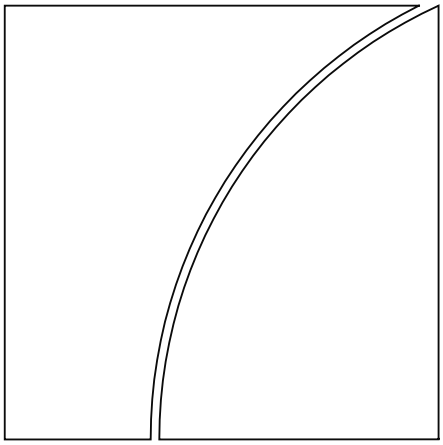
Committee on Payments and Market Infrastructures

Board of the International Organization of Securities Commissions

Consultative report



Harmonisation of the Unique Product Identifier

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BANK FOR INTERNATIONAL SETTLEMENTS

OICV-IOSCO

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This report has been issued for public consultation. Comments should be sent by 24 February 2016 to the secretariats of both the CPMI (cpmi@bis.org) and IOSCO (upi@iosco.org). The comments will be published on the websites of the BIS and IOSCO unless respondents have requested otherwise.

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Executive summary

G20 Leaders agreed in 2009 that all over-the-counter (OTC) derivatives contracts should be reported to trade repositories (TRs), as part of their commitment to reform OTC derivatives markets in order to improve transparency, mitigate systemic risk and protect against market abuse. Aggregation of the data reported across TRs is necessary to help ensure that authorities are able to obtain a comprehensive view of the OTC derivatives market and activity.

The 2012 CPSS-IOSCO report on "OTC derivatives data reporting and aggregation requirements" (Data Report), the 2013 CPSS-IOSCO report on "Authorities' access to trade repository data" (Access Report) and the 2014 FSB Study on the "feasibility of options for a mechanism to produce and share global aggregated data" (Aggregation Feasibility Study) have identified OTC derivatives data elements, including the Unique Product Identifier (UPI), that are critical to many aspects of regulatory initiatives. As stated in the Data Report, "a product classification system would allow regulators to perform data aggregation to monitor exposures to, or positions in, various groupings of products". The purpose of the UPI is to uniquely identify OTC derivatives products that authorities require, or may require in the future, to be reported to TRs.

The UPI would consist of a product classification system and associated code. The focus of this consultative report is the product classification system. When used in this report, "UPI" refers to both the classification system and the code.

The Harmonisation Group aims to produce clear guidance about the definition, format and usage of a UPI that meets the needs of its users, is global in scale, is based on relevant international technical standards where available, and is jurisdiction-agnostic. The governance structure, including implementation and maintenance of the UPI, will be the subject of further work by the FSB and is not covered in this consultative report.

The purpose of this report is to seek general and specific comments and suggestions from respondents on the proposed approach to UPI guidance. The general points are:

i. This report outlines CPMI-IOSCO's proposed principles[1] and high-level business specifications for the UPI and requests respondents' feedback on them, in particular whether any of the proposals would pose implementation challenges. Providers of product identifiers are encouraged to provide detailed responses to set out how their solutions meet, or could be revised to meet, each of these principles and high-level business specifications.

ii. This report proposes two related approaches for the granularity of the UPI classification system, and requests respondents' feedback on them, in particular whether any aspects of the proposals would pose implementation challenges.

In addition to the above general points, CPMI and IOSCO invite comments on the questions included within each section and repeated in Section 6 "Summary of the consultation questions".

A separate consultative report on code proposals is envisaged to be published in 2016, followed by the publication of final guidance on a classification system and code by CPMI-IOSCO later in 2016.

[1] Use of the word "principles" in this document conveys the criteria of the UPI system that CPMI-IOSCO believes should be achieved in order to help the envisaged detailed technical guidance on UPI facilitate the global aggregation of OTC derivatives data. This usage is distinct from IOSCO's 38 Core Principles of securities market regulation, which may be amended or added to from time to time.

1. Introduction

1.1 Background

As part of their commitment to reform OTC derivatives markets in order to improve transparency, mitigate systemic risk and protect against market abuse, the G20 Leaders agreed in 2009 that all OTC derivatives contracts should be reported to TRs.[2] At present, a total of 20 TRs are authorised and operating, for at least some asset classes, in FSB member jurisdictions. In six jurisdictions, government authorities or other TR-like entities are currently collecting OTC derivatives transaction reports. Aggregation of the data being reported across these TRs is necessary to help ensure that authorities can obtain a comprehensive view of the OTC derivatives market and activity.

In September 2014, the Financial Stability Board (FSB) published a study of the feasibility of options for a mechanism to produce and share global aggregated data (Aggregation Feasibility Study).[3] One of the study's conclusions was that "it is critical for any aggregation option that the work on standardisation and harmonisation of important data elements be completed, including in particular through the global introduction of the Legal Entity Identifier (LEI), and the creation of a Unique Transaction Identifier (UTI) and Unique Product Identifier (UPI)".

1.2 CPMI-IOSCO working group for harmonisation of key OTC derivatives data elements

Following the Aggregation Feasibility Study, the FSB asked the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) to develop global guidance on the harmonisation of data elements that are reported to TRs and are important for the aggregation of data by authorities.[4] The FSB is also planning future work with CPMI and IOSCO to provide official sector impetus and coordination for the further development and implementation of uniform global UTIs and UPIs.

In November 2014, CPMI-IOSCO established a working group for the harmonisation of key OTC derivatives data elements (the Harmonisation Group), in order to develop such guidance, including for UTIs and UPIs.

The mandate of the Harmonisation Group is to develop guidance regarding the definition, format, and usage of key OTC derivatives data elements, including UTIs and UPIs. In doing so, the Harmonisation Group takes into account other relevant data harmonisation efforts and encourages the use of internationally agreed global standards for reporting financial transaction data.

The Harmonisation Group acknowledges that the responsibility for issuing requirements for reporting OTC derivatives transactions to TRs falls within the remit of the relevant authorities. The mandate of the Harmonisation Group does not include addressing issues that are planned or are already covered by other international workstreams, such as the legal, regulatory and technological issues related to the implementation of a global aggregation mechanism, or the governance and legal issues related to the UTI and UPI.

[2] Also known as Swap Data Repositories in the United States.

[3] www.financialstabilityboard.org/wp-content/uploads/r_140919.pdf.

[4] CPMI and IOSCO have previously conducted work related to the reporting of data elements to TRs, and data aggregation. In January 2012, CPMI-IOSCO published its *Report on OTC derivatives data reporting and aggregation requirements*, in which minimum data reporting requirements were recommended, as well as general guidance about reporting formats, www.iosco.org/library/pubdocs/pdf/IOSCOPD366.pdf.

This consultative report on the UPI issued by the Harmonisation Group focuses on proposals for guidance on a product classification system; a second consultative report on proposals for code and final guidance on the classification system and code are envisaged for 2016.

The Harmonisation Group has already issued consultative reports on:

- harmonisation of the Unique Transaction Identifier in August 2015 (with final UTI guidance envisaged in 2016);
- harmonisation of a first batch of key data elements other than the UPI and UTI in September 2015.

The Harmonisation Group also plans to issue consultative reports on the harmonisation of a second and third batch of key data elements other than the UTI and UPI in 2016 and 2017.

1.3 Purpose and organisation of this consultative report

The Harmonisation Group is responsible for developing guidance about the definition, format and usage of an OTC derivatives products classification system and associated code, together referred to as the UPI. While the scope of the Harmonisation Group includes guidance on all the components of a uniform global UPI, this initial consultative report focuses on the classification system. As explained above, a separate consultative report is envisaged to address the code, ie how the UPI will be represented in trade reports. The final guidance document will include recommendations on definition, format and usage, and would be intended to be sufficiently flexible and extensible to accommodate the evolution of markets (such as new products being traded), regulatory regimes and technical standards. Given that derivatives are traded in global markets, the Harmonisation Group envisages that the final guidance will be global in scale, make use of relevant international technical standards where available, and be jurisdiction-agnostic. The governance structure, including the UPI's implementation and maintenance, will be the subject of further work by the FSB and is not covered in this consultative report.

In developing this consultative report, the Harmonisation Group:

- Developed principles and high-level business specifications for a UPI that would meet authorities' needs, including characteristics relating to uniqueness, persistence, consistency and generation.
- Consulted with authorities on their use of UPIs (see Annex 2).
- Considered industry's views on their perceptions of and expectations for UPIs, as expressed in a workshop (see Annex 2).

The organisation of this consultative report is as follows. Section 1 presents an Introduction. Section 2 sets out key concepts. Section 3 describes proposed principles and high-level business specifications applying to classification systems. Section 4 describes UPI precision and granularity in relation to use cases. Section 5 provides examples of product classification systems. Sections 2 to 5 contain specific consultation questions to invite feedback from respondents. Section 6 collates all the questions, for easy reference. Annexes provide a list of abbreviations and terms used in the report (Annex 1), information on interactions with authorities and the industry (Annex 2), examples of use cases for determining data element for classification systems (Annex 3), further analysis on granularity (Annex 4), additional product classification system examples (Annex 5) and a list of members of the Harmonisation Group (Annex 6).

To ensure that the UPI guidance meets CPMI-IOSCO's principles and high-level business specifications and includes the other data elements desired by authorities, enabling the global aggregation of OTC derivatives transaction data, the purpose of this report is to seek consultation comments and suggestions on the UPI from respondents, particularly on two points:

i. This report outlines CPMI-IOSCO's proposed principles and high-level business specifications for the UPI and requests respondents' feedback on them, particularly on whether any of these proposals would pose implementation challenges. In particular, providers of product identifiers are encouraged to submit detailed responses to set out how their solutions meet, or could be revised to meet, each of these business specifications.

ii. This report proposes two related approaches for the granularity of the UPI classification system, and requests respondents' feedback, in particular on whether any aspects could pose implementation challenges.

Comments on these points and on the proposals set out in this report and answers to questions should be sent by 24 February 2016 to the secretariats of both the CPMI (cpmi@bis.org) and IOSCO (upi@iosco.org). The comments will be published on the websites of the BIS and IOSCO unless respondents have requested otherwise.

In providing feedback, it would be helpful if respondents could set out their views on the following:

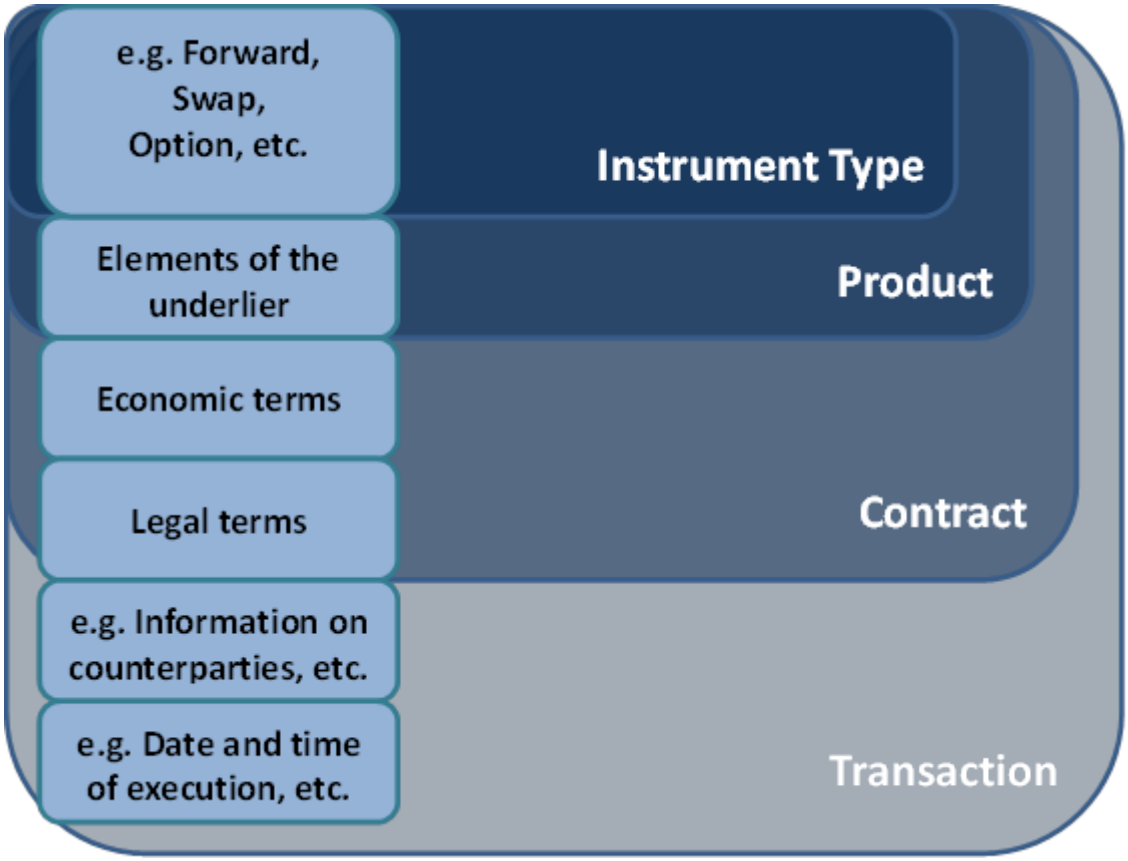
- Whether this consultative report covers the necessary topics to enable a uniform global UPI.
- Whether the proposals in this consultative report are unambiguous.
- Whether the level of detail in this consultative report is adequate and what additional level of detail would be expected in the final guidance document.
- Whether examples could be given of situations where the proposals might not work.
- How far the proposals reflect current practice, and what are the expected costs (both direct and indirect) and benefits of a harmonised UPI.

2. Key concepts

The Aggregation Feasibility Study calls for "the standardisation of the depiction of financial products/instruments/contracts across markets and geographies" for the purpose of data aggregation. As stated in the Data Report, "a product classification system would allow regulators to perform data aggregation to monitor exposures to, or positions in, various groupings of products". This consultation report supplements the Data Report, the Access Report and the Aggregation Feasibility Study by proposing to use a set of data elements to represent an OTC derivatives product. This minimum set of particular elements to classify an OTC derivatives product provides a starting point for the grouping of OTC derivatives transactions. When the UPI is combined with other elements, such as economic terms and legal provisions, a number of uses are possible (see Section 4).

In addition to proposing a set of data elements for representing an OTC derivatives product, which are further discussed in Section 5 and Annex 5, this section also compares the classification of OTC derivatives products with the data needed to represent an underlier, OTC derivatives instrument type, OTC derivatives contract and OTC derivatives transaction, to provide appropriate context for the use of the term "product".5

To structure the discussion of the UPI and what it should cover, the following concepts are useful: instrument type, product, contract and transaction. Their relationships are illustrated in the following diagram:



5 The scope of products reported and the modalities of reporting differ among jurisdictions. This report is not commenting on the scope or modalities; the report does presume to give guidance to jurisdictions beyond their definition of OTC derivatives. See Section 3.9.

Data elements for representing an OTC derivative instrument type

International Financial Reporting Standards (IFRS) 9 Financial Instruments[6] defines a derivative as,

"*A financial instrument or other contract within the scope of this Standard with all three of the following characteristics.*

(a) its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to a counterparty to the contract (sometimes called the 'underlying').

(b) it requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors.

(c) it is settled at a future date."

In line with this definition, below is a non-exhaustive list of the three basic OTC derivative instrument types on which OTC derivatives products could be based, and the corresponding set of proposed data elements for each, which is further discussed in Section 3.1 and the associated annex:

- A forward, which is an agreement to deliver an underlier, or its cash equivalent, at a specified price on a future date. The data elements for representing a forward should establish that the instrument is a forward, its return parameters (eg value of underlier, contract for difference, spreadbet) and whether the forward settles with delivery of the actual underlier, or its cash equivalent.
- A swap, which is an agreement to exchange cash flows based on an event related to one or more underliers. The data elements for representing a swap should establish that the instrument is a swap, and include indicators of: its payout trigger (eg credit event, price change, payment schedule), return parameters (eg total, excess, contract for difference) of the swap, whether the swap's cash flows are based on single or multiple currencies, whether the notional value(s) of the swap remain constant, accrete, amortise or vary in other ways, and whether the payments are made in the currencies specified in the legs of the swap or in a reference currency.
- An option is an agreement that gives the right, but not the obligation, to buy, or sell, a particular underlier. Depending on the terms of the particular contract, the actual underlier or its cash value may be exchanged at settlement. The data elements for representing an option establish that the instrument is an option, the type of the option (ie put, call or chooser), the exercise style (eg American, European, Bermudan), pay-out method (eg price of underlier at time of exercise, Asian or other lookback methodology etc), payout trigger (eg digital, barrier etc) and whether at settlement delivery is made of the actual underlier, its cash equivalent, or if the choice of which of these two is delivered is made at the time of settlement.

Question 1: Are the above three OTC derivative instrument types sufficient to describe (in combination) all OTC derivatives? Which OTC derivatives would fall outside this approach?

Data elements for representing an underlier

The data elements for an underlier may include the asset class as well as data elements that could be used to identify the asset, collection of assets, index, collection of indices or combination of assets and

[6] International Accounting Standards Board (2014): *IFRS 9 Financial Instruments* (July).

indices or other variable that is referenced by an OTC derivatives product. The set of data elements of the underlier may vary depending on the asset class to which the underlier belongs. If the underlier of an OTC derivatives product is itself an OTC derivatives product, then the data elements for the underlier would be the data elements for an OTC derivatives product as described below.

Data elements for representing an OTC derivatives product

The data elements for representing an OTC derivatives product would combine elements of the OTC derivatives instrument type with elements of the underlier. This combination may vary across asset classes.

Question 2: Is it valid to assume that a combination of data elements of the instrument with data elements of the underlier is sufficient to define a product? If not, please explain.

Question 3: Is it valid to assume that the combination/set of data elements in the UPI classification system may differ across asset classes? If not, please explain and state how a uniform set of data elements could be comprehensively applied across asset classes.

The UPI would contain information about the instrument type and product but not about the contract or the transaction.

Data elements for representing an OTC derivatives contract

An OTC derivatives contract would include data elements for the product and data elements for other economic and legal terms. Economic terms include, but are not limited to, fixed and variable rates, rate schedules, notional amounts and schedules, payment amounts and schedules, effective date, termination date, calculation schedules, roll conventions, day count conventions, and holiday calendars and any other terms used for the calculation of cash flows. Legal provisions for optional termination, cancellation or extension are also included.

Data elements for representing an OTC derivatives transaction

An OTC derivatives transaction would include the data elements for the product and contract plus other elements such as counterparty information, trade date and execution time.

Data elements for representing package trades

Package trades, such as multi-leg swaps or option strategies, involve the simultaneous pricing and execution of two or more component transactions and could require two or more reports to TRs, depending on the applicable reporting framework in a given jurisdiction.

This report provisionally takes the view that the fact that a particular transaction is linked to another transaction, as part of a package trade, is an attribute of a transaction, not of a product Therefore, if a data element is designed to establish that a transaction is a component of a package, it would not be included in the set of data elements used for representing an OTC derivatives product and the UPI would not identify whether a transaction is part of a package trade.

Rather, as suggested in the UTI consultation[7] by the Harmonisation Group, constituent package transactions could be identified or linked either by a UTI that is structured in such a way that the constituent package transactions are inherently related, or by a separate field in each constituent package transaction report that links the separate reports which represent a package (this field being separate from the UTI).

[7] CPMI-IOSCO, *Harmonisation of the Unique Transaction Identifier*, www.bis.org/cpmi/publ/d131.pdf.

Question 4: Do you agree with this approach to the UPI's treatment of package trades? If not, please explain and suggest alternatives.

3. Product classification principles and high-level business specifications

The Data Report discussed the authorities' needs to conduct data aggregation, including product aggregation, to achieve objectives such as "assessing systemic risk, conducting market surveillance and enforcement, supervising market participants, conducting resolution activities, and increasing the transparency of OTC derivatives markets". The report described aggregation as involving "OTC derivatives activity in one product with activity in other OTC or exchange-traded derivatives or other types of financial transactions that are economically equivalent or closely related". The report then introduced the concept of a product classification system and related product identifiers.

The Aggregation Feasibility Study called for the creation of a UPI and included the following "requirements for product identification in order to achieve the objectives of data aggregation".[8]

- "An identifier that is sufficiently precise for the purposes of the authorities using the data, although recognising that it may need to be supplemented by other reported data on the transactions."
- "An identifier that either explicitly or implicitly (through reference data) includes a well-articulated and precise classification hierarchy, so that data aggregation and analyses that does not require precise detail of the traded product are possible."
- "An identifier that is open-source, available to all users and has open redistribution rights."
- "A governance process for adding new values to the identification system, recognising that new products will come into being over time. Authorities should have some role in the governance process."
- "An identifier that incorporates an approach which allows for historic data comparisons in a straightforward way, eg by not deleting or mapping old values. The approach would maintain a version history of the identifiers."

The UPI is intended to uniquely identify OTC derivatives products within the OTC derivatives transactions being reported to TRs. The UPI should meet the needs (as illustrated in Section 4) of the authorities that use the data from TRs, facilitating in particular the global aggregation of OTC derivatives transactions, while also respecting the capabilities of those entities that maintain UPIs or handle messages in which UPIs are included. Accordingly, the proposed principles and high-level business specifications described below would be desirable in a product classification system. In practice, there might be viable UPI solutions that do not fully satisfy each principle and high-level business specification.

3.1. Jurisdiction-neutrality

The approach to the harmonisation of classification systems should not depend on factors that are specific to a jurisdiction, but should be based only on the inherent characteristics of products.

[8] Aggregation Feasibility Study, Section 5.3.3.

Neutrality helps ensure that the solution is, as far as possible, globally applicable and facilitates aggregation.

3.2. Uniqueness

Every reportable OTC derivatives product should typically be identified by one distinct set of elements within the classification system. Different reportable OTC derivatives products should have different UPIs.

A distinct set of elements within the classification system should be associated with one code; and conversely each code should be associated with one distinct set of elements within the classification system.

The classification system should describe OTC derivatives products with sufficient detail and precision to uniquely define a product, but should not be so granular as to describe individual contracts or transactions.

3.3. Consistency

Regardless of structure, the classification system should describe each OTC derivatives product using a consistent set of data elements, notwithstanding the fact that different asset classes may have different sets of data elements to describe the product.

For example, the classification system should classify one particular interest rate derivative using the same set of data elements as any other interest rate derivative, and should classify one particular credit derivative using the same set of data elements as any other credit derivative, even though the set of data elements used to classify all interest rate derivatives may differ from the set of data elements used to classify all credit derivatives.

3.4. Persistence

An OTC derivatives product, once described in the classification system and assigned a code, should keep the same classification.

No product should ever be reassigned to another classification after the original assignment has taken place.

While cases where a product with an existing classification is re-assigned to a new classification should be kept to a minimum, where this is necessary (for example, to add in a new product classification for a product that has hitherto been reported in an "Other" category, as discussed in more detail in Section 3.5), the reclassification should adhere to the "Adaptability" principle described below.

3.5. Adaptability

The classification system should be capable of adapting swiftly to market changes and innovations, including the introduction of new OTC derivatives products, as well as to the evolving aggregation needs of authorities (eg new regulation for a specific product or market segment).

Changes should be capable of being readily incorporated into the classification system, and be readily adopted by market participants.

A versioning process would facilitate the incorporation of changes. The classification system should incorporate an approach that allows for comparisons across versions in a straightforward way, eg by not deleting, or by mapping to, old values.

A version history should be maintained, with, as far as possible, backward/forward compatibility across classification system versions, although clearly some types of revision might not satisfy the backward compatibility criterion.

For example, in order to meet the "Comprehensiveness" and "Ease of generation/acquisition" principles described in Sections 3.11 and 3.7 respectively, it might be appropriate for a classification system to permit one or more of its data elements to be able to take the value "Other" in order to incorporate new and/or highly bespoke products that do not yet have a more precise definition within the classification system. In order to preserve the precision of the UPI over time, reporting using these "Other" bucket(s) should be monitored in order to prompt the addition of new product classifications to the classification system and thereby ensure that the volume of trades reported using these values does not exceed a necessary minimum. Clearly, a revision to the classification system to add in a new product classification for a product that has hitherto been reported in an "Other" category would not meet the criterion of backward compatibility but would nonetheless be desirable.

3.6. Clarity

The classification system should be clear and unambiguous, supported by comprehensive and freely available documentation, instructions and guidance in order to support market participants' understanding and use of the classification system (eg to provide precise definitions of each of the values that can be taken by each data element in the classification system).

3.7. Ease of generation/acquisition/query

It should be possible to easily check whether a classification already exists, or not, and if needed, generate or acquire one in a timely manner.

3.8. Long-term viability

The classification system approach should be one that would be expected to remain valid for a number of years. It should be practicable now and not be limited by technological or legal constraints that exist in 2015 but which could reasonably be expected to change in the near future.

3.9. Scope-neutrality

The proposed classification system should work in a context where there are some differences in the scope of reporting regimes for OTC derivatives and where some of these differences are unlikely to be harmonised. Following the characteristic that the classification system should be jurisdiction-neutral, this leads to the following more detailed characteristic:

The definition of "OTC derivatives" varies across jurisdictions. Thus, the guidance for the classification system should not depend on the precise definition of "OTC derivatives" (which is not harmonised at a global level) but instead should be generally applicable to any product that might be classified as an "OTC derivative" within a particular jurisdiction and that needs a classification system for reporting purposes.[9]

[9] See footnote 5.

3.10. Compatibility

The classification system should rely on open standards that facilitate compatibility with existing automated systems of financial market infrastructures (eg trade repositories), market participants, and regulators.

3.11. Comprehensiveness

The classification system, in conjunction with other data elements, should be able to accommodate any OTC derivatives product that is subject to a reporting requirement, and it should also meet various other regulatory needs, by supporting regulatory functions such as market surveillance, risk analysis, dissemination of market information, and regulatory research. The classification system should also support enhanced market transparency, improved risk management and increased operational efficiency.

3.12. Extensibility

Some jurisdictions could require the reporting of transactions that are not OTC derivatives (eg exchange-traded derivatives or securities financing transactions)[10] through the same channels (ie using the same reporting formats and rules and/or the same TRs) as for OTC derivatives transactions. Accordingly, compatibility with or adaptability to accommodate for a broader range of financial products (including derivative products traded on exchange) should be considered a desirable characteristic of a classification system.

3.13. Precision

The classification system should be well articulated, and should classify with sufficient detail and level of granularity to enable regulators to fulfil their regulatory responsibilities.

The classification system should describe relevant data items with sufficient distinctiveness and specificity to meet authorities' needs including the efficient and effective aggregation of data. The level of distinctiveness and specificity could be determined separately according to the asset class.

3.14. Public dissemination

The classification system should support public dissemination of OTC derivatives data as may be required by a particular jurisdiction.

Question 5: Are the principles and high-level specifications listed and described above comprehensive in representing the characteristics of a classification system? If not, are there other principles and high-level specifications that should be considered? Please list and explain.

Question 6: Are the principles and high-level specifications listed and described above accurate and precise in their definitions? If not, are there changes you would suggest? Please list and explain.

Question 7: Could some of these principles and high-level specifications pose implementation challenges? Which ones and why?

[10] See footnote 5.

Question 8: Providers of product classification systems are encouraged to provide a detailed response to Section 3 to set out how their prospective UPI solutions meet, or could be revised to meet, each of these principles and high-level business specifications. If the UPI solution does not meet a particular principle or high-level business specification, please describe planned or potential amendments that could satisfy it.

Question 9: As discussed in Section 3.5, should a classification system allow one or more of its data elements to take the value "Other" in order to incorporate new and/or highly bespoke products that do not yet have a more precise definition within the classification system? Why or why not? If not, how would the bespoke/non-standard products be treated within the classification system? What should be the criteria and processes for moving one or more data elements from "Other" to a more specific bucket? Should the volume of transactions that can be reported using these "Other" values be capped in order to maintain the precision of the classification system? If so, what would an appropriate cap be?

4. UPI precision and granularity in relation to use cases

As a starting point for deciding on the data elements that should be included in the UPI classification system (ie the appropriate level of precision/granularity for the classification system), use cases help to establish all the data elements used in the authorities' analysis. One method of deciding what degree of granularity would be appropriate for the classification system is to identify which data elements of an OTC derivative uniquely identify a product and therefore should be included in the classification system, and which of these data elements should be included elsewhere in the trade report to uniquely identify contracts and transactions.

In order to provide examples of the potential business specifications of a product classification system, stemming from authorities' needs to aggregate OTC derivatives transactions reported to TRs, a number of use cases have been identified as typical, with various levels of complexity. The list of use cases provided in Annex 3 is intended to be illustrative and should not be considered comprehensive.

The use cases described include aggregation of transactions to measure market exposure to a specific underlier (credit reference entity in Annex 3.1 or commodity delivery point in Annex 3.2), and the definition of common clearing obligations in Annex 3.3, covering interest rate swaps, index CDS and foreign exchange non-deliverable forwards. Broader aggregation applications for financial stability purposes including assessing systemic risk arising from common potential exposures (Annex 3.4) and from the interconnectedness in the CDS market (Annex 3.5) have also been considered. With particular regard to the latter two cases, the experience of the financial crisis suggested a global approach to aggregation, with the aim of assessing the impact of shocks originating from an individual market or jurisdiction on the resilience of financial systems in other countries or of the worldwide network.

The examples described in this paper can be easily extended to assess contagion channels through different instruments (eg equity derivatives), other types of regulatory functions (eg trading/settlement), additional risk categories (eg counterparty risk) or specific purposes (eg monitoring market activities for prudential supervision or surveillance). Further use case examples can be found in both the Data Report and the Aggregation Feasibility Study referenced earlier in this paper.

In any case, the identification and classification of OTC derivatives products via a consistent UPI across jurisdictions and along time series has been identified as a relevant component of potential analyses. Every specific use case would utilise, in addition to the UPI, the access to other product-related data elements, with different granularity according to the specific analysis and to the authority's mandate. The use cases, especially in Annex 3.4 and Annex 3.5, show how the UPI might typically be used and where its use fits within the analytical process.

Authorities use OTC derivatives data for a wide range of purposes that could be advanced by the development of a UPI (consisting of both a product classification system and associated codes to represent each product's particular set of characteristics) as shown in the examples of use cases in Annex 3. A UPI should provide a mechanism for characterising economically similar OTC derivatives transactions as a product and supplying a unique code for that product group. A uniform way of referring to products could improve communication among authorities and between authorities and market participants.

If the product classification system is not sufficiently precise, it might not provide a meaningful way to aggregate transactions that share common economic characteristics. For example, transactions with material economic differences might be deemed to have the same taxonomy and thus receive the same code. On the other hand, if the product classification system is too precise, it might identify transactions in such a granular way – perhaps supporting product groups that contain only a single contract – that it does not provide a useful way of aggregating economically similar OTC derivatives transactions.

The level of granularity is directly proportional to the number of data elements and level of detail used to categorise a product. The more data elements with detailed breakdowns are used to categorise a product, the greater the number of products. The Harmonisation Group provisionally believes that the optimal level of granularity for a product classification system would keep to a minimum the number of product groupings that contain only a single or a limited number of transactions. This makes it possible to perform a quantitative analysis that can be used to determine the specific data elements that should be included in a product classification system. It is possible to arrive at the specific data elements that would reach the desired level of granularity by starting with a broad list of data elements and narrowing that list down.

As an example of such analysis, the Harmonisation Group has conducted an internal study to inform its discussion of which data elements would be included in a product classification system with the proposed optimal level of granularity for a variety of interest rate swaps using existing trade repository data. The details of this study, including the methodology and results, are included in Annex 4 to this consultation document. Considerations for further analysis include adding interest rate transaction for caps, floors, FRAs, swaptions etc. Further analysis on transactions in the credit, equity, commodity and FX asset classes may also be conducted. The level of precision that is desirable in one asset class (eg interest rates) might be different from what is desirable in a different asset class (eg credit). Similarly, the particular data elements required to attain the desired level of precision might differ among asset classes. An analysis of existing taxonomies can be done starting from a broader set of data elements to determine how each transaction would be classified and then grouping those transactions accordingly.

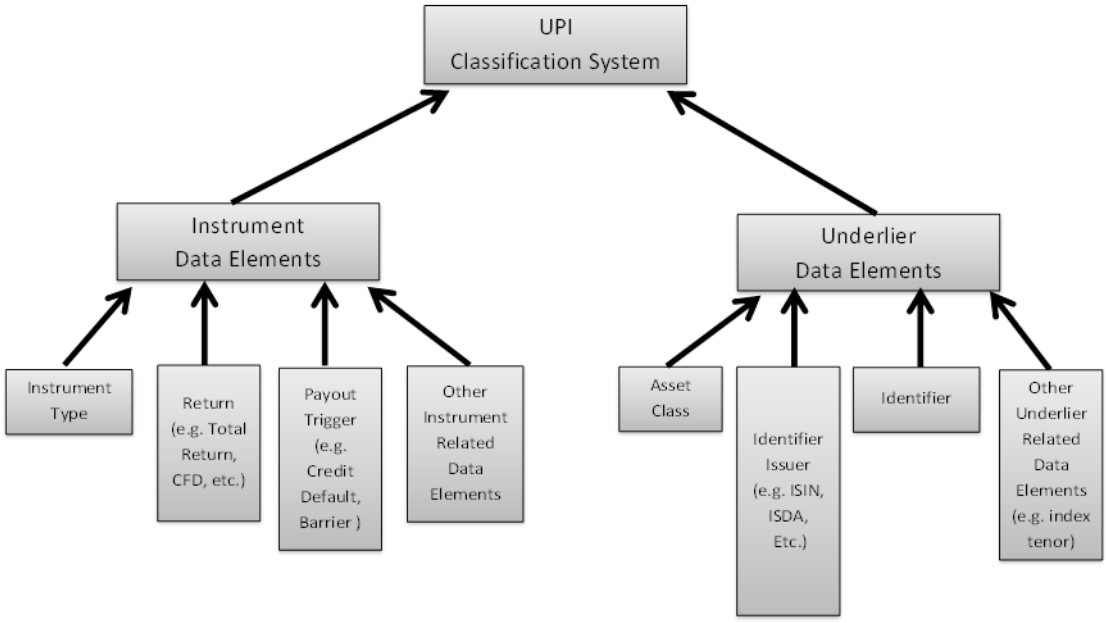
5. Proposed product classification systems

The results from the study presented in Annex 4 suggest that data elements that describe the instrument, together with data elements that describe and identify the underlier, could provide an optimal level of granularity for product classification. Drawing on the discussion in Section 4, two levels of granularity are being considered for the OTC derivatives product classification system. One would include a detailed identifier for the specific underlier, the other would not.

A classification system that includes an identifier for the underlier would also include the source of the identifier, and possibly other data elements that identify the underlier, such as the tenor of an underlying index. For a compound OTC derivative, such as a swaption (option on a swap), the underlier that is identified is the asset(s), or index that underlies the underlying contract (the ultimate underlier).

The data elements for identifying the underlier could be used to determine from external sources the current market price, or valuation, for the underlier(s) as well as to facilitate the collection from external sources of reference data related to the underlier(s), such as the constituents of a broad market index.

A classification system not including an identifier for the underlier would focus on the instrument type. It would include general information about the underlier such as its asset class, but without explicitly identifying the specific underlier.



The table below shows some of the data elements that might be used in a UPI classification system for the credit asset class.

Similar tables are provided for the interest rate, foreign exchange, equity and commodity asset classes in Annex 5 to this document.

The row headings (Asset class, Instrument type etc) represent data elements that could be thought of as those that uniquely identify an OTC derivatives product.

In order to illustrate the definitions of the different data elements listed, each row contains a non-exhaustive list of some possible values which that data element could take.

Asset class: credit

Asset class	Credit		
Instrument type	Swap	Option	Forward
Option style	N/A	Eg European, American, Bermudan etc.	N/A
Option type	N/A	Eg Put/receiver, call/payer, chooser etc.	N/A
Return, pricing method or payout trigger	Eg Credit default, total return, first to default, nth to default, contingent, recovery etc.	Eg Vanilla, lookback, other path-dependent etc.	Eg Spread, forward price of underlying instrument etc
Underlier type	Eg Single-name (CDS), index (CDS), (CDS on) index tranche etc.		
Underlier sub-type	Eg Sovereign, municipal, corporate, loan pools etc.		
Delivery type	Eg Cash, physical etc.		
Underlier ID Source	Eg Issuer name, code provider etc.		
Underlier ID	Eg Asset name, code etc.		

Example 1: a cash-settled credit default swap on the five-year bond of corporation *X*, with maturity on 20 December 2020, could, for instance, receive the following classification:

Data element	***With underlier ID***	***Without underlier ID***
Asset class	Credit	Credit
Instrument type	Swap	Swap
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Credit default	Credit default
Underlier type	Single name	Single name
Underlier sub-type	Corporate	Corporate
Delivery type	Cash	Cash
Underlier ID source	ISIN	
Underlier ID	XS*nnnnnnnnnn*	

Example 2: a physically-settled European vanilla credit default call (aka. payer) swaption on the 10-year bond of government *X*, with maturity on 20 June 2017, could, for instance, receive the following classification:

Data element	*With underlier ID*	*Without underlier ID*
Asset class	Credit	Credit
Instrument type	Option	Option
Option style	European	European
Option type	Call	Call
Return, pricing method or payout trigger	Vanilla	Vanilla
Underlier type	Single-name CDS	Single-name CDS
Underlier sub-type	Sovereign	Sovereign
Delivery type	Physical	Physical
Underlier ID source	ISIN	
Underlier ID	XS*nnnnnnnnnn*	

Example 3: a credit forward agreement specifying a 2% spread between the five-year bond of corporation *X*, with maturity on 20 December 2020 and a US Treasury bond with the same maturity would be classified as:

Data element	*With underlier ID*	*Without underlier ID*
Asset class	Credit	Credit
Instrument type	Forward	Forward
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Spread	Spread
Underlier1 type	Single-name	Single-name
Underlier1 sub-type	Corporate	Corporate
Underlier2 type	Single-name	Single-name
Underlier2 sub-type	Sovereign	Sovereign
Delivery type	Cash	Cash
Underlier1 ID source	ISIN	
Underlier1 ID	*XSnnnnnnnnn*	
Underlier2 ID source	ISIN	
Underlier2 ID	*USmmmmmmmmm*	

Examples for other asset classes are included in Annex 5.

Question 10: The results from the study presented in Annex 4 suggest that data elements which describe the instrument, together with data elements that describe and identify the underlier, may provide an optimal level of granularity for product classification. For informational purposes, beyond the use of a derivatives product classification system for the global aggregation of data reported to trade repositories, are you aware of product classifications for other purposes where this level of granularity is applicable? For example, what level of granularity is used for aggregating transactions to calculate a position, or to determine various risk exposures to a

particular product? What level of granularity is used to aggregate transactions for the purposes of compression or netting operations?

Question 11: Do the options presented above appear operationally feasible? If not, please explain why.

Question 12: What are the pros and cons that you see in each considered level of granularity (one with an identifier for the underlier, one without an identifier for the underlier)?

Question 13: A classification system that includes identifiers for underliers in all asset classes would require identifiers that are open-source and freely available to all users with open redistribution rights. Looking at the example of classification systems provided in this section and in Annex 5, do such identifiers exist for all asset classes? If not, please specify where you foresee implementation challenges in this regard and any suggested solutions.

Question 14: For the identifiers in each asset class, are there corresponding reference data that are open-source and freely available to all users with open redistribution rights?

Question 15: For a classification system that does not include an identifier for underliers in all asset classes, what classification systems are available that are open-source and freely available to all users with open redistribution rights? What are the data elements included in these systems?

Question 16: Based on the examples provided in this section and in Annex 5, do you have comments on how the allowable values would be technically managed or/and how they are technically managed in the case of existing classification system solutions?

6. Summary of the consultation questions

This section of the consultative report collates the questions in the rest of the report for convenience.

Question 1: Are the above three OTC derivative instrument types sufficient to describe (in combination) all OTC derivatives? Which OTC derivatives would fall outside this approach?

Question 2: Is it valid to assume that a combination of data elements of the instrument and data elements of the underlier is sufficient to define a product? If not, please explain.

Question 3: Is it valid to assume that the combination/set of data elements in the UPI classification system may differ across asset classes? If not, please explain and state how a uniform set of data elements could be comprehensively applied across asset classes.

Question 4: Do you agree with this approach to the UPI's treatment of package trades? If not, please explain and suggest alternatives.

Question 5: Are the principles and high-level specifications listed and described above comprehensive in representing the characteristics of a classification system? If not, are there other principles and high-level specifications that should be considered? Please list and explain.

Question 6: Are the principles and high-level specifications listed and described above accurate and precise in their definitions? If not, are there changes you would suggest? Please list and explain.

Question 7: Could some of these principles and high-level specifications pose implementation challenges? Which ones and why?

Question 8: Providers of product classification systems are encouraged to provide a detailed response to Section 3 to set out how their prospective UPI solutions meet, or could be revised to meet, each of these principles and high-level business specifications. If the UPI solution does not

meet a particular principle or high-level business specification, please describe planned or potential amendments that could satisfy it.

Question 9: As discussed in Section 3.5, should a classification system allow one or more of its data elements to take the value "Other" in order to incorporate new and/or highly bespoke products that do not yet have a more precise definition within the classification system? Why or why not? If not, how would the bespoke/non-standard products be treated within the classification system? What should be the criteria and processes for moving one or more data elements from "Other" to a more specific bucket? Should the volume of transactions that can be reported using these "Other" values be capped in order to maintain the precision of the classification system? If so, what would an appropriate cap be?

Question 10: The results from the study presented in Annex 4 suggest that data elements that describe the instrument together with data elements that describe and identify the underlier may provide an optimal level of granularity for product classification. For informational purposes, beyond the use of a derivatives product classification system for the global aggregation of data reported to trade repositories, are you aware of product classifications for other purposes where this level of granularity is applicable? For example, what level of granularity is used for aggregating transactions to calculate a position, or to determine various risk exposures to a particular product? What level of granularity is used to aggregate transactions for the purposes of compression or netting operations?

Question 11: Do the options presented above appear operationally feasible? If not, please explain why.

Question 12: What are the pros and cons that you see in each considered level of granularity (one with an identifier for the underlier, one without an identifier for the underlier)?

Question 13: A classification system that includes identifiers for underliers in all asset classes would require identifiers that are open-source and freely available to all users with open redistribution rights. Looking at the example of classification systems provided in this section and in Annex 5, do such identifiers exist for all asset classes? If not, please specify where you foresee implementation challenges in this regard and any suggested solutions.

Question 14: For the identifiers in each asset class, are there corresponding reference data that are open-source and freely available to all users with open redistribution rights?

Question 15: For a classification system that does not include an identifier for underliers in all asset classes, what classification systems are available that are open-source and freely available to all users with open redistribution rights? What are the data elements included in these systems?

Question 16: Based on the examples provided in this section and in Annex 5, do you have comments on how the allowable values would be technically managed or/and how they are technically managed in the case of existing classification system solutions?

Annex 1 – Abbreviations and terms used in this report

Access Report	2013 CPSS-IOSCO report on authorities' access to trade repository data
AFSG	Aggregation Feasibility Study Group
Aggregation Feasibility Study	2014 FSB Study on the feasibility of options for a mechanism to produce and share global aggregated data
CPMI	Committee on Payments and Market Infrastructures (formerly CPSS)
CPSS	Committee on Payment and Settlement Systems (now CPMI)
Data Report	2012 CPSS-IOSCO Report on OTC derivatives data reporting and aggregation requirements
FSB	Financial Stability Board
Harmonisation Group	CPMI-IOSCO working group for harmonisation of key OTC derivatives data elements
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association
ISO	International Organization for Standardization
OTC	over the counter
SDR	Swap data repository
TR	Trade repository (referred to as an SDR in US jurisdictions)
UPI	Unique Product Identifier (includes both a classification system and a code)
UTI	Unique Transaction Identifier

Annex 2 – Survey of authorities and industry workshop

To inform its work, the Harmonisation Group surveyed authorities and industry participants on the rules and regulations currently surrounding the formulation and use of the UPI in different jurisdictions, and the issues and challenges encountered in applying them. Further inputs were sought from the industry at a workshop conducted on 5 March 2015.

The survey responses and the opinions voiced at the workshop show a strong consensus among regulatory authorities and industry participants on the development of an effective global UPI solution.

Survey of authorities

The official survey findings indicate that, in most jurisdictions, supervisors have widely recognised the potential usefulness of a UPI for OTC derivatives transactions and have generally factored it into the reporting regime. In the absence of a universally recognised UPI, authorities have typically relied on some kind of interim taxonomy based on asset classes and instruments, or have allowed the use of existing UPI solutions provided by third parties, or simply do not yet support reporting of such a data field. The preferred solution expressed is to have an internationally recognised UPI.

Authorities consider that a UPI would be useful in a number of contexts, such as for macroprudential/systemic risk analysis using a minimum number of data fields (eg to assess the size and concentration of market sectors as well as market liquidity risk) and for market monitoring (eg to assess the activity relating to a specific underlier) as well as for determining clearing obligations. The UPI is seen as an efficient and accurate way of identifying OTC derivatives transactions that share specific economic terms.

The data elements that would be expected in a UPI classification system are the asset class itself (commodities, interest rate etc), the instrument (forward, option etc) and some identification of the underlier.

Compared to existing UPI classification systems, the expected enhancements generally include the identification of the underlier and no use of proprietary data for the underlier.

Industry workshop

The Harmonisation Group held a one-day workshop with industry participants in March 2015. In particular, the industry participants voiced the following views:

- The granularity of UPI should be driven by the uses of UPI by authorities and may vary by asset class since each asset class has its own complexities. In general, UPI would be most compatible with the standard asset classes. Overall, the classification system should be kept at a high level and should not be too complex. The more granular UPI becomes, the more difficult it would be to agree on the definitions.
- If UPI classifications were to become too granular, public disclosure of such UPI data could raise confidentiality issues.
- Some phasing-in of the UPI implementation across asset classes would be appropriate and the focus should first be on the most-traded products. Due to the wide variety of products, there was a general question whether it would be possible to cover them all.
- The UPI's governance should be given careful consideration.

Annex 3 – Use cases for determining data elements for product classification

This annex provides more details of the use cases outlined in Section 4.

3.1 Determine market exposure to a specific credit reference entity

When determining the market exposure to a particular reference entity, a combination of reference data and reporting data would be used.

Reference data is required to determine credit indices for which the particular reference entity is a constituent, or if a particular reference obligation is guaranteed by the particular reference entity. Once those indices and obligations are determined, active contracts could then be grouped by the following product elements:

(i) Reference entity or reference obligation

(ii) Reference basket

(iii) Reference index

(iv) Reference index series

(v) Reference index series version

(vi) Instrument (CDS, CDS swaption)

(vii) Tranched or untranched

(viii) Contract termination date

3.2 Determine market exposure to a commodity delivery point

When determining the market impact of a shutdown of a particular commodity delivery point (eg Henry Hub for natural gas, Cushing for crude oil), it should be possible to aggregate active contracts by the following product elements:

(i) Underlying commodity (eg natural gas, crude oil)

(ii) Underlying delivery point (eg Henry Hub, Cushing)

(iii) Instrument (eg swap, forward, option)

(iv) Delivery (cash, physical)

3.3 Determination of clearing obligations

Aggregation can also help authorities to determine which OTC derivatives products should be subject to central clearing when criteria specified in applicable legislation are met.

The example below covers interest rate swaps, index CDS and foreign exchange non-deliverable forwards (NDFs).

(a) Interest rate swaps

  (i) Type (eg fixed-to-float, basis, OIS, FRA)

  (ii) Reference Index (eg Euribor, Libor)

(iii) Settlement currency

(iv) Embedded optionality (yes or no)

(v) Maturity

(vi) Settlement currency type (single currency or cross-currency)

(vii) Notional amount type (constant, variable or conditional)

Other additional characteristics are also used by CCPs to determine whether particular OTC derivatives products will be made eligible for central clearing. They include:

(i) Day count fraction

(ii) Stub (front or back)

(iii) Reset frequency

(iv) Payment frequency

(v) Trade start type (spot or forward)

(b) Index CDS

(i) Type (tranched, untranched)

(ii) Reference index (eg iTraxx Europe Main, iTraxx Europe Crossover)

(iii) Settlement currency

(iv) Series

(v) Tenor (three-, five-, seven-, 10-year)

(c) FX NDF

(i) Currency pair (eg BRL/USD)

(ii) Settlement currency

(iii) Settlement type (cash of physical)

(iv) Maturity

3.4 Assessing systemic risk: common potential exposures

During the financial crisis, global financial institutions sold credit protection on mortgage-backed securities to a wide range of banks and other market participants. In this type of situation, authorities would find it useful to aggregate worldwide positions to assess the total amount of credit protection sold and the collateral extended in order to identify risk concentrations, establish the number of counterparties involved, and prevent potential cases of collateral shortage. During the crisis, problems did, in fact, occur when the same collateral was called upon at the same time by an excessive number of market participants, preventing its timely delivery.

The scope of such an assessment can be generalised to all OTC derivatives in the following steps:

(i) Identify market participants with a very large directional position, ie net notional amount of outstanding long or short positions in a particular OTC derivatives product above a high threshold value; and

(ii) Identify the counterparties to these positions.

Any assessment along these lines would require granular data collected from all TRs worldwide on outstanding trades involving as a counterparty any institution that might have a large directional position. As a result of this analysis, aggregated data could be made available to authorities at a given frequency (eg monthly or quarterly).

Transaction data should provide for the identification of the institutions with large directional positions and their counterparties (eg with Legal Entity Identifiers, if possible at a global group level) and the elimination (eg by means of UTIs) of double-counting of the same trade reported to different TRs.

Aggregated data (ie total of all monitored OTC derivatives product positions between entity *i* and counterparty *j* on date *d*) would be helpful in conducting global level financial stability assessments. To be useful, any time series would take into account the impact of events on transaction lifecycles by removing terminated trades and differentiating new ones from novations or similar events. Trade details would be updated in the case of an assignment or if the notional amount is subject to a partial termination or an increase. If positions have been cleared, the CCP would appear as a counterparty.

This analysis would focus on net notional amounts, provided that the gross long and gross short amounts of each product held between any counterparty pair are included in common netting sets.

The availability of a UPI to identify economically equivalent OTC derivatives products according to their instrument type and underlying. A globally consistent OTC derivatives product classification and coding could help to identify large directional positions in various asset classes/sub-classes across different jurisdictions. Consistent product identification over time is also relevant to identifying any changes in the behaviour of market participants that might have potential financial stability implications.

3.5 Assessing systemic risk: network analysis

As a tool for assessing the shape and resilience of a network composed of "nodes" with specific characteristics, network analysis has been increasingly applied post-crisis to gauge the strength and weaknesses of interconnected financial systems. Such tools could also be applied to data reported to TRs for identifying and measuring patterns of interconnectedness in the OTC CDS market. In this context, potential applications of network analysis include:

- Assessing contagion risk
- Monitoring counterparty risk and systemic risk
- Monitoring concentration risk
- Determining interconnectedness between participants

Measuring the resiliency of a given network to a random shock has three objectives:

1. To identify firms which play a central role in the transfer of risk from end-buyers to end-sellers and thus have a key function in the network.
2. To assess the network's degree of interconnectedness.
3. To assess the resilience of the network should one or more crucial nodes fail or otherwise have problems, and measure the effects of the failure or distress of a node through the whole network structure.

The analysis should be based on data reported to one or more TRs. CDS trades are reported by market participants including dealers, hedge funds and other buy-side firms, for both cleared and bilateral transactions. For trades reported by both counterparties, double-counting should be eliminated via de-duplication of the reported data. Also, events in the lifecycle of a trade should be understood in

order to identify novation, termination and, in the case of a CDS transaction, credit events relevant to assessing the size and counterparties involved.

While some useful results can be extracted from aggregated data, a comprehensive analysis would use transaction-level data elements in addition to a UPI, with the availability of all or almost all elements. Depending on the geographical spread of the network in question, counterparties operating in one jurisdiction or at a global level should be included in the data set. Particular care should be taken in the case of legal difficulties to access data related to foreign counterparties or, at global level, to counterparties or operations conducted in jurisdictions with access restrictions. In fact, it is difficult to make inferences based only on data from limited parts of the network.

In addition to counterparty information, the analysis would utilise gross and net notional values to assess the strength of interconnectedness before and after risk transfers. Information on relationships between participants (eg affiliates, subsidiaries, branches) is also useful in identifying the risks taken by large financial groups operating through a number of different entities worldwide.

While this use case focuses on the CDS market, similar analytical tools could be used to expand the analysis to interest rate swaps and other OTC derivatives products. A UPI that is consistent across different TRs and that covers an adequate period of time would be useful in grouping the products to be included in the network analysis and in identifying different products with similar economic characteristics.

Annex 4 – Further analysis on granularity

As outlined in Section 4, the Harmonisation Group has conducted a study to inform discussions on the optimal level of granularity for the following types of interest rate swaps:

- Fixed-float single currency
- Fixed-fixed single currency
- Basis single currency
- OIS
- Fixed-float cross currency
- Fixed-fixed cross currency
- Basis cross currency

Methodology

To select the starting set of data elements for interest rate swap transactions, a number of CCPs were asked which data elements they use for swap trade compression. The CCPs responded with the following categories of data elements:

- Calculation dates including effective and termination dates, and date adjustments, business day and roll conventions and business calendars and calculation period frequency
- Payment schedules
- Reset schedules including fixing dates
- Underlying asset, benchmark, or reference price
- Spreads to underlying asset, benchmark or reference price
- Fixed rates used for payment calculations
- Calculation parameters such as daycounts, discounting and compounding methods
- Currencies

For the purposes of classification, the following data elements are added:

- Notional schedules (amortising, accreting, roller coaster, custom)
- Rate schedules
- Delivery method (deliverable, non-deliverable)

From these categories, 15 scenarios were created. The first consisted of aggregating a three-month sample of TR new trade submissions using all the data elements from each category to group transactions. Each subsequent scenario removed the data elements from a particular category as criteria for aggregation. This process was repeated until there was no further improvement in reducing the number of groups that contained five or fewer transactions.

For the first study, the sample consisted of 406,830 transactions submitted between 23 January 2015 and 27 April 2015. Possible "false grouping" due to data quality issues was not accounted for.

Terms in italics were removed from each of the following scenarios.

Scenario 1 Aggregation Terms: Instrument Description, Termination Date(s), Calculation Period(s), Payments Schedule(s), Stub Period(s), Reset Schedule(s), Notional Currency(s), Notional Step Schedule(s),

Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Floating Rate Index Period Multiplier Initial Value(s), Floating Rate Index Period Multiplier Step Schedule(s), Spread from Floating Rate Index(s), Spread from Floating Rate Index Step Schedule(s), Day Count Fraction(s), Compounding Method(s), Settlement Currency, *Non-Deliverable Fixing Date Period(s), Non-Deliverable Fixing Date Period Multiplier(s), Non-Deliverable Settlement Rate Option(s)*

Scenario 2 Aggregation Terms: Instrument Description, Termination Date(s), Calculation Period(s), Payments Schedule(s), Stub Period(s), Reset Schedule(s), Notional Currency(s), Notional Step Schedule(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), *Floating Rate Index Period Multiplier Initial Value(s), Floating Rate Index Period Multiplier Step Schedule(s)*, Spread from Floating Rate Index(s), Spread from Floating Rate Index Step Schedule(s), Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 3 Aggregation Terms: Instrument Description, Termination Date(s), Calculation Period(s), Payments Schedule(s), Stub Period(s), Reset Schedule(s), Notional Currency(s), *Notional Step Schedule(s)*, Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Spread from Floating Rate Index(s), *Spread from Floating Rate Index Step Schedule(s)*, Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 4 Aggregation Terms: Instrument Description, Termination Date(s), Calculation Period(s), Payments Schedule(s), *Stub Period(s)*, Reset Schedule(s), Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Spread from Floating Rate Index(s), Spread from Floating Rate Index Step Schedule(s), Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 5 Aggregation Terms: Instrument Description, Termination Date(s), Calculation Period(s), Payments Schedule(s), Reset Schedule(s), Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Spread from Floating Rate Index(s), *Spread from Floating Rate Index Step Schedule(s)*, Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 6 Aggregation Terms: Instrument Description, Termination Date(s), Calculation Period(s), Payments Schedule(s), Reset Schedule(s), Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), *Spread from Floating Rate Index(s)*, Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 7 Aggregation Terms: Instrument Description, Termination Date(s), *Calculation Period(s)*, Payments Schedule(s), Reset Schedule(s), Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 8 Aggregation Terms: Instrument Description, Termination Date(s), Payments Schedule(s), *Reset Schedule(s)*, Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Day Count Fraction(s), Compounding Method(s), Settlement Currency

Scenario 9 Aggregation Terms: Instrument Description, Termination Date(s), Payments Schedule(s), Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Day Count Fraction(s), *Compounding Method(s)*, Settlement Currency

Scenario 10 Aggregation Terms: Termination Date(s), *Payments Schedule(s)*, Notional Currency(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Day Count Fraction(s), Settlement Currency

Scenario 11 Aggregation Terms: Instrument Description, Termination Date(s), *Notional Currency(s)*, Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), Day Count Fraction(s), Settlement Currency

Scenario 12 Aggregation Terms: Instrument Description, Termination Date(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), *Day Count Fraction(s)*, Settlement Currency

Scenario 13 Aggregation Terms: Instrument Description, Termination Date(s), Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s), *Settlement Currency*

Scenario 14 Aggregation Terms: Instrument Description, *Termination Date(s)*, Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s)

Scenario 15 Aggregation Terms: Instrument Description, Floating Rate Index(s), Floating Rate Index Period(s), Floating Rate Index Period Multiplier(s)

A summary of the results of this study are as follows:

	Number of groups							
Transactions per group	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**	**Scenario 5**	**Scenario 6**	**Scenario 7**	**Scenario 8**
1	**26218**	**26218**	**24477**	**24299**	**23802**	**23800**	**23800**	**16549**
5	**35642**	**35642**	**35946**	**35895**	**35341**	**35342**	**35342**	**30124**
10	**8530**	**8530**	**8561**	**8556**	**8484**	**8484**	**8484**	**8987**
50	**5482**	**5482**	**5492**	**5504**	**5548**	**5548**	**5548**	**6025**
100	**530**	**530**	**530**	**531**	**540**	**540**	**540**	**578**
500	**242**	**242**	**243**	**243**	**245**	**245**	**245**	**258**
1000	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**6**
5000	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**
10000	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
50000	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
100000	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**76662**	**76662**	**75267**	**75046**	**73978**	**73977**	**73977**	**62540**

	Number of groups						
Transactions per group	**Scenario 9**	**Scenario 10**	**Scenario 11**	**Scenario 12**	**Scenario 13**	**Scenario 14**	**Scenario 15**
1	**16283**	**14553**	**13746**	**13735**	**13223**	**13068**	**141**
5	**29843**	**25768**	**25157**	**25152**	**24294**	**24085**	**223**
10	**8984**	**7844**	**7853**	**7849**	**7747**	**7701**	**82**
50	**6019**	**5923**	**5996**	**5998**	**6064**	**6089**	**150**
100	**576**	**642**	**647**	**647**	**659**	**661**	**31**
500	**267**	**344**	**346**	**346**	**351**	**351**	**60**
1000	**6**	**10**	**10**	**10**	**10**	**10**	**29**
5000	**13**	**13**	**13**	**13**	**13**	**13**	**49**
10000	**0**	**0**	**0**	**0**	**0**	**0**	**6**
50000	**0**	**0**	**0**	**0**	**0**	**0**	**6**
100000	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Total	**61991**	**55097**	**53768**	**53750**	**52361**	**51978**	**778**

Annex 5 – Additional product classification system examples[11]

The tables below complement Section 5 on proposed OTC derivatives product classification systems and provide an indication of the data elements that could be used in a UPI classification system for the interest rate, foreign exchange, equity and commodity asset classes.

Asset class: rates

Asset class	Rates		
Instrument type	Swap	Option	Forward
Instrument sub-type	eg Basis swap, fixed – floating, fixed – fixed, inflation, OIS, zero coupon, other etc.	N/A[12]	N/A
Notional schedule	eg constant, accreting, amortising , custom etc.	N/A	N/A
Single or multiple currency	Single-currency cross-currency	N/A	N/A
Underlying asset/contract type	N/A	eg Interest rate index, swaps – basis swap, swaps – fixed – floating, swaps – fixed – fixed, swaps – inflation, swaps – (OIS), options, forwards, futures. other etc.	eg Interest rate index, options, other, single-name, basket etc.
Option style	N/A	eg European, American, Bermudan etc.	N/A
Option type	N/A	eg Put, call, chooser etc.	N/A

[11] The scope of products reported and the modalities of reporting differ among jurisdictions. This report is not commenting on the scope or modalities; this report and the examples provided in this annex do not presume to give guidance to jurisdictions beyond their definition of OTC derivatives. See note 5.

[12] Throughout this annex, N/A stands for "not applicable".

Return, pricing method or payout trigger	N/A	eg Vanilla, Asian, digital (binary), barrier, digital barrier, lookback, other path-dependent , other, cap, floor etc.	eg Spreadbets, forward price of underlying instrument, forward rate of underlying X notional, contract for difference etc.
Single or multiple tenor	N/A	N/A	eg Single, multiple etc
Delivery type	eg Cash, physical etc.		
Underlier ID source	eg Issuer name, code provider etc.		
Underlier ID	eg Index name, code etc.		
Other data elements	eg Tenor period, tenor period multiplier etc.		

Example 4: An interest rate swap on the EONIA overnight index could receive the following classifications:

Data elements	***With underlier ID***	***Without underlier ID***
Asset class	Rates	Rates
Instrument type	Swap	Swap
Instrument sub-type	OIS	OIS
Notional schedule	Constant	Constant
Single or multiple currency	Single	Single
Underlying asset/contract type	N/A	N/A
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	N/A	N/A
Single or multiple tenor	N/A	N/A
Delivery type	Physical	Physical
Underlier ID source	ISDA 2006 definitions	
Underlier ID	EUR-EONIA-OIS-compound	

Example 5: A cap on three-month USD Libor could receive the following classifications:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	Rates	Rates
Instrument type	Option	Option
Instrument sub-type	N/A	N/A
Notional schedule	N/A	N/A
Single or multiple currency	N/A	N/A
Underlying asset/contract type	Interest rate index	Interest rate index
Option style	European	European
Option type	Call	Call
Return, pricing method or payout trigger	Cap	Cap
Single or multiple tenor	N/A	N/A
Delivery type	Physical	Physical
Underlier ID source	ICE Benchmark Administration	
Underlier ID	USD ICE Libor	
Underlier tenor period multiplier	3	
Underlier tenor period	Month	

Example 6: A forward rate agreement against an interpolated three-month/six-month LIBOR curve could receive the following classifications:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	Rates	Rates
Instrument type	Forward	Forward
Instrument sub-type	N/A	N/A
Notional schedule	N/A	N/A
Single or multiple currency	N/A	N/A
Underlying asset/contract type	Interest rate index	Interest rate index
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Forward rate of underlying X notional	Forward rate of underlying X notional
Single or multiple tenor	Multiple	Multiple
Delivery type	Physical	Physical
Underlier ID source	ICE Benchmark Administration	
Underlier ID	USD ICE Libor	
Underlier tenor1 period multiplier	3	
Underlier tenor1 period	Month	
Underlier tenor2 period multiplier	6	
Underlier tenor2 period	Month	

Asset class: commodities

Asset class	Commodities		
Instrument type	Swap	Option	Forward
Underlying asset/contract type	eg Energy, precious metals, non-precious metals, agriculture, Environmental, freight, polypropylene products, paper, fertiliser, index, multi commodity, other etc.		
Sub-asset	eg Aluminium, adzuki beans, Baltic Exchange – dry bulk routes, Baltic exchange – wet bulk routes, barley, benzene, butter, canola, coal, cobalt, cocoa, coffee, containerboard, copper, corn, cotton, diesel fuel, electricity, emissions, ethanol and biofuels, fertiliser, fluff, fuel oil, gas oil, gasoline, gold, heating oil, iridium, iron ore, jet fuel/kerosene, lead, livestock, lumber, methanol, milk, molybdenum, naphtha, natural gas, natural gas liquids, newsprint, nickel, oats, oil, orange juice, other, palladium, palm oil, plastics, platinum, platts clean tankerwire, platts dirty tankerwire, pulp, rapeseed, recovered paper, rhodium, rice, rubber, ruthenium, silver, sorghum, soybeans, steel, sugar, sunflower seeds, tin, uranium, wheat, wool, zinc.		
Option style	N/A	eg European, American, Bermudan etc.	N/A
Option type	N/A	eg Put, call, chooser etc.	N/A
Return, pricing method or payout trigger	eg Contract for difference, total return, excess return, loan/lease, physical commodity, value of underlying asset, location basis, quality basis, calendar basis etc.	eg Vanilla, Asian, digital (binary), barrier, digital barrier, lookback, other path-dependent, other, cap, floor etc.	eg Spreadbet, forward price of underlying asset, contract for difference etc.
Delivery type	eg Cash, physical, elect at settlement etc.		
Underlier ID source	eg Issuer name, code provider etc.		
Underlier ID	eg Asset name, code etc.		

Example 7: A cash-settled electricity swap on PJM AEP Dayton Hub Day Ahead Locational Marginal Pricing could receive the following classifications:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	Commodities	Commodities
Instrument type	Swap	Swap
Underlying asset/contract type	Energy	Energy
Sub-asset	Electricity	Electricity
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Value of underlying asset	Value of underlying asset
Delivery type	Cash	Cash
Underlier ID source	PJM	
Underlier ID	PJM AEP Dayton Hub	

Example 8: A European call Asian option on the Argus API 2 coal index with cash delivery could receive the following classification:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	Commodities	Commodities
Instrument type	Option	Option
Underlying asset/contract type	Energy	Energy
Sub-asset	Coal	Coal
Option style	European	European
Option type	Call	Call
Return, pricing method or payout trigger	Asian	Asian
Delivery type	Cash	Cash
Underlier ID source	Argus	
Underlier ID	API 2	

Example 9: A three-month forward on gold bullion with physical delivery could receive the following classification:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	Commodities	Commodities
Instrument type	Forward	Forward
Underlying asset/contract type	Precious Metals	Precious Metals
Sub-asset	Gold	Gold
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Forward price of underlying asset	Forward price of underlying asset
Delivery type	Physical	Physical
Underlier ID	Gold	

Asset class: equities

Asset class	Equities		
Instrument type	Swap	Option	Forward
Underlying asset/contract type	eg Single-name, index, basket etc.	eg Single-name, index, basket, options, forwards, futures etc.	eg Single-name, index, basket, options, futures etc.
Option style	N/A	eg American, European, Bermudan etc.	N/A
Option type	N/A	eg Put, call, chooser etc.	N/A
Return, pricing method or payout trigger	eg Price, dividend, total return, variance, volatility, contract for difference (CFD) etc.	eg Vanilla, Asian, digital (binary), barrier, digital barrier, lookback, other path-dependent, other etc.	eg CFD, spreadbet, forward price of underlying instrument etc.
Delivery type	eg Cash, physical, elect at settlement		
Underlier ID source	eg Issuer name, code provider etc.		
Underlier ID	eg Asset name, code etc.		

Example 10: a total return swap on the S&P 500 Index could receive the following classification:

Data elements	***With underlier ID***	***Without underlier ID***
Asset class	Equities	Equities
Instrument type	Swap	Swap
Underlying asset/contract type	Index	Index
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Total return	Total return
Delivery type	Cash	Cash
Underlier ID source	S&P Dow Jones Indices	
Underlier ID	S&P 500 Index	

Example 11: A Bermudan put option with cash delivery on a basket consisting of Euronext Paris (ISO 10383 Market Identifier Code (MIC): XPAR) traded shares of AB Science (AB), Biophytis (ALBPS), Cellectics (ALCLS), Dixonhit (ALEHT), and Genfit (GNFT) could receive the following classification:

Data elements	***With underlier ID***	***Without underlier ID***
Asset class	Equities	Equities
Instrument type	Option	Option
Underlying asset/contract type	Basket	Basket
Option style	Bermudan	Bermudan
Option type	Put	Put
Return, pricing method or payout trigger	Vanilla	Vanilla
Delivery type	Cash	Cash
Underlier1 ID source	XPAR	
Underlier1 ID	AB	
Underlier2 ID source	XPAR	
Underlier2 ID	ALBPS	
Underlier3 ID source	XPAR	
Underlier3 ID	ALCLS	
Underlier4 ID source	XPAR	
Underlier4 ID	ALEHT	
Underlier5 ID source	XPAR	
Underlier5 ID	GNFT	

Example 12: A CFD on Frankfurt Stock Exchange (MIC: XFRA) traded shares of Deutsche Telekom AG could receive the following classification:

Data elements	***With underlier ID***	***Without underlier ID***
Asset class	Equities	Equities
Instrument type	Forward	Forward
Underlying asset/contract type	Single-name	Single-name
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	CFD	CFD
Delivery type	Cash	Cash
Underlier ID source	XFRA	
Underlier ID	DTE	

Asset class: FX

Asset class	FX		
Instrument type	Swap	Option	Forward
Instrument sub-type/ underlying asset	Eg Spot-forward, forward-forward etc.	Eg Forwards, futures, spot, volatility etc	Eg Spot, forward, options, futures etc.
Option style	N/A	e.g.eg American, European, Bermudan etc.	N/A
Option type	N/A	eg Put, call, chooser etc.	N/A
Return, pricing method or payout trigger	N/A	eg Vanilla, Asian, digital (binary), barrier, digital barrier, lookback, other path-dependent, other etc.	eg CFD, spreadbet, forward price of underlying instrument etc.
Delivery type	eg Cash, physical, elect at settlement etc.		
Currency pair	eg ISO 4217 currency codes etc.		
Settlement currency	eg ISO 4217 currency codes etc.		

Example 13: A standard spot-to-forward FX swap on the currency pair USD/JPY, with the physical delivery of respective currencies could receive the following classification:

Data elements	***With underlier ID***	***Without underlier ID***
Asset class	FX	FX
Instrument type	Swap	Swap
Instrument sub-type/underlying asset	Spot-forward	Spot-forward
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	N/A	N/A
Delivery type	Physical	Physical
Currency pair	USD/JPY	

Example 14: A EUR cash-settled American barrier call option on the currency pair EUR/USD could receive the following classification:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	FX	FX
Instrument type	Option	Option
Instrument sub-type/underlying asset	Spot	Spot
Option style	American	American
Option type	Call	Call
Return, pricing method or payout trigger	Barrier	Barrier
Delivery type	Cash	Cash
Currency pair	EUR/USD	
Settlement currency	EUR	

Example 15: A Non-Deliverable Forward (NDF) settled in USD on the currency pair EUR/JPY could receive the following classification:

Data elements	*With underlier ID*	*Without underlier ID*
Asset class	FX	FX
Instrument type	Forward	Forward
Instrument sub-type/underlying asset	Spot	Spot
Option style	N/A	N/A
Option type	N/A	N/A
Return, pricing method or payout trigger	Forward price of underlying asset	Forward price of underlying asset
Delivery type	Cash	Cash
Currency pair	EUR/JPY	
Settlement currency	USD	

Annex 6 – List of members of the Harmonisation Group

This report was produced for the CPMI and IOSCO by the Working Group for the harmonisation of key OTC derivatives data elements (Harmonisation Group).

Co-chairs:	Marc Bayle European Central Bank
	John Rogers US Commodity Futures Trading Commission
Vice-chairs:	Markus Mayers European Central Bank
	Karine Themejian European Central Bank
	Srinivas Bangarbale US Commodity Futures Trading Commission
Members:	
Canada	Steve Badra-Quirion Autorité des Marchés Financiers
	Shaun Olson Ontario Securities Commission
	Yani Wu Ontario Securities Commission
China	Haibo Cheng China Securities Regulatory Commission
France	Franck Lasry Autorité des Marchés Financiers
	Claudine Hurman Bank of France
	Laurent Kersenbaume Bank of France
Germany	Olaf Kurpiers Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)
Hong Kong SAR	Colin Pou Hak Wan Hong Kong Monetary Authority
Italy	Carlo Bertucci Bank of Italy
Japan	Daisuke Yamazaki Financial Services Agency

Mexico	Roberto Toledo-Cuevas Bank of Mexico
Netherlands	Marinus Jeuken Netherlands Bank
Russian Federation	Ekaterina Abasheeva Central Bank of the Russian Federation
Singapore	Su-E Yap Monetary Authority of Singapore
United Kingdom	Will Abel (until April 2015) Bank of England
	Michael Yoganayagam (since April 2015) Bank of England
	John Tanner Financial Conduct Authority (until January 2015) Bank of England (since February 2015)
	Victoria Hinton Financial Conduct Authority
	Chris Kiew-Smith (since May 2015) Financial Conduct Authority
United States	Celso Brunetti Board of Governors of the Federal Reserve System
	Kate Dolan Commodity Futures Trading Commission
	Kate Mitchel Commodity Futures Trading Commission
	Janaki Naga Commodity Futures Trading Commission
	Esen Onur Commodity Futures Trading Commission
	Caroline Quintarelli (until September 2015) Commodity Futures Trading Commission
	Robert Stowsky Commodity Futures Trading Commission (since August 2015)
	Kim Allen Securities and Exchange Commission
	Michael Gaw Securities and Exchange Commission
	Carol McGee Securities and Exchange Commission
	Narahari Phatak Securities and Exchange Commission

European Central Bank	Linda Fache Rousová
	Christine Jozet
	Malgorzata Osiewicz
	Grzegorz Skrzypczynski
European Securities and Markets Authority	Giulia Ferraris
	Joanna Lednicka
	Olga Petrenko

Observers:

United States	Thomas Brown Office of Financial Research
	Cornelius Crowley Office of Financial Research
	William Nichols Office of Financial Research
	Robert Peterson Office of Financial Research
	Robert Stowsky Office of Financial Research (until July 2015)
	Paul D'Amico Office of Financial Research
European Insurance and Occupational Pensions Authority	Patrick Hoedjes Katarzyna Wojtkiewicz
European Banking Authority	Giuseppe Cardi Gabriel
FSB Secretariat	Pietro Franchini

Secretariats:

Committee for Payments and Market Infrastructures	Cristina Picillo Philippe Troussard
International Organization of Securities Commissions	Manabu Kishimoto (until January 2015)
	Verinder Sharma (since January 2015)