

# Principles on the Development of Derivatives Product Identifiers

Regulators and market participants agree on the need for a global unique product identifier (UPI) for derivatives. ISDA supports the efforts of the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) to establish a globally consistent product identifier, which builds on existing identifiers and standards developed in conjunction with market participants. The creation of a common standard will be a major step on the path to regulatory reporting harmonization, and will improve the ability of supervisors to aggregate derivatives trade data across borders. A common identifier that can be used across the entire trade lifecycle will also help reduce costs and complexity for the derivatives industry.

European regulators have moved quickly to identify the International Securities Identification Number (ISIN) as the sole identification standard under the revised Markets in Financial Instruments Directive/Regulation (MIFID II/MIFIR). However, there are a number of challenges associated with using ISINs in their current form for derivatives. For example, ISDA analysis suggests a new ISIN would be required for every 1.5 derivatives trades to be compliant with current European Securities and Markets Authority (ESMA) requirements and to reflect the full variability in trading terms – a number way in excess of what is currently issued.

In response, ISDA has established four principles, which are essential for the successful development and deployment of an extensible product identifier:

- Appropriate granularity of product identifiers
- Open governance
- Open source data and competitive market infrastructure
- Business usage and post-trade adaptability of product identifiers

## INTRODUCTION

ISDA and its members support a robust, global and unique open-source product identifier framework that meets both regulatory demands for data aggregation and transparency, and business demands for a basic and consistent set of product identifiers suitable for various applications across the full trade lifecycle.

In September 2015, ISDA launched an industry-wide Symbology initiative to create a methodology for the identification of derivatives products that would meet both demands. As part of that initiative, ISDA established a Symbology Governance Committee (SGC), which includes representatives from the buy-side, vendor and dealer communities, to guide and oversee the development of the derivatives product identifier.

This initiative is intended to complement current regulatory efforts. In December 2015, CPMI-IOSCO launched a consultation to develop a UPI<sup>1</sup>. The aim is to establish a globally consistent methodology that builds on existing identifiers and standards developed in conjunction with market participants<sup>2</sup> – an objective ISDA supports.

A further consultation by CPMI-IOSCO on the format is expected in mid-2016, and a final recommendation is likely to be published in 2017. CPMI-IOSCO's specific aim of facilitating the aggregation of data reported to multiple trade repositories across a variety of jurisdictions is an important objective that ISDA and the SGC want to achieve as part of the overall derivatives product identifier framework.

Individual supervisory authorities are also working towards developing a common standard. As part of MIFID II regulatory technical standard 2, 6, 22 and 23, ESMA has mandated the use of ISINs for derivatives product identification purposes. ISDA has analyzed the ISIN technical and governance framework, and has raised a number of concerns to the International Organization for Standardization (ISO), which manages the ISO standard, and the Association of National Numbering Agencies (ANNA), the registration authority for the ISIN standard. These concerns cover a variety of issues, as summarized in Annex I.

Due to the ESMA regulatory mandate, and the impending January 2018 start date for MIFID II, ISDA and the SGC agreed to engage with ISO to determine whether or not the ISIN framework could be adapted for derivatives. In February 2016, a joint ISDA-ANNA working group was formed under the auspices of ISO to address concerns and provide guidance on the allocation of ISINs for derivatives. However, the ISIN is not well suited as the universal product identifier for derivatives without significant modifications to the ISIN standard and issuance framework.

ISDA and the SGC will continue to work within the ISO effort, to the extent ISO and ANNA members are willing to adapt the ISIN standard and issuance process. It is important these satisfy the various regulatory demands and provide benefits to the industry by streamlining the trade-processing infrastructure. As such, ISDA has established four principles that are essential for the successful development and deployment of an extensible product identifier. These principles are:

- Appropriate granularity of product identifiers
- Open governance
- Open source data and competitive market infrastructure
- Business usage and post-trade adaptability of product identifiers

The remainder of this paper focuses on these four principles.

<sup>1</sup> <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD519.pdf>

<sup>2</sup> See: <http://www2.isda.org/functional-areas/technology-infrastructure/data-and-reporting/responses/>

## 1. Appropriate Granularity of Product Identifiers

It is vital the product identifier framework is appropriately detailed and granular and can be implemented consistently in all jurisdictions.

Through the Symbology work, and subsequent work on granularity determinations as part of ISO SG2, ISDA and the SGC have defined a framework for product identifiers, which allows ISIN codes to be assigned at different levels of granularity. These granularity levels are driven by regulatory and business-use cases.

Ensuring the product identifier framework is sized correctly requires an analysis of all products for all use cases to determine when the number of attributes is sufficiently different to require a separate identifier. Although multiple identifier levels can exist for a certain product, careful consideration should be given to the issuance of identifiers at a specific level based on the use cases they address, due to the high costs of issuing and maintaining identifiers.

There also needs to be a balance between the data attributes associated with a specific level and the number of unique identifiers that would result. To be useful, the ratio of the number of trades per product identifier should not be too low. Specifically, the inclusion of volatile or dynamic data such as maturity and price exponentially increases the number of identifiers that need to be generated for a particular product. Data analysis of US public data for fixed-floating interest rate swaps over a three-month period shows an average ratio of 1.5 trades per ISIN if maturity and fixed price information is included as part of the identifier. In contrast, an identifier that only reflects static information such as floating-rate index and notional currency would result in an average of 376 trades per ISIN (see Annex II).

In addition to the framework and the level of granularity associated with each use case, the attributes and allowable values associated with a particular product and use case need to be defined. Financial products Markup Language (FpML) is an excellent source for the attributes and allowable values. Moreover, FpML is a good proxy to determine if a product is sufficiently standardized to assign a product identifier. FpML currently provides product representation for all derivatives asset classes. Further work on FpML and the linkage with ISO 20022 should facilitate FpML as the source for the identifier data.

## 2. Open Governance

A transparent governance structure that supports innovation and the development of new products and identifiers is also important. As new products are developed or existing products become standardized, the process by which new identifiers are issued must adapt, and the governance must facilitate these changes in a timely and transparent fashion.

ISDA strongly believes the governance structure should be developed in a partnership between private and public sectors, and will benefit from continued private and public involvement. The legal entity identifier (LEI) governance structure is a good model for an appropriate governance framework.

ISO has assigned ANNA as the registration authority for the ISIN standard in a separate agreement, which is not part of the ISIN standard itself. As such, the governance requirements are primarily focused on how ANNA will administer the assignment of ISINs on an ongoing basis. The market infrastructure managed by ANNA should operate on a clearly defined cost-recovery basis. Service levels to meet the regulatory and business needs must be defined and monitored in service level agreements. The right incentives also need to be put in place to ensure a timely implementation of new products, and it is critical that the right expertise is involved when allocation rules for new products are defined.

### 3. Open Source Data and Competitive Market Infrastructure

The product identifier and reference data should be open source, and the infrastructure should meet market needs while allowing for competition and innovation to occur. Market participants must be assured that any identifier system can be quickly searched and referenced, and is able to produce identifiers in order to comply with regulatory obligations across all jurisdictions.

A key consideration is that both the identifier in the form of an ISIN and all the underlying metadata<sup>3</sup> associated with that specific ISIN need to be freely<sup>4</sup> available to all market participants.

While the issuance of ISINs for derivatives will ultimately be administered under the ANNA umbrella, the process to select the infrastructure provider(s) should be open (with future ANNA membership a potential condition but not a prerequisite) to allow for selection of the best candidate.

Speed of creation and access to product identifiers – in some use cases, in near real time – will be crucial in the pre-trade environment and in some reporting-related uses. In addition, the infrastructure needs to be able to handle very large volumes of product identifiers. At the same time, flexibility is required to provide ISIN codes for new products or for additional levels of granularity to meet future market demands.

Along with sufficient transparency on operational requirements and cost-recovery principles, it is important that the adopted infrastructure and cost model do not create any barriers to entry for derivatives markets.

Special attention will need to be given to the identification of underlying instruments for the variety of derivatives products in scope. While the requirement for open data is key, the underliers are sometimes subject to licensing requirements that might challenge the open-data requirement.

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<sup>3</sup> Metadata includes all variables comprising an ISIN, but does not include the definition of such variables or any supplemental documentation

<sup>4</sup> For the avoidance of doubt, the underlying metadata may be used without restrictions as a component of the ISIN. However, fees may be charged to create the ISIN or for supplemental documentation providing the definition of a particular data element of the ISIN

#### 4. Business Usage and Post-trade Adaptability of Product Identifiers

Beyond the regulatory requirements for ISIN codes as product identifiers, other use cases have been proposed where product identifiers can prove valuable in streamlining the processing of derivatives.

While regulatory requirements are the key driver for the development of the ISIN as the product identifier for derivatives, the business use cases need to be considered and taken into account during the development of the framework. A product identifier that can be used in multiple ways provides a variety of benefits to both regulators and the industry.

A full integration of product identifiers in the trade lifecycle will require more effort, and carries a high cost. The cost of changing, updating and simplifying processing flows is likely to be multiple times higher, and will come in addition to the not-trivial cost of building the infrastructure needed to provide ISINs in the first place (this cost will be affected by the number of ISINs required, which in turn is driven by the granularity requirements).

The benefits of appropriately designed identifiers should more than justify the costs. However, the high cost of implementing product identifiers leaves little room for multiple competing identifiers or using different identifiers for different purposes.

## ANNEX I

### ISIN concerns identified by ISDA/SGC

#### Mandatory ISINs for MIFID II/MIFIR and Working with ANNA/ISO

The final draft of the MIFID II/MIFIR RTS mandates ISINs for instrument identification. Current coverage of ISINs for derivatives, and several practical issues associated with ISIN issuance, might have been underestimated.

The ISDA Symbology initiative has identified several considerations that need to be addressed to overcome these issues, and is engaging ISO/ANNA to evaluate how these can be implemented in time for compliance with MIFIDII/MIFIR.

	Considerations	Next Steps
<b>Hierarchy of symbols</b>	Requirements from MIFID, other regulators and business use cases imply a need to support a hierarchy of product symbols for OTC derivatives	The ISDA Symbology initiative is proposing a three-level hierarchy, tested against CFTC public-price reporting data: MIFID liquidity threshold Regulatory reporting Post-trade economic equivalence
<b>How many symbols?</b>	The number of symbols to be generated should be appropriate to the associated number of transactions, and fit within the identifier format (ie, format should allow sufficient number of identifiers)	
<b>On-the-fly creation</b>	MIFID requirements imply the creation of identifiers as part of a real-time workflow	Develop workflow use cases with ISO/ANNA, and evaluate against existing solutions
<b>No re-use of symbols</b>	The reuse of symbols must not occur because of long maturities of some derivatives and lengthy record-keeping obligations	Evaluate with ISO/ANNA how this can be incorporated into the standard
<b>Open standard</b>	Are there any restrictions that might inhibit widespread distribution, access or usage of the symbols and associated metadata?	Assess with ISO/ANNA any impediments and evaluate appropriate approach
<b>Flexibility for innovation</b>	It is critical that the standard and its implementation be sufficiently flexible to allow timely extension to future derivative products	
<b>Timing</b>	Current MIFID II/MIFIR timelines	Evaluate with ISO/ANNA what is achievable within the current framework and infrastructure. For what is not achievable, evaluate the potential solutions that might exist outside of that framework
<b>Solution selection</b>	A successful implementation within the required MIFID timelines may require evaluating best-of-breed solutions across the global landscape	

## ANNEX II

### What Does the Data Tell Us?

Trade data analysis carried out for fixed/floating interest rate swaps, foreign exchange options and interest rate swaptions, based on US publicly reported data, shows a dramatic increase in the number of ISINs that would need to be created if certain volatile or dynamic data attributes are included. This is in clear contrast to the static attributes, for which the values are not expected to vary greatly over a long period of time. Price information and dates are examples of volatile attributes; currencies and day count conventions are examples of static attributes.

Table 1 shows the impact for fixed/floating interest rate swaps during a three-month period. For the 168,450 trades over that period of time, 448 ISINs would need to be created if only the static data fields were considered as part of the identifier. Including fixed rate/price and maturity date brings the number to 112,608 ISINs, or an average of 1.5 trades per ISIN.

Interest rates fixed v float swap			
	Static attributes included in ISIN	Attribute values examples observed	
Static attributes of product	taxonomy	InterestRate:IRSwap:FixedFloat	
	underlying_asset_1	e.g. EUR-EURIBOR-Reuters	
	reset_frequency	e.g. 6M	
	notional_currency_1	e.g. EUR	
	payment_frequency	e.g. 6M	
	underlying_asset_2	e.g. fixed	
	reset_frequency_2	e.g. N/A	
	payment_frequency_2	e.g. 6M	
	day_count_convention	e.g. 30/360	
	bespoke_swap	e.g. Y	

  

	Attributes included in ISIN	Number of ISINs required	Average trades per ISIN ratio
	static attributes of the fixed float swap included	448	376.00
Add dynamic attributes	Adding only fixed rate/price of the swap to static attributes	58,505	2.88
	Adding only fixed end (maturity) date to static attributes	29,871	5.64
	Adding fixed rate/price and end (maturity date) to static attributes	112,608	1.50
Total number of trades in sample: 168,450			

*Note: the publicly reported data is block-level data and does not take into account any allocations for which there is no publicly available information. At the allocation level, the number of trades per ISIN would be higher.*