

Comments on the Public Consultation Paper: “Feasibility study on approaches to aggregate OTC derivatives trade repository data”

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Deep River Group Inc. appreciates the opportunity to provide the Financial Stability Board (FSB) with comments and recommendations regarding the Aggregation Feasibility Study Group public consultation paper “Feasibility study on approaches to aggregate OTC derivatives trade repository data.”

Our view is that reporting of OTC derivative transaction and lifecycle event information to a central repository is one of the most effective and efficient means of monitoring markets and managing risk created by the OTC derivative market activity. Economically, the minimum efficient scale of a trade repository service is a very large number with the consequence that there will be an inevitable consolidation of trade repositories over time. Barriers to such consolidation are both national and commercial in nature and are the result of understandable short-term interests. Authorities at the national level want autonomous control of resources which are critical to achieving their missions. Trade repositories are such critical resources. In parallel, commercial entities recognize how operating a trade repository strengthens their position in the market structure and creates opportunities to develop new services.

Unfortunately, realization of these two interests has led to fragmentation of OTC derivative trade reporting across multiple trade repositories and across several data standards. This fragmentation has, in turn, reduced the efficacy and cost efficiency of OTC derivative transaction reporting.

Creation of a single, global aggregation mechanism will ameliorate this situation and will restore the lost value, albeit at cost. Because of this cost it is critical that this feasibility study be objective and credible. It must inform the FSB’s immediate decision: whether or not to take further action on aggregation. Please accept our comments and recommendations as Deep River Group’s contribution to this important initiative.

### **Deep River Group Inc.**

Deep River Group is a boutique management consultancy focused on the capital markets, commodity markets and environmental markets. Together our principals have more than 40 years experience working with corporate banks, investment banks, clearing houses, exchanges, reinsurers and institutional asset managers on issues of risk management, strategy and operational efficiency. We have worked with clients in North America, South America, Europe, Asia and the Middle East.

Peter Stockman is a Partner at Deep River Group. As a consultant to the Depository Trust and Clearing Corporation (DTCC), he led the design, development and deployment of DTCC’s global trade repository for commodities. He worked with G30 banks and global commodities firms on IOSCO, CFTC and EMIR reporting. He has helped clients create the capability to report to DTCC’s FX, equities, rates and commodity trade repositories. Stockman co-chairs ISDA’s FpML Commodity Product Working Group and is fluent in four OTC derivative data standards: FpML, CpML, FixML and ICE’s proprietary eConfirm/Trade Vault XML format. Among the many feasibility studies he has executed, Stockman led the SIA’s (now SIFMA) “T+1 Business Case” project which examined the costs and benefits of moving to T+1 clearing and settlement in all U.S. capital markets.

Below are our comments on each chapter in the draft feasibility study. Following these comments are responses to the five questions posed to commenters as well as recommendations related to the approach which will be used to evaluate the alternative aggregation models.

## Chapter 1 – Objectives, Scope and Approach

Within the time frame prescribed in the terms of reference it is not possible to complete all the analyses that would normally be included in a feasibility study. In any case, such an extensive analysis would be neither desirable nor efficient. Rather, it is more appropriate to conduct a series of reviews at key stages of the project aimed at, among other things, informing a “go/no-go” decision as to whether to proceed. Considered in the context of such a stage-gate review process the purpose of this initial feasibility study should be to inform a decision as to whether take further action on an aggregation mechanism or do nothing with regard to aggregation. As drafted, it is unclear that the scope of this feasibility study is intentionally limited relative to a full feasibility study. It is also unclear how the analyses in this study fit within the larger set of analyses expected of a full feasibility study.

*We recommend that the full set of analyses that will be conducted over the course of the project be listed and that those analyses that will be completed in this initial study be identified.* This will serve both to clarify the scope of this document and to describe the additional work that will be done and at what stage this work will be done. The complete stage-gate process which will be employed should be described at a high level and the content of the current stage analysis described in detail.

In this regard, it may be useful to describe, at least at a high level, a decision framework which will be applied at this current stage. For example, it is our view that constraints imposed by privacy and other laws create a threshold which must be passable if aggregation is to be feasible. It is the first and most important part of a decision framework. The threshold question is: “Do privacy and legal constraints render useful amounts of aggregation of TR data feasible?”

Continuing the example, perhaps the next most important component of a decision framework relates to costs *versus* benefits. Transparency in global OTC derivatives markets produces tangible benefits that exceed the cost of building an aggregation mechanism many times over. At the same time, data to be aggregated is concentrated in a small number of trade jurisdictions. This reduces the benefits of incremental aggregation. The cost of creating an aggregation mechanism is driven by the objective of connecting to as many trade repositories as possible, regardless of volume. The size of benefits and the size of costs do not scale together. The threshold question is: “Is the transparency benefit gained by incremental aggregation worth the cost of incremental connectivity with smaller trade repositories?”

Continuing further with this example of a decision framework, if the answers to both threshold questions is “Yes” then one can move on to the separate task of comparing

aggregation mechanisms on the degree to which they enable authorities' requirements, are governable, consume resources, etc.

As drafted, Option 3 is treated as if it were an aggregation model. This may be the case for any particular authority. However, from the standpoint of the decision to be taken by the FSB, Option 3 is the outcome when the answers to the two threshold questions are "No."

## **Chapter 2 – Stocktake of Existing Trade Repositories**

This chapter provides facts about the number of trade repositories which have been authorized or are likely to be authorized and the number of jurisdictions which have or will require trade reporting. It speaks to the diversity in the requirements of each jurisdiction and as well as diversity in the implementation approaches trade repositories have taken. It highlights differences between jurisdictions and trade repositories in terms of available data, timeliness of data, data format, the use of standard identifiers and other sorts of differences. On balance, Chapter 2 paints a picture of data fragmentation and uneven standardization.

We do not think that such a picture properly portrays the landscape. Absent from the presentation is an analysis of the demographics of reportable OTC derivatives. A description of the demographics of reportable swaps would speak to two important dimensions: (1) the distribution of the global market for OTC derivatives across regulatory jurisdictions and (2) the coverage of these jurisdictions by trade repositories. It is the case that the great majority of reportable OTC derivative transactions fall under the jurisdiction of countries in the EU and the United States. It is also true that there are trade repositories which have or will have broad coverage of jurisdictions, including the EU and the United States and that these same trade repository providers have broad coverage of the five derivative asset classes. The FSB's paper, "OTC Derivatives Market Reform: Sixth Progress Report on Implementation" states (on page 29) that one such trade repository, the Depository Trust & Clearing Corporation's (DTCC) trade repository, has captured 99% of all interest rate derivatives and 100% of credit default swaps outstanding when compared to the Bank for International Settlements semiannual survey. This indicates that, for these two asset classes at least, the amount of data fragmentation is limited and that common industry identifiers (e.g. LEI, UTI) and a common data standard (FpML) are being applied to high percentage of OTC transactions in these two asset classes. The implication is that the problem of data fragmentation and uneven standardization may not be as severe as is portrayed in the draft.

*We recommend that the demographics of OTC derivative reporting be taken into account when considering the very real problem of data fragmentation and lack of standardization.* The problem exists. The task of choosing an effective and cost-efficient means of addressing the problem requires a more complete analysis of the scope and location of the problem itself.

The demographics of OTC derivatives should also be taken into account when considering legal and privacy issues. The scope, nature and severity of the problem

should be judged within the context of the number of transactions subject to privacy limitations and limitations on access by one jurisdiction to the data of another. On the basis of outstanding notional as well as volume, the problem may be much less severe than portrayed when the distribution of such laws against the global OTC derivatives market is taken into account.

### **Chapter 3 – Authorities Requirements for Aggregated OTC Derivatives Data**

We question the cost-benefit of pre-calculated aggregation-level data. Calculation of positions in a particular underlying or exposure to a particular counterparty is a surprisingly idiosyncratic activity and one for which there is little experience doing so in a way that is acceptable to all authorities. Far more important is the capability for authorities to compile their own position-level and aggregation-level data according to their own design. Over time broad agreement regarding the calculation of particular position-level and aggregation-level data items may emerge and, should this occur, there is a clear benefit to the aggregation mechanism preparing standard reports of such data items. However, the immediate need is for authorities to have the means of preparing their own aggregation-level data. This requirement means that authorities will need access to a good report writer, training in its use and the data elements they require. The first two can be provided by the aggregation mechanism. The third capability is controlled by the authorities themselves.

*We recommend that consideration of a particular option's ability to support the pre-calculation of aggregate-level data receive much less weight than the ability of a particular option's ability to enable bespoke aggregation by authorities.*

### **Chapter 4 – Legal Considerations**

Deep River Group offers no comments or recommendations relative to this chapter.

#### **Comments on the Framework and Process to be Used to Evaluate Options**

Below are several recommendations related to the evaluation framework and process overall.

*We recommend explicit, albeit subjective, scoring of each criterion on an ordinal scale.* This will make the mechanics of the evaluation more transparent and the collation of results easier.

*We recommend that explicit weights be applied to each criterion even if the criteria themselves are to be equally weighted.* This will make the mechanics of the evaluation more transparent.

*We recommend that each criterion within the final set of evaluation criteria be independent from the others ("orthogonal").* That is, two or more evaluation criteria

should not measure the same concept nor should two or more evaluation metrics be correlated because they derive from the same cause. Doing otherwise will result in a single concept, embedded in more than one criterion, receiving a greater weight than the other criteria. This extra weighting will not be apparent.

*We recommend that each criterion within the final set of evaluation criteria resolve a difference between at least two of the options.* All of the options may perform similarly against a given criterion and this fact may be important to point out this fact in the study. However, the purpose of evaluating the options against criteria is to differentiate between options. Including one or more criteria which do not resolve a difference between options does not serve this purpose.

The market for over-the-counter (OTC) derivatives is not evenly distributed across geographies or regulatory jurisdictions. The great majority of reportable OTC derivative transactions are reportable to trade repositories registered in the United States and the European Union. This fact should be reflected in the scoring of options relative to the evaluation criteria. The concentration of the OTC derivative markets in jurisdictions which have adopted shared data standards for legal entity identifiers, unique transaction identifiers and product taxonomy reduces or eliminates many of the issues identified in the analysis for the great majority of reportable transactions.

It is also the case that, from the outset of OTC derivative market regulation, trade repository services offered by less-than-a-handful of vendors will house most of the reportable transactions for a given asset class, globally. Trade repository services offered by these vendors use or will use standard identifiers (e.g. LEI, UTC) and a common data standard (e.g. FpML, FIXML).

### **Responses to the Five Questions Posed to Commenters**

1. Does the analysis of the legal considerations for each option cover the key issues? Are there additional legal considerations - or possible approaches that would mitigate the considerations - that should be taken into account?

Deep River Group has not provided any public comments or recommendations relative to this question.

2. Does the analysis of the data and technology considerations cover the key issues? Are there additional data and technology considerations - or possible approaches that would mitigate those considerations - that should be taken into account?

Comments related to this question appear elsewhere in this document.

3. Is the list of criteria to assess the aggregation options appropriate?

Our overall comment on the evaluation criteria is that they do not satisfy the objective of being “mutually exclusive, comprehensively exhaustive” i.e. the so-called “MECE”

quality of good analytical frameworks. We recommend several changes, additions and deletions to the draft criteria below.

### Uses Evaluation Criteria

As drafted, it is difficult to separate these two evaluation criteria into scales that are independent of one another (“orthogonal”). For example, if the “Use flexibility” criterion is at its maximum value (any and all custom aggregations can be executed starting with the lowest level of data across all possible categories) then the “Scope of data needed” criterion necessarily will be at its maximum value (aggregation at any level, breadth and identity will be available).

It is our view that all the criteria that are to be used to evaluate the options should necessarily identify differences between the options. As drafted, all three options would score the same on both of the use-related criteria. Each jurisdiction has set out the data elements it needs to fulfill its mandate within its jurisdiction. This is the Option 3 *status quo* approach. Having those same data elements, and aggregations of those data elements, available on a centralized basis through Option 1 or Option 2 would not improve on the authorities’ capabilities. All three options will necessarily receive the same score the same on the “Scope of data needed” criteria.

Similarly, each authority has determined what aggregation of base-level data elements it needs to fulfill its mandate. Making these same aggregations available centrally through Option 1 and Option 2 would not improve the authorities’ capabilities. All three options will necessarily receive the same score the same on the “Use flexibility” criteria.

*We recommend that these two criteria be changed to be “Market Span” and “Information Span” or some other names denoting the same two concepts.* The “Market Span” criterion would measure the degree to which a particular option makes it possible to access data for the entire market. Complete coverage of the market goes to the heart of the purpose of an aggregation mechanism. Recognizing that complete coverage may come slowly due to other impediments, the ability of an aggregation model to enable access to complete coverage is a critical evaluation criterion. The aggregation model itself should not be an impediment to complete coverage. This criterion will resolve differences between the options: Option 3 will score poorly on the Market Span criterion relative to Options 1 and 2.

The “Information Span” criterion would measure the degree to which a particular option makes it possible to access data for all potential aggregations, including *ad hoc* aggregations. Having the capability to execute needed drill-downs and aggregations goes to the heart of the purpose of an aggregation mechanism. The aggregation model itself should not be an impediment to complete coverage of drill-downs and aggregations. This criterion will resolve differences between the options: Options 1 and 2 will score poorly relative to Option 3 if a great deal of transaction-level data are covered by privacy laws which prohibit, say, disclosure of counterparty identity to the aggregation mechanism. These private data will be available to the authority under Option 3 but not available to the same authority through the aggregation mechanism under Options 1 and 2.

## Legal

As drafted, the “Data access ease and usability” criterion is not independent of the two “Use” criteria. The same underlying cause, legal restrictions on disclosure of certain information, will cause poor scores on this criterion and the two “Use” criteria. We recommend replace the existing “Use” criteria as mentioned above. *We recommend eliminating the “Data access ease and usability” criterion entirely unless it can be made orthogonal to all other criteria.*

## Data

As drafted, it is unclear what the “Degree of necessary standardization and harmonization” criterion measures and how the description of the criterion can be operationalized. We think that the premise that any aggregation can be effective at all without the use of data standards is false. This is because the aggregation mechanism will need to choose an existing standard or develop a *de novo* standard as a prerequisite to development of its data model and data dictionary.

In the case of Option 1 and Option 2 a mapping from the data standard used by the aggregation mechanism to the data standards used by the trade repositories will guide the upstream or downstream conversion of data sent to or indexed by the aggregation mechanism. In the case of Option 3 a mapping from the data standard used by each authority to the data standards used by the trade repositories will guide the conversion of data requested by the authority.

This being the case, it is unclear how or why one would evaluate an option without the use of data standards or to evaluate an option “under no or partial harmonization”.

As drafted, it is unclear what the “Data quality and integrity” criterion measures and how the description of the criterion can be operationalized. The description accurately describes the sub-attributes of data quality and integrity but does not define the criterion in a way which makes it clear how the criterion will resolve differences between the three options. We recognize that there are means by which the aggregation mechanism, like the trade repositories, can detect poor quality data. We also recognize that there are means by which the aggregation mechanism, like the trade repositories, can use such detection as the starting point for maintenance of data integrity. We think that these means can be implemented for any of the three options. There will be differences in workflow and differences in the ease of implementation across the three options. Data quality and integrity will be determined largely at the source: at the trade repositories. The next driver of data integrity will be the use of standard identifiers such as LEIs and UTIs. In the end it is not clear that this criterion will necessarily identify differences between the three options.

*For these reasons we recommend that both of the “Data” criteria, as drafted, be dropped and replaced by a single criterion: “Standardization-Harmonization Effort”.*

This criterion would measure the differences between the three options in the amount of effort needed to achieve and maintain standardization and harmonization. This is both an important consideration as well as a criterion which resolves differences between the three options. On its face, Option 3 will require the most standardization effort over all authorities. Each authority will need to map its data standard to the data standards of the repositories from which it requests data. Under Option 3 this mapping effort will need to be repeated by each authority. It adds up to a lot of effort, much of it redundant. Maintenance of the mapping will involve similar amounts of redundant effort. Under Options 1 and 2 the initial mapping effort will be executed once as will the maintenance of the mapping as trade repositories change their message specifications.

### **Technology**

The nature of the technology needed to support each alternative model will be determined by analysis of business requirements, performance requirements, security requirements, testing requirements, communications requirements and the functional specifications and detailed designs which result from these requirements. At this early stage none of these requirements or designs have been produced. The means of envisioning what technologies will be employed do not exist. For this reason, we do not think it will be possible to render evaluations of the options on any of the three "Technology" criteria. *We recommend the "Technology" criteria be eliminated entirely.*

### **Additional Criteria**

*We recommend that an evaluation criterion be added which measures three concepts: relative implementation cost, relative operating cost and relative overall project risk.* Our experience is that it is possible to assess objectively the relative cost of implementation and operations on an ordinal scale and, sometimes, on a ratio scale. For this particular study there is a wealth of information available on potential build and operating costs: the trade repositories themselves. Expert opinion is required to evaluate overall project risk.

4. Are there any other broad models than the three outlined in the report that should be considered?

There is another broad model which should be considered. It is a self-service model that is a variant of Option 1 and Option 2. In this model no pre-aggregated data are stored and no reports are prepared by the aggregation mechanism for authorities. Under this option the aggregation mechanism would consist of a data store of the lowest level data and a tool kit for preparing selective aggregations, calculations and reports. The tool kit would include a data dictionary, documentation of tables, example extract routines and a report writer. Our view is that it will be difficult to construct a set of common reports which will satisfy all authorities. A staff will be required to create aggregations and reports for individual authorities. Staff will also be required to execute *ad hoc* aggregations and reports on behalf of authorities.

This additional model is attractive in that it shifts the work of creating reports and executing *ad hoc* analyses to the authorities themselves. This will reduce the cost of

operating the aggregation mechanism and provide immediate and direct access to the data. This aggregation model will create any additional requirements relating to masking and data permissioning as these capabilities will need to be automated and built into the report writer itself regardless of who produces reports. Compliant data permissioning cannot be reliably implemented manually, report-by-report, by staff.

5. The report discusses aggregation options from the point of view of the uses authorities have for aggregated TR data. Are there also uses that the market or wider public would have for data from such an aggregation mechanism that should be taken into account?

There are important commercial applications which will reduce the cost of OTC derivative processing which are possible only with concentration of all trades within a particular asset class in a single trade repository.

Our view is that consideration of these uses need not be taken into account at this time. Whether or not particular services can be developed which use data from the aggregation mechanism is largely dependent on the degree of market span and information span which can be achieved. The degree to which market span and information span can be achieved is, in turn, dependent on what data are captured by the trade repositories. There is little the aggregation mechanism can do to maximize market span and information span other than achieving maximum connectivity with trade repositories and enabling access to the maximum range of data collected by trade repositories.