

## MEMORANDUM

SUBJECT:	JWG LabCFTC Prize Request for Input (83 FR 18009)	FROM:	PJ Di Giammarino, CEO, JWG <a href="mailto:PJ@jwg-it.eu">PJ@jwg-it.eu</a> <a href="http://www.jwg-it.eu">www.jwg-it.eu</a> +44 (0) 20 7870 8004
SUBMISSION:	Commodity Futures Trading Commission. Submitted to: <a href="https://comments.cftc.gov/PublicComments/CommentForm.aspx?id=2873">https://comments.cftc.gov/PublicComments/CommentForm.aspx?id=2873</a>		
Date:	23 July 2018		

### Introduction to JWG

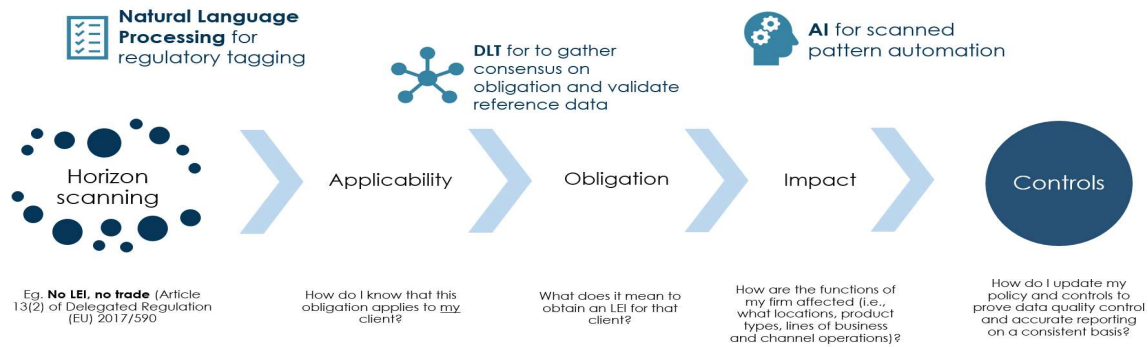
We are operations and technology professionals, trusted by the global financial services industry as experts in regulatory change management. We pride ourselves on capturing every financial services regulation published the world over and are the only organisation to set ourselves this global challenge.

For the past decade, our team of independent analysts has helped the industry interpret large quantities of regulatory reform and action it in a smart and intelligent way. JWG work with trade bodies and regulators to facilitate the understanding of regulatory change and its impacts on financial institutions, both sell and buy-side, market infrastructure and the vendors that serve them all. Facing the ever-pressing challenge of understanding, enacting, complying with and facilitating regulation respectively, JWG play a crucial role, bringing together a wide variety of stakeholders and pooling their knowledge and understanding to provide invaluable insight, context, and feedback.

In doing so, JWG have formalised a number of special interest groups covering several regulatory topics, including anti-money laundering and financial crime, trade surveillance, and regulatory reporting. In developing this response, we have drawn from the views of our members - comprising senior personnel from operations, risk and compliance at major financial institutions - and our research on EU regulatory reporting, financial crime, and trade surveillance. For the avoidance of doubt, however, the views in this response are our own. This response is submitted to the CFTC by JWG group and not on behalf of the RegTech Council.

**Q1. Are there subject matter areas or specific topics that the Commission should particularly consider or focus on for a potential prize competition?**

*Diagram 1: Next generation technologies applied to regulatory reporting*



Firms face considerable challenges when navigating and interpreting regulation in order to determine how an obligation applies and impacts their business (see Diagram 1 above). Given the changing landscape of regulation and associated reporting, this model is not sustainable – and degrees of automation have to be achieved.

From all the regulatory topics covered by JWG, nowhere is this problem more apparent than in regulatory reporting. Regulatory reporting has historically proven to be an area where specificity is a prerequisite, and uncertainty or optionality regarding what and how to report often leads to unsatisfactory and inconsistent data. Many tell us it takes them significant effort to navigate and interpret the regulatory text and instead rely on external professional services to understand what information we need and when. Firms then implement and codify these interpretations into their in-house regulatory reporting systems. Each firm does this manually, creating the risk of different interpretations and inconsistent reporting.

Given these widespread issues, we urge the CFTC to focus their Science Prize competition on regulatory reporting. This is crucial, especially because the data received from regulatory reporting are critical to market integrity objective; assisting the regulators ability to deliver effective supervision, monitor markets and detect financial crime. However, from a RegTech application perspective, it is important to consider how solutions could be applied to cover additional regulatory challenges not limited to reporting (e.g. financial crime monitoring).

**Q1.a) In each case, what is the relevant challenge to be addressed?**

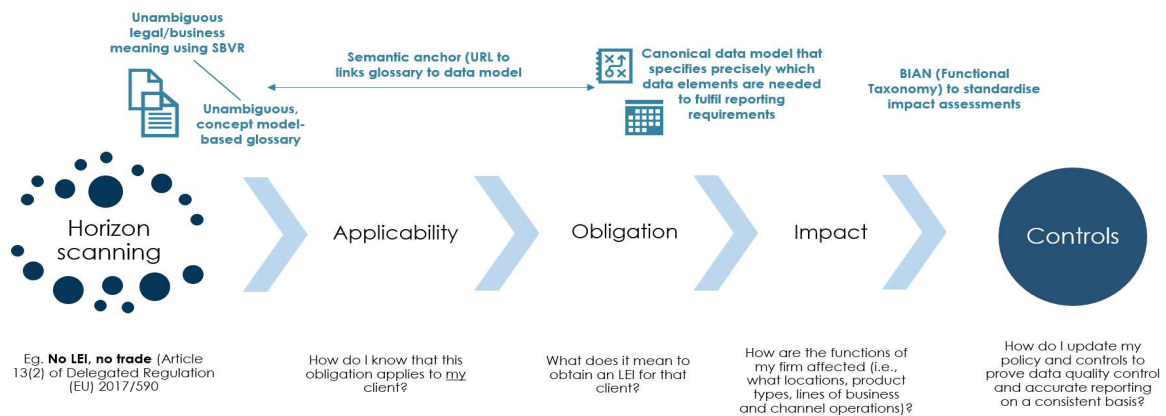
In our view, standards (including de facto) have a major role to play in facilitating efficiencies and understanding between market participants, particularly in the realm of financial regulation. Since regulatory reporting is fundamentally data driven, consistency in regulatory compliance can be achieved only if all stakeholders share the same understanding of the meaning and purpose of that data – as a starting point to reduce some of the heterogeneity that exists today. It would therefore make sense to focus regulatory reporting Prize Competitions on the adoption of common standards and standardised technology foundations on which to build “apps”.

**Q1.b) In what ways can FinTech innovation potentially address this challenge?**

We have identified several semantic and business modelling standards which could be applied to the method used to achieve machine executable reporting. These standards have been chosen on the basis that they will enable us to curate an unambiguous view as to whether a firm

and its clients are in scope of a regulation; what data is required to fulfil firms' reporting requirements; and the impact on a specific business function. This has been graphically displayed in Diagram 1 below:

Diagram 2: Efficient ways to achieve smarter regulatory reporting



### Removing ambiguity in the rule-book using SBVR

Maintained by the Object Management Group (OMG), the SBVR standard, in our view, is an acceptable vehicle to remove ambiguity from the CFTC's rule-book.

SBVR could be used to define, in natural language text, the unambiguous legal/business meaning of both regulatory behavioural rules that govern the actions of financial service organizations and regulatory reporting rules, including the legal/business meaning of the facts which must be reported, from the CFTC rule-book. SBVR defines "the vocabulary and rules for documenting the semantics of business vocabularies and business rules." It is used to exchange unambiguous business and/or legal natural language text as rule sentences and definitions of concepts:

- among the people in organizations,
- between business vocabulary and business rules software tools conformant with SBVR; and
- between SBVR software tools and IT design tools that contain a transformation from SBVR Content Models to IT design models.

In other words, it is a standard that deals with the 'concept' and not the 'data'. By way of example, concepts are meanings shared by business people that denote the real/planned things in the business, e.g. the metal, plastic and rubber vehicle in the parking lot; while the instances of data are representations (character strings, graphics, etc.) that document facts about those real things.

It is critical to ensure that the standards used are correctly applied and specified. It would appear that the use of SBVR in the FCA's November 2017 TechSprint has exceeded the mandate which is defined by the SBVR texts themselves:

"SBVR Content Models focus exclusively on defining meaning and the expressions that represent meaning. They do not concern themselves with or contain assertions of the truth-value of propositions. **Such concerns and assertions are outside the**

**scope of SBVR and belong to the domain of data and rules enforcement.** While putting business vocabulary in a published SBVR Business Vocabulary and business rules in a published SBVR Rulebook is often used by organizations to communicate that, in fact, this vocabulary is the vocabulary in use and these rules are the rules in force, such assertions are outside the scope of the SBVR XMI metamodel. For example, an organization could propose rules in a rulebook that are never put into force. SBVR Content Models therefore do not contain any kind of business data except business vocabulary and business rules content. While this specification contains the SBVR XMI Metamodel for interchanging the documentation of business vocabulary and business rules content, **the SBVR XMI Metamodel is not a metamodel for any form of data model, message model, business information, or model designed for reasoning over business information. A transformation is required to bridge from an SBVR Content Model to a data model, message model, business information, model for reasoning over business information, or any other IT system model.**<sup>1</sup>"

We have consulted with one of the authors of SBVR, who stressed that it is absolutely essential to have a transformation from the 'unambiguous, concept model-based glossary that is part of the unambiguous legal/business meaning of sentences in natural language text' to 'an IT data model/data dictionary'.

#### Delivering machine-executable requirements through a canonical data model linked to ISO 20022

Any common data model for reporting used throughout the process should be built on well-defined and correctly\_specified standards. The use of/adoption of specific existing global standards in the CFTC's reporting architecture would remove the need (and cost) of developing new standards, whilst minimising the implementation costs of those already familiar with the standard in question. It would enable firms and vendors to design technology and processes to deliver the requisite reporting data

In this regard, we believe that ISO 20022 can be used as the standard for reporting destination and enable the economies/efficiencies of common data modelling referred to in this question.

ISO 20022 uses a data dictionary with well-defined terms and definitions for financial services represented in a standardised way, independent of any syntax. This common, open, well-defined and well-used set of data terms developed in ISO 20022 supports the implementation of regulatory reporting requirements and ensures the level of interoperability that is necessary. Thanks to this central dictionary, all the ISO 20022 messages share a common understanding and representation of business data which helps the business information to flow smoothly from one message to the other along the transaction life cycles.

#### Using BIAN to facilitate mapping CFTC's regulatory meaning to a firm's database

Wide-use of the Banking Industry Architecture Network (BIAN) will help make the processes in Step 4 a lot less manual and increases the scope for further automation. In 2008, BIAN published an updated version of its standardised global IT architecture model. Titled, Service Landscape 6.0 (SL6.0), the model contains definitions for 26 new types of semantic API, like "Execute Customer Onboarding" and "Customer Offer for Consumer Loan", providing banks and software developers in the broader financial services community with consistent guidelines for creating and implementing APIs into the banking ecosystem. The API definitions are compliant with the SWIFT

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<sup>1</sup> SBVR Rules Version 1.4, pg. 4. Source: <https://www.omg.org/spec/SBVR/1.4/PDF>

ISO20022 open banking standardisation approach, recognised and compatible with banks universally.

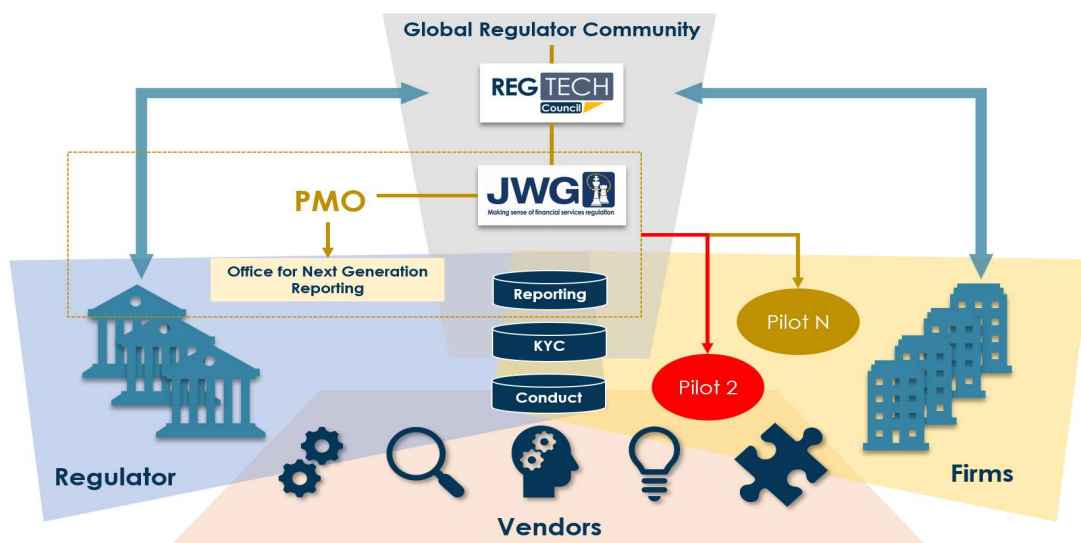
### International RegTech collaboration

Though many regulators and working groups tackle individual challenges, there is no place for them to meet to take that ownership of the RegTech agenda. To get to a safer financial system, we need a platform to facilitate dialogue between firms, regulators, technology companies and standards bodies.

Considering the international nature of financial services firms in the USA, any material benefits/cost savings which result from this new approach to reporting will be most effective when considered globally. The CFTC should therefore look to engage other interested regulators (FCA, MAS) to ensure that regulatory reporting requirements start to be harmonised internationally.

When coordinating its RegTech engagement, good, transparent governance will be of utmost importance. The CFTC should look to question whether it should lead the way on this issue, or whether an industry-combined approach is more effective in facilitating change and adoption of RegTech. In this regard, a centralised, high-level authority (i.e., a PMO/Project Management Office) will be required to orchestrate and manage the fragmented nature of financial regulation in the US. We are currently engaged with the UK's Financial Conduct Authority (FCA) on how to enact a similar body in the UK.

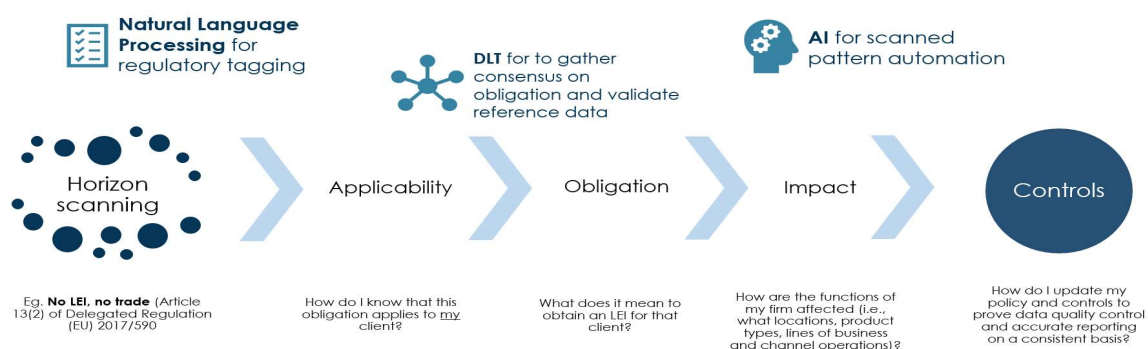
Diagram 3: A collaborative PMO is required to manage the ecosystem



JWG, along with the RegTech Council, could help facilitate the launch of this new collaborative body (see diagram 3 above). The RegTech Council is a not-for profit think-tank, which will provide a bridge between regulators, firms, academia and the wider financial and technology markets. It is a not for profit association with transparent formal structures and byelaws. We have formal committees and flexible working groups, supported by strong, technically enabled secretariat to meet members' demands.

## Q.6 Which existing regulatory compliance or regulatory reporting processes do you feel would most benefit from RegTech?

*Diagram 4: Next generation technologies applied to regulatory reporting*



From all the technologies surveyed by JWG's technical working group members as having the most potential to solve for the 'regulatory interpretation' problem, Distributed Ledger Technology (DLT), founded on a wide federal approach, proved to be the most promising. Automation can address the bulk of the effort, but human rule interpretation of rules will always be needed to support outliers in trading patterns. A DLT-based interpretation work-flow could be the mechanism by which industry participants share and validates their interpretations of certain regulatory requirements – notably what represent an eligible transaction for reporting.

The use of DLT could also be extended to validate data accuracy and completeness once it has been reported to the NCA. Several institutions, including [the European Central Bank \(ECB\)](#), and more recently, the [Commodity Futures Trading Commission \(CFTC\)](#) recognise that this technology could facilitate are engineering of cross industry processes. It could provide market participants - investment firms, trading venues, reporting infrastructure and data firms, with a secure and trusted rule-set, as well as the virtualisation of assets on custom stock exchanges, proxy voting systems and real-time gross reporting. Other potential benefits include: enhanced transparency, automatic reporting, and, the provision of an immutable audit trail of market history for any tuning amendments to be made.

In order to define the use cases (e.g. large volume reports) which are hosted on the DLT, we believe that AI could be used to mine the data in transactional flow and be used to produce the report and deduce the valid combinations and permutations of the reporting scenarios. The AI could also be used to identify potential challenges in data validation (e.g., reference data) and help shape the objectives of using DLT to validate it.

There are emerging standards in AI and DLT – and with a PMO orchestrated public communication of the standards approach, these new technologies could make the CFTC's reporting architecture future-proof, fostering innovation approaches and thereby enabling wider and more efficient adoption. JWG's founding principle is to enable cross market technology enabled responses to regulation. As a Think Tank and not a commercial consultancy, it organises and manages a number of pilot programmes with leading industry bodies who are looking at utilising

DLT and AI for a number of regulatory purposes. We urge the CFTC to embrace/involve itself in similar engagements to determine how DLT and AI technologies could be applied in a future Prize Competitions.