



## **Derivatives Service Bureau**

### **UAT Product Definitions**

July 2017

# Preface

## Change History

Date	Change	Version	Author	Revision Details
31/03/2017	Creation	0.1	Tony Birrell	Initial Version
21/04/2017	Update	0.2	Natalia Kozlovich	Added normalization rules for FX
12/06/2017	Change	0.3	Tony Birrell	Reference Rate for Commodities added to enumeration table, dates amended
23/06/2017	Change	0.4	Tony Birrell	Enumerations table updated

## 1 Introduction

- This document and the accompanying annexes are designed to act as a manual for users to interpret and utilize the provisional Product Definitions in the Derivatives Service Bureau (DSB) User Acceptance Testing (UAT) environment
- This document provides the user with a description of the provisional Product Definition content, product sequencing, attribute enumerations and validation, where applicable
- The accompanying asset class annexes will provide all the provisional Product Definitions within an asset class and the specific attributes that comprise each definition
- The appendix specifies the normalization approach the DSB is employing within the ISIN engine
- Any feedback or queries in relation to provisional Product Definition design or UAT functionality should be directed to [secretariat@ANNA-DSB.com](mailto:secretariat@ANNA-DSB.com)

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## 2 Organization of this report

The document is organized as follows:

- Section 3 outlines the product classification
- Section 4 outlines the structure and attributes contained within the provisional Product Definitions
- Section 5 outlines the enumerations and validations, where applicable, of each of the attributes contained within the provisional Product Definitions

## 3 Product Classification




The DSB has sequenced the work by asset class. This aligns with the Product Definition review efforts of the DSB Product Committee (PC) and will allow a more orderly and robust implementation for UAT testing. Accordingly, the order will be:

1. Rates
2. Credit
3. FX
4. Equities
5. Commodities

## 4 Provisional Product Definitions

A Product Definition is a unique representation of the population of attributes applicable to a specific OTC Derivative product within an asset class.

Each Product Definition has been grouped into three distinct sections:

- Product Definition Selection: Set of fields to identify the product specific schema. This schema defines the full set of attributes for that product 
- Product Definition Input Attributes: User input fields 
- Product Definition Derived Attributes: Attributes that will be inferred by the combination of Product Definition Selection & Product Definition Input Attributes and will be returned to the user as part of the full ISIN record 

The combination of the above 3 sections comprise the record of the ISIN that will be returned to the requester.

### 4.1 Product Definition Selection

The Product Definition Selection fields will identify the product specific schema. This schema defines the full set of attributes for that product.

Product Definition selection interface is comprised of the below fields:

- Asset Class: ISO 10962 CFI Letter #2
- Instrument Type: ISO 10962 CFI #1
- Product: Unique human readable label that defines the product (this is based on the ISDA 2.0 Taxonomy combination of Sub product and Transaction Type, where applicable)

- Level: Label assigned to the ISIN to describe its level in the hierarchy – the day 1 level will satisfy the technical requirements articulated by MiFID II / MiFIR RTS 23 Annex 1 while bearing in mind the requirements for future implementation of CPMI-IOSCO's UPI

## 4.2 Product Definition Input Attributes

Product Definition Input Attributes are the population of attributes that require user input when requesting an ISIN.

Attributes can be populated by either selecting a value from an enumerated list e.g FpML Floating Rate Index List or entering text in a specific format e.g. Expiry date YYYYMMDD. The full list of attributes and their enumerations can be found in section 5 below.

## 4.3 Product Definition Derived Attributes

Product Definition Derived Attributes are those which are inferred by the combination of Product Definition Selection & Product Definition Input Attributes. These will be auto populated by the DSB ISIN engine and returned to the user as part of the ISIN record.

## 4.4 Asset Class Product Definition Annexes

A Product Definition annex will be made available for each asset class containing the population of products implemented into UAT. These will be made available to users per the schedule below:

Order	Asset Class Annex	Date of Annex publication
1	Rates	12-06-2017
2	Credit	12-06-2017
3	FX	12-06-2017
4	Equity	12-06-2017
5	Commodities	12-06-2017

## 4.5 UAT Implementation

The new product definitions for all asset classes will be implemented into UAT environment on 10<sup>th</sup> July 2017.

## 5 Attribute Enumerations

Alongside each attribute in the table below, the Source has been assigned which specifies the exact reference (where applicable) of that attribute within the respective taxonomy<sup>1</sup>.

These attributes will be presented in UAT as enumerated lists where applicable.

It should be noted that the JSON messaging schema the DSB is employing will contain all attributes listed below and their associated enumerations.

Full Name	Source
Additional sub product	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FProduct%2FAgricultural%2FGrainOilSeed%2FAdditionalSubProduct">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FProduct%2FAgricultural%2FGrainOilSeed%2FAdditionalSubProduct</a>
Asset Class	CFI Code (ISO 10962: 2015) Character #2
Base product	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FProduct%2FAgricultural%2FGrainOilSeed%2FBaseProduct">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FProduct%2FAgricultural%2FGrainOilSeed%2FBaseProduct</a>
Classification Type	CFI Code (ISO 10962: 2015) Full Code
Commodity Derivative Indicator	Boolean
Debt Seniority	<a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.63">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.63</a>
Delivery type	CFI Code (ISO 10962: 2015) Character #6
Expiry Date	Date YYYY-MM-DD (Expiry Date of the financial instrument) Syntactic validation: <ul style="list-style-type: none"> <li>- Date format as above</li> <li>- Between 1970 &amp; 2500</li> </ul>
Final price type	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FFinalPriceType">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FFinalPriceType</a>
Full Name	Full name of the instrument defined by DSB
FX Type	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FForeignExchange%2FFXType">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FForeignExchange%2FFXType</a>
Identification (ISIN)	ISO 6166: 2013
Instrument Type	CFI Code (ISO 10962: 2015) Character #1
ISIN Status	New, Deleted
ISO Reference Rate	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2F">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2F</a>

<sup>1</sup> To access the relevant reference links below to the ISO20022 messages within swift/mystandards, users are required to create a free account by following the link below and clicking 'Login to MyStandards' in the top right of the homepage: <https://mystandards.swift.com/>  
Once an account has been created and login is successful, the links below will direct users to the correct reference.

	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FReferenceRate">erivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FReferenceRate</a>
ISO Other Leg Reference Rate	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FReferenceRate">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FReferenceRate</a>
ISO Underlying Instrument Index	<a href="https://www2.swift.com/mystandards/#/mp/mx/LHnxgEdKEeam3NbiLvWnrw/ju17AYy7Eea01uQ-eS5IPQ#content%2FReferenceData%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FReferenceRate">https://www2.swift.com/mystandards/#/mp/mx/LHnxgEdKEeam3NbiLvWnrw/ju17AYy7Eea01uQ-eS5IPQ#content%2FReferenceData%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FReferenceRate</a>
Issuer or operator of the trading venue identifier	“NA”
Level	“InstRefDataReporting” (Label assigned to the ISIN to describe its level in the ISIN hierarchy)
Notional Currency	ISO 4217: 2015
Notional Schedule	CFI Code (ISO 10962: 2015) Character #4 (Swaps: Rates only)
Option exercise style	CFI Code (ISO 10962: 2015) Character #4 (Options – first part)
Option type	CFI Code (ISO 10962: 2015) Character #4 (Options – second part)
Other Leg Reference Rate	<b>Rates:</b> <a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.91">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.91</a> <b>Rates CPI:</b> <a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.100">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.100</a> <b>Credit:</b> Industry specified, annex will be published <b>Equities:</b> Industry specified, annex will be published <b>Commodities:</b> Industry specified, annex will be published
Other Leg Reference Rate Term Unit	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FTerm%2FUnit">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FTerm%2FUnit</a>
Other Leg Reference Rate Term Value	Integer – Positive or negative but not 0
Other Notional Currency	ISO 4217: 2015
Parent	ISO 6166: 2013 (where relevant, <null> otherwise)
Price Multiplier	Double (0 or positive)
Product	Unique human readable instrument label, created by the DSB PC and based on ISDA 2.0 taxonomy
Reference Rate	<b>Rates:</b> <a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.91">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.91</a> <b>Rates CPI:</b> <a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.100">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.100</a> <b>Credit:</b> Industry specified, annex will be published <b>Equities:</b> Industry specified, annex will be published <b>Commodities:</b> Industry specified, annex will be published
Reference Rate Term Unit	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FTerm%2FUnit">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FTerm%2FUnit</a>
Reference Rate Term Value	Integer – Positive or negative but not 0



Return or payout Trigger	CFI Code (ISO 10962: 2015) Character #4 (Swaps); Character #5 (Forwards)
Short Name	ISO 18774: 2015
Settlement Currency	ISO 4217: 2015
Single or Multi currency	CFI Code (ISO 10962: 2015) Character #5 (Rates only)
Sub product	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FProduct%2FAgricultural%2FGrainOilSeed%2FSubProduct">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FProduct%2FAgricultural%2FGrainOilSeed%2FSubProduct</a>
Transaction type	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FTransactionType">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FAssetClassSpecificAttributes%2FCommodity%2FTransactionType</a>
Underlying Asset Type	CFI Code (ISO 10962: 2015) Character #3
Underlying credit index series (RTS2 Annex IV Field 35)	Positive Integer – 1 to 999
Underlying credit index version (RTS2 Annex IV Field 36)	Positive Integer – 1 to 999
Underlying Instrument Index	<b>Rates:</b> <a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.91">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.91</a> <b>Rates CPI:</b> <a href="http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.100">http://www.fpml.org/spec/coding-scheme/fpml-schemes.html#s5.100</a> <b>Credit:</b> Industry specified, annex will be published <b>Equities:</b> Industry specified, annex will be published <b>Commodities:</b> Industry specified, annex will be published
Underlying Instrument Index Term Unit	<a href="https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FTerm%2FUnit">https://www2.swift.com/mystandards/#/mx/DRAFT6auth.036.001.01#content%2FFinancialInstrument%2FNewRecord%2FDerivativeInstrumentAttributes%2FUnderlyingInstrument%2FSingle%2FIndex%2FName%2FTerm%2FUnit</a>
Underlying Instrument Index Term Value	Integer – Positive or negative but not 0
Underlying instrument ISIN	ISO 6166: 2013 Syntactic validation: <ul style="list-style-type: none"> <li>- 1st 2 characters = e.g. “EZ”</li> <li>- Next 9 are characters alphanumeric (caps)</li> <li>- Check Sum</li> </ul>
Underlying instrument LEI	ISO 17442: 2012 Syntactic validation: <ul style="list-style-type: none"> <li>- Alphanumeric</li> <li>- Check sum</li> </ul>
Underlying Issuer Type	CFI Code (ISO 10962: 2015) Character #5 (Swaps: Credit)
Product	Unique human readable instrument label, created by the DSB PC and based on ISDA 2.0 taxonomy
Valuation Method or Trigger	ISO 10962: 2015. Character #5 (options)
Version	Positive Integer – 1 to 999

## 6 Appendix 1

### 6.1 Common Normalization

This normalization is applicable all instruments.

For both legs:

1. If Reference Rate Term Unit = "DAYS" and Reference Rate Term Value is divisible by 7, record it in weeks:

Reference Rate Term Value	7	→	1
Reference Rate Term Unit	DAYS		WEEK

2. If Reference Rate Term Unit = "MNTH" and Reference Rate Term Value is divisible by 12, record it in years:

Reference Rate Term Value	12	→	1
Reference Rate Term Unit	MNTH		YEAR

### 6.2 Basis Swap/Cross Currency Swap normalization

The purpose of this appendix is to specify normalization for Basis Swap, Cross Currency Basis Swap and Cross Currency Fixed Fixed Swap products.

#### 6.2.1 Basis Swap

For a Basis Swap the user provides the following input:

Attribute	Sample Value
Notional Currency	USD
Expiry date	20211231
Reference Rate	USD-LIBOR-BBA
Reference Rate Term Value	3
Reference Rate Term Unit	MNTH
Other Leg Reference Rate	USD-SIFMA Municipal Swap Index
Other Leg Reference Rate Term Value	9
Other Leg Reference Rate Term Unit	MNTH
Notional Schedule	C - Constant

Regardless of the order in which the reference legs are supplied, the DSB assumes the same ISIN would be allocated to the instrument, i.e. the instrument in the example above is the same as if it were entered as follows:

Attribute	Sample Value
Notional Currency	USD
Expiry date	20211231
Reference Rate	USD-SIFMA Municipal Swap Index

Reference Rate Term Value	9
Reference Rate Term Unit	MNTH
Other Leg Reference Rate	USD-LIBOR-BBA
Other Leg Reference Rate Term Value	3
Other Leg Reference Rate Term Unit	MNTH
Notional Schedule	C - Constant

The DSB will normalize data submitted by the user to ensure that the same ISIN is returned for a given set of attributes.

Normalization rules:

1. Order alphabetically "Reference Rate" and "Other Leg Reference Rate"
2. If "Reference Rate" is first alphabetically, record it as "Reference Rate"
3. If "Reference Rate" is not first alphabetically, then record the following fields as:

Other Leg Reference Rate	→	Reference Rate
Other Leg Reference Rate Term Value		Reference Rate Term Value
Other Leg Reference Rate Term Unit		Reference Rate Term Unit

And record the following fields as:

Reference Rate	→	Other Leg Reference Rate
Reference Rate Term Value		Other Leg Reference Rate Term Value
Reference Rate Term Unit		Other Leg Reference Rate Term Unit

## 6.2.2 Cross Currency Basis Swap

For a Cross Currency Basis Swap the user is required to provide the following input:

Attribute	Sample Value
Notional Currency	GBP
Expiry date	20180211
Reference Rate	GBP-LIBOR-BBA
Reference Rate Term Value	3
Reference Rate Term Unit	MNTH
Other Notional Currency	USD
Other Leg Reference Rate	USD-LIBOR-BBA
Other Leg Reference Rate Term Value	3
Other Leg Reference Rate Term Unit	MNTH
Notional Schedule	C - Constant

The Notional Currency is always associated with the Reference Rate and Other Currency with the Other Reference Rate.

Regardless of the order in which the notional currencies are supplied, the DSB assumes the same ISIN would be allocated to the instrument, i.e. the instrument in the example above is the same as if it was entered as follows:

Attribute	Sample Value
Notional Currency	USD
Expiry date	20180211
Reference Rate	USD-LIBOR-BBA
Reference Rate Term Value	3
Reference Rate Term Unit	MNTH
Other Notional Currency	GBP
Other Leg Reference Rate	GBP-LIBOR-BBA
Other Leg Reference Rate Term Value	3
Other Leg Reference Rate Term Unit	MNTH
Notional Schedule	C - Constant

The DSB will normalize data submitted by the user to ensure that the same ISIN is returned for a given set of attributes.

Normalization rules:

1. Order alphabetically "Notional Currency" and "Other Notional Currency".
2. If "Notional Currency" is first alphabetically, record it as "Notional Currency".
3. If "Notional Currency" is not first alphabetically, then record the following fields as:

Other Notional Currency	→	Notional Currency
Other Leg Reference Rate		Reference Rate
Other Leg Reference Rate Term Value		Reference Rate Term Value
Other Leg Reference Rate Term Unit		Reference Rate Term Unit

And record the following fields as:

Notional Currency	→	Other Notional Currency
Reference Rate		Other Leg Reference Rate
Reference Rate Term Value		Other Leg Reference Rate Term Value
Reference Rate Term Unit		Other Leg Reference Rate Term Unit

### 6.2.3 Cross Currency Fixed Fixed Swap

For a Cross Currency Fixed Fixed Swap the user is required to provide the following input:

Attribute	Sample Value
Notional Currency	EUR
Expiry date	20211231
Other Notional Currency	USD
Notional Schedule	C - Constant

Regardless of the order in which the notional currencies are supplied, the DSB assumes the same ISIN would be allocated to the instrument, i.e. the instrument in the example above is the same as if it were entered as follows:

Attribute	Sample Value
Notional Currency	USD
Expiry date	20211231
Other Notional Currency	EUR
Notional Schedule	C - Constant

The DSB will normalize data submitted by the user to ensure that the same ISIN is returned for a given set of attributes.

Normalization rules:

1. Order alphabetically "Notional Currency" and "Other Notional Currency".
2. If "Notional Currency" is first alphabetically, record it as "Notional Currency"
3. If "Notional Currency" is not first alphabetically, record the following fields as:

Other Notional Currency	->	Notional Currency
Notional Currency		Other Notional Currency

### 6.3 FX normalization

The purpose of this appendix is to specify normalization for FX Forward products, including:

- Contract for Difference
- Forward
- NDF
- Rolling Spot
- Spreadbet
- Vol Var

Regardless of the order in which the reference legs are supplied, the DSB assumes the same ISIN would be allocated to the instrument, i.e. the following user entries will be considered the same instrument:

Asset Class	Foreign_Exchange	Foreign_Exchange
Instrument Type	Forward	Forward
Product	Contract_for_Difference	Contract_for_Difference
Notional Currency	GBP	USD
Other Notional Currency	USD	GBP
Expiry Date	20170421	20170421

The DSB will normalize data submitted by the user to ensure that the same ISIN is returned for a given set of attributes.

Normalization rules:

1. Order alphabetically “Notional Currency” and “Other Notional Currency”
2. If “Notional Currency” is first alphabetically, record the currencies as they are entered
3. If “Other Notional Currency” is first alphabetically, then swap the currencies:

Other Notional Currency	->	Notional Currency
Notional Currency		Other Notional Currency