SuperDerivatives

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Mr. David A. Stawick
Secretary to the Commission
Commodity Futures Trading Commission
Three Lafayette Center
1155 21st Street, N.W.
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secretary@cftc.gov

RE: CFTC/SEC Consultation on standardized computer-readable algorithmic descriptions which may be used to describe complex and standardized financial derivatives dd. 9 December 2010

Dear Mr. Stawick:

SuperDerivatives (SD) is pleased to respond to your request for information.

SD is in the business of providing OTC derivatives prices on the full range of derivatives instruments.   We have over 1,200 clients throughout the world who depend on us for high quality, transparent, and independent pricing with associated analytics.

Kindly let me know if we can be of further assistance.

Cordially,

David N. Gertler

Director Enterprise Solutions

MEMO

CFTC/SEC Consultation on standardized computer-readable algorithmic descriptions which may be used to describe complex and standardized financial derivatives dd. 9 December 2010

SUMMARY: The Dodd-Frank Wall Street Reform and Consumer Protection Act("Dodd-Frank Act") was enacted on July 21, 2010. The Dodd-Frank Act, among other things, mandates that the Commodity Futures Trading Commission ("CFTC") and the Securities and Exchange Commission ("SEC") conduct **a study on "the feasibility of requiring the derivatives industry to adopt standardized computer-readable algorithmic descriptions which may be used to describe complex and standardized financial derivatives."** These algorithmic descriptions should be designed to "facilitate computerized analysis of individual derivative contracts and to calculate net exposures to complex derivatives." The study also must consider the extent to which the algorithmic description, "together with standardized and extensible legal definitions, may serve as the binding legal definition of derivative contracts."
A copy of the text of the statute calling for this study may be found here: *http://www.dodd-frank-act.us/Dodd_Frank_Act_Text_Section_719.html.*

In connection with this study, the staff of the CFTC and SEC seek responses of interested parties to the questions set forth below.

DATES: The CFTC will accept **submissions** on behalf of both agencies **in response to the questions through December 31, 2010.**

ADDRESSES: You may submit responses to the CFTC, identified in the subject the following methods:
• *CFTC Agency Web site: http://www.cftc.gov,* via its Comments Online process at http://comments.cftc.gov. Follow the instructions for submitting comments through the Web site.
• *Mail:* David A. Stawick, Secretary of the Commission, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street, NW.,
Washington, DC 20581.
All comments must be submitted in English, or if not, accompanied by an English translation. Comments will be posted as received to *http://www.cftc.gov* and *http://www.sec.gov.*
You should submit only information that you wish to make available publicly.

QUESTIONS: In furtherance of this report, we seek responses to the following questions.
Please note that responses may be made public, and may be cited in this report. Questions relate to the current use of standardized computer-readable descriptions for both data storage and messaging, and to the usefulness and cost of any transition to a universal standard for messaging and data storage. Responders are encouraged to provide any additional relevant information beyond that called for by these questions.

Calculation of "Net Exposures to Complex Derivatives" and other "Computerized Analysis":

1. How would your organization or community define ''net exposures to complex derivatives?''

SD helps a wide range of customers manage their exposure to both simple and complex OTC derivatives. The definition of such exposure (and hence the tools we provide) depends on the customer goal. A few examples include:

- Sales in banks: structure or use a pre-defined catalogue of derivatives products, and advise customer on possible outcome and risk of using (hedging/investing) in them; price these instruments based on both "bank price" and "fair market price" to offer best deal to customers. Analyze customer existing portfolios and offer restructuring to improve hedging, payments schedule, or return from investment products
- Traders in banks or in hedge funds: obtain real time valuation, greeks & totals of all positions, perform sensitivity analysis (e.g. spot/vol ladders) & bucketing of risk by tenors.
- Fund administrators: obtain independent "fair market value" for their customers, and investigate valuations (from independent provider or from counterparties) the fall outside tolerance levels.

Net Exposure – is the outstanding exposure after all offsetting positions have been netted

2. Do you calculate net exposures to complex derivatives?

Yes. SD covers a wide range of OTC derivatives, from vanilla & first generation exotics (e.g. swaps, swaptions, vanilla options, cap/floors, CDS, CDX, Asians, single barriers), to various levels of advanced exotics (partial barriers, CMS, accrual, averages, baskets, quanto, callable, snowballs & other path dependent instruments). SD also provides tools to structure & analyze products from the latter building blocks.

3. What data do you require to calculate net exposures to complex derivatives? Does it depend on the derivatives instrument type? How?

The data required to calculate the value of complex derivatives depends on the asset class (e.g. foreign exchange, interest rates, equities, commodities, credit) as well as the derivatives instrument type. In general, SuperDerivatives' (SD) pricing methodology uses price levels of the underlying asset(s), interest rates, option volatilities quoted in the market, skew points quoted in the market, option prices, interest rate swaps, futures, and historical dividends. SD manages over 1,500,000 data points per day in order to price derivatives for a wide variety of instruments in all of the asset classes above.

Material exposures might occur due to unfavorable market moves as applied in changes in either/or:
- Underlying Price
- Underlying Asset's Volatility
- Yield Curve
- Correlation/Credit curves (where applicable)

Loss could occur directly by holding a position in the market place, or by serving a client holding the same position within the financial institution.

4. Are there any difficulties associated with your ability to gather the data needed to calculate net exposures to complex derivatives? What are they?

The challenge for the industry in pricing derivatives is that the more illiquid the asset, the more difficult it is to find data required to value derivatives. SD's solution has been to develop a wide network of sources in the financial markets that provide the raw data described above. Because data comes from varied sources, SD has a Data Management (DM) function that assures a high level of data quality. The DM group, using SD software tools, constantly review incoming information for data problems. Our software tools use: a) traditional decision rules (e.g. missing information, data spikes, etc.) and b) sophisticated analysis (e.g. inconsistencies in vol surfaces that are caused by incoming data). Our well defined workflow procedures insure that the DM group detects, tracks, and remediates flaws with incoming data.

5. What other analyses do you currently perform on derivatives agreements? What kinds of analyses would you like to perform, and how could regulators and standards setters make those analyses possible?

In addition to pricing derivatives, SD provides a broad set of "greeks" which clients use for price validation and risk reporting activities.

6. How often do you perform net exposure calculations at the level of your organization? Is it continuous and real time, only for periodic external reporting, or some frequency in between?

SD services enable our clients to perform pricing and calculations on a single instrument or portfolio, at any interval (intra-day or end-of-day).   SD's service is accessible on-line ("on-demand") and/or the client can establish a schedule of specific times throughout the day.

Current practices concerning standardized computer descriptions of derivatives:

7. Do you rely on a discrete set of computer-readable descriptions (''ontologies'') to define and describe derivatives transactions and positions? If yes, what computer language do you
use?

Yes, we rely on SD's descriptions to define and describe derivatives transactions and positions, using Microsoft .Net framework.

8. If you use one or more ontologies to define derivatives transactions and positions, are they proprietary or open to the public? Are they used by your counterparties and others in the derivatives industry?

In order to communicate derivatives transactions into and from our system we publish to our clients SD's XML and excel transaction definitions. Some of the XML formats are based on industry standard FpML. SD's representation of derivatives is

proprietary; however SD is willing to have a discussion with the various regulatory agencies to consider offering our IP on this subject to the industry.

9. How do you maintain and extend the ontologies that you use to define derivatives data to cover new financial derivative products? How frequently are new terms, concepts and definitions added?

We add instruments frequently (new ones every few weeks), based on our market research, roadmap, and contractual commitments to our customers

10. What is the scope and variety of derivatives and their positions covered by the ontologies that you use? What do they describe well, and what are their limitations?

SD's ontologies cover hundreds of instruments and thousands of associated underlings (5 assets: FX, IR, Commodities / energy, Equities, Credit derivatives. For each product we capture all financial information required for valuation of the contract, and for managing the deal events of the contract (e.g. expiry, payment, knock in, etc...)

Limitations: Due to the nature of the derivatives industry, access to market data can be challenging for certain asset types in selected regions. When this occurs, it is SD's standard practice to immediately contact sources in those regions to make arrangements for acquiring the required data and simultaneously adjust our ontologies and analytics to accommodate these new instruments.

11. How do you think any limitations to the ontologies you use to describe derivatives can be overcome?

We do not have any material limitations. Our infrastructure allows us to quickly add any new instrument by linking to the appropriate models, extending the fields and internal communication protocols, and feed the relevant market data into our data management repositories. – adding instruments is an on going, standard practice for SD.

12. Are these ontologies able to describe derivatives transactions in sufficient detail to enable you to calculate net exposures to complex derivatives?

Yes. As mentioned in #8 above, these are well documented and we can discuss the potential of sharing portions or all with the industry.

13. Are these ontologies able to describe derivatives transactions in sufficient detail to enable you to perform other analysis? What types of analysis can you conduct with this data, and what additional data must be captured to perform this analysis?

Yes – we offer a very wide range of analysis tools such as: back testing, historical pricing, rate perturbations, Greeks & portfolio level Greeks totals, Greeks bucketing, "spot/vol" reporting, P&L, aggregated position, we also offer a range of life cycle planning tools such as payment, triggers, expiry, spot/fwd delivery etc..

14. Which identifier regimes, if any, do you use to identify counterparties, financial instruments, and other entities as part of derivatives contract analysis?

SD offers a broad range of integration tools that allow clients to capture trades through SD and download to internal (or 3rd party) systems. As a result we have broad exposure to how our clients identify counterparties and financial instruments. We would consider leading an industry effort to help establish identification standards.

Current use of standardized computer readable descriptions for messaging of derivatives transactions:

15. Which computer language or message standard do you currently use to create and communicate your messages for derivatives transactions?

Our messaging standard include "SDML" (SD extension to FpML), as well as SD's own excel and XML formats.

The protocols that we use are either MSMQ (Microsoft Message Queuing) or MQSeries (IBM WebSphere MQ).

16. Is there a difference between the created message and the communicated message? For example, does your internally archived version of the message contain proprietary fields or data that are removed when it is communicated to counterparties or clearing houses?

Yes. Our internal XML communication reflects data that is required between our distributed components. Our transaction API exposed to customers contain only relevant data for the purpose of the transaction (e.g. "upload trades" or "trades valuation"), the external API is generated by SD middleware (based on BizTalk), and guaranties to our customers' IT system stability and backwards compatibility of SD protocol.

17. Are different messaging standards used to describe different contracts, counterparties, and transactions?

SD's approach is to adhere to the standards as described in the other bullets of our response. However, there are instances where we deviate from this approach in order to assist a client with a special need.

18. How and where are the messages stored, and do the messages capture different information from that information stored in internal systems?

Information is stored with SD and then download to the clients internal (or 3rd party system).

19. What information is currently communicated, by and to whom, and for what purposes?

The following messaging API is supplied to our customers:

Input to SD:
- Upload trades for valuations (snapshot of incremental)
- Activation of valuation on demand
- Upload market data to SD

Outbound from SD:
- New trade/deal event entered by an SD user (for STP from SD to downstream systems)
- Valuation of a portfolios (based on ad hoc input, or on trades already in SD repository)
- Volatility surfaces.

20. For lifecycle event messages (*e.g.,* credit events, changes of party names or identifiers), are there extant messaging standards that can update data relating to derivatives contracts that are stored in data repositories?

There are several vendors who sell feeds with this information in a standard format. These are delivered as flat files or XML feeds.

21. What other standards (*i.e.,* FpML, FIX, *etc.*) related to derivatives transactions does your organization or community use, and for what purposes? Has your implementation of these
standards had any effect on the way your business is conducted (*e.g.,* does it reduce misunderstanding of contract terms, has it increased the frequency or ease of trades).

Using FpML as part of our STP messaging allows SD to describe contract to downstream systems in a concise way, and save us the need to define protocol by ourselves however:
- Some IT organizations find FpML "too difficult", hence some of our API (especially for Valuations rather then for STP) is excel based – which our customer find easier
- FpML does not contain all fields that we need to communicate, hence we extended it using our own XML wrapping & extra fields.

22. Is the data represented by this/these messaging standard(s) complete enough to calculate net exposures to complex derivatives? What additional information would need to be represented?

For our purposes this data is sufficient.

23. In general, to what extent are XML-based languages able to describe a derivatives contract for further analysis? To what extent is other technology needed to provide a full description?

XML is sufficient, however, "industry standard" XML (e.g. FpML) only offers partial fields coverage, and is often very complex. SD finds the need to offer multiple format options.

For example – most IRS contracts communicated to SD do not have amortizing "cash flow and dates", as a result most customers prefer SD "flat" excel formats.

24. What other analysis can beconducted with this data? What additional information should be captured?

In addition to "contract definition" SD messages contain various other data required for workflow and analyses purposes. These include for example: Greeks, market data at time of capture, custom fields, and sensitivities measures.

25. Do you have plans to change your messaging schemes/formats in the near future?

SD is constantly expanding messaging capabilities.
We are now looking at more efficient ways for offering a flexible interface; for example – the "master message" may have hundreds of fields, and dozens of fields can be added every year, but in order to simplify the protocol we may offer only subset of the fields to each customer.

26. Are there identifier regimes widely used in the derivatives market for identifying counterparties, financial instruments, and other entities in messaging?

Standard: ISIN/CUSIP for equity; currency name for FX/IR,

Other than that, most other objects (instrument name, cut off times, counterparties, commodities underlying name etc, CD issuers) do not have an industry standard, or there are few conventions.

The need for standardized computer descriptions of derivatives:

27. Would there be a benefit to standardizing computer readable descriptions of financial derivatives? What about standardization for a certain class/type of financial derivatives (*i.e.,*CDS versus interest rate, or plain vanilla versus complex)?

The problem with standards is that there are so many of them. The closest to a wide enough standard that currently exists is FpML, which is still partial (covers well the contract details, but not the extended workflow we need for the instrument) .

We believe that a "new" standard will take time to establish. Adopting FpML (or an extension of it) by the SEC will give a push to the standard. Having said that – we do not see how in the near future we will able to "get rid" of our simplified excel instrument descriptions (as most IT organizations can not easily deal with FpML).

28. What would be the issues, costs and concerns associated with standardizing computer readable descriptions of financial derivatives? Are there existing standards that could
or should be expanded (*i.e.,* FpML, FIX, *etc.*)? Do the existing standards in this area have materially different costs or issues?

See above.

29. What would be an ideal ontology for you in terms of design, implementation, and maintenance of the data sets and applications needed for your business?

XML based, with "well defined" methodology for extending it for needs of "application to application (rather than "business to Business") workflow.

30. How would a standardized computer readable description of financial derivatives be developed and maintained (*i.e.,* a government sponsored initiative, a public-private partnership, standard-setting by a collaborative process, *etc.*)? Are there current models that should be considered?

The industry needs to achieve a "critical mass" on one standard, FpML looks like the best candidate. Collaborative process with commitment of "large enough" players may create this mass (e.g. the CCP providers)

31. What is the importance of ontologies for the representation of derivatives data now and in the future?

A well defined standard will increase transparency and reduce operational risk - As integration/STP will gradually become a "must", there will be integration specialists that can "roam" between providers etc..

Implementation:
32. Have you ever implemented a transition to a new data ontology, data messaging standard, or internal data standard?

We implemented a data symbology system for incoming raw data which describes not only the raw data type, but also the data source.

33. If yes, how did the perceived and actual benefits compare to estimated and actual costs over the short- and long-run?

There were multiple benefits of this transition, both in the short and long run. We process data faster with fewer technical outages due to replicating data across global centers. This benefit was felt immediately. In addition, adding new data types is relatively quick and easy since we have a standard symbology so there is less room for manual errors.

34. What were the main difficulties that you experienced during a transition/implementation of new data standards? What could the organization developing and maintaining the standards do (or avoid) to help alleviate these difficulties?

As in all transitions, there is a period where the users need to adapt to a new way of working, and mistakes occur. In order to alleviate these difficulties, organizations need to have a "beta" period where there is a parallel run with the new standards in

order to see where there are problems. Furthermore, the staff needs to be properly trained on using the standards to ensure that no human errors occur.

35. Would it be useful to use a standardized, computer readable description for financial derivatives instruments? How would it be useful? Would such a standard be useful for
communicating transactions, storing position information, both, or other purposes? What would be the costs involved?

Yes, especially to insure there is consistent risk reporting across all firms.

Estimating the cost will require further industry participation.

36. How should regulators and standard setters implement description standards in the derivatives market?

Industry participants, with regulatory directives and guidance, should define and implement these standards.

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Due to the deadline for responding (Dec 31) we are not providing answers at this time for #37 through #41.

Making computer descriptions legally binding:

37. Are there currently aspects of financial derivatives messaged in a computer readable format that have a legally-binding effect?

38. What information, if any, is not captured that would be required to make the computer descriptions themselves, without reference to other materials, legally binding?

39. What information would need to be captured for a legally binding contract that would not need to be captured for analyzing the contract? Is there a substantial cost differential
between the processes needed to capture one set of information versus another?

40. Would there be a benefit to making the computer readable descriptions of financial derivatives legally binding? Would there be drawbacks? What are they?

Other:
41. Is there other information not called for by these questions that we should consider?