. We expect that this foundation will evolve beyond documenting the terms and definitions of financial instrument concepts to include the relationships between concepts that ultimately define the financial instrument. An ontology is a mechanism to do just that.

Next, the Financial Instrument Reference Database will include open **data standards**. The data standards supplement the common terms and definitions, defined by the data dictionary, to provide format and structure for each type of financial instrument. For example, the overall format and structure of individual data elements differs if you refer to a fixed income instrument versus an equity instrument. Derivatives add an additional layer of complexity resulting in unique structures and formats.

The differences between the two components do not end there. Data standards form a technical specification documenting terminology, relationships, formats, and structures. For the Financial Instrument Reference Database, the terms and definitions are documented in a data dictionary, and the actual instructions for composing the format and structure a particular financial instrument type are contained in the data standard.

The success of this effort will rely upon the application of the data standards. The data dictionary serves as the foundation of the standards for financial instrument **reference data**. The OFR will reference conforming data providers and will identify providers of analytic services whose data terms, definitions, structures, and formats conform to established standards — the common language.

Engaging in Public-Private Collaboration

Data standards exist that define financial instruments. Various standardization efforts that have emerged each define aspects of a financial instrument in their own unique way. This includes varying terminologies, relationships, formats, and structures. In addition, some financial instruments lack robust standardization.

We intend to remedy this situation by engaging in a **public-private collaboration** that includes regulatory and financial markets participants, standards developing organizations, and financial instrument reference data providers. The FRAC Data and Technology Subcommittee (DTS) is focused on providing the OFR with recommendations on industry engagement through public-private partnerships and to outline best practices for an effective governance framework.

Through this collaboration we will (1) identify and prioritize financial instruments requiring more robust standardization, (2) gain agreement on financial instrument terminology, relationships, formats, and structures, (3) establish new or identify existing authoritative consensus-based standards for financial instruments, (4) coordinate with vendors to assess alignment approaches and issues, and (5) identify conforming reference data vendors.

Conclusion

Aligning to standards will facilitate data interoperability between market participants, data vendors, and analytics providers. We envision that the public-private collaboration to produce a Financial Instrument Reference Database will enable a diverse set of stakeholders to:

- evaluate financial instruments,
- compare the attributes of financial instruments,
- facilitate data interoperability between data and analytics providers,
- standardize the data used in the design of innovative financial instruments, and
- provide a framework in which to integrate and explore ‘smart contracts’.

Finally, the Financial Instrument Reference Database will be a source of data standards for the description of financial instruments that are reported to the OFR. Its use by U.S. regulators will drive the adoption of data standards and improve interoperability for data sharing. Its use by industry participants will drive efficiency, improved risk data aggregation, and result in reduced reporting burden.

Questions for Discussion

1. Is this a rational approach?
2. How do you suggest we engage industry in a public-private partnership?
3. Can you provide recommendations on best practices for a governance framework?