



**Derivatives Service Bureau**

# Foreign Exchange : Swap : FX\_Swap

## UPI Product Definition

Version 4

Date	Status	Version	Revision Details
8 Aug 2022	Draft	1	Initial Version
16 Oct 2022	Draft	2	Update Comment in the OTC ISIN-UPI Mapping
23 Jan 2023	Draft	3	<ul style="list-style-type: none"><li>Update example values in the Request and Record templates layout</li><li>Insert Underlier Name attribute and Derivation rules</li></ul>
06 Sep 2023	Draft	4	<ul style="list-style-type: none"><li>Update Associated Documentation to include Best Practice Guidelines and FAQs.</li><li>Update Best Practice Guidelines to include the link to Best Practice Guidelines and FAQs.</li></ul>

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# 1 INTRODUCTION

This document is designed to act as a manual for users to interpret the Product Definitions in the DSB UPI Service.

This document provides the user with the detailed description of the UPI Product Definition content such as attribute enumerations, validation, normalization, and derivation where applicable.

## 1.1 Associated Documentation

Each UPI Product Definition template links to reference documents where values will be maintained for the sake of consistency and ease of access e.g., Enumerations, Data Dictionary, Validation and Normalizations, etc.

These documents are made available for references as follows:

- UPI Enumerations Document can be found in the Enumerations section on the [DSB website](#).
- UPI Product Definition Data Dictionary can be found in the Other Documents section on the [DSB website](#).
- UPI Product Definition Validations and Normalizations Document can be found in the Other Documents section on the [DSB website](#).
- UPI Underlier Input Method can be found in the Other Documents section on the [DSB website](#).
- Best Practice Guidelines and FAQs can be found in the Other Documents section on the [DSB website](#).
- Links to the relevant JSON templates can be found in the GitHub Environment Section on the [DSB website](#).

## 2 PRODUCT TAXONOMY

### 2.1 CFI Taxonomy

Source: [ISO 10962](#) (CFI Code) – Third edition 2015-07-15

Attr #	Title	Values	Name	Description
	<b>Instrument (Category)</b>	<b>S</b>	Swap	
	<b>Asset Class (Group)</b>	<b>F</b>	Foreign Exchange	
<b>Attr #1</b>	<b>Underlying Assets</b>	<b>C</b>	Forward-Forward swap	A transaction that involves both an exchange of two currencies on a specified future date at a fixed rate that is agreed upon at the inception of the contract covering the exchange; and a reverse exchange of the same two currencies at a further future date, at a fixed rate that is agreed upon at the inception of the contract covering the exchange, e.g., a swap between the 3-month forward and 6 month forward dates
<b>Attr #2</b>	<b>Not applicable / undefined</b>	<b>X</b>	Not applicable / undefined	
<b>Attr #3</b>	<b>Not applicable / undefined</b>	<b>X</b>	Not applicable / undefined	
<b>Attr #4</b>	<b>Delivery Type</b>	<b>P</b>	Physical	Delivery of traded currencies on settlement date
		<b>N</b>	Non-deliverable	On settlement date of the trade, if the settlement amount is positive, then the currency buyer will pay that amount in the settlement currency to the currency seller; if that amount is negative, the seller will make that payment to the buyer

### 2.2 ISDA Taxonomy

The table below is based on the products identified as part of the [ISDA 2.0 taxonomy](#).

Asset Class	Base Product	Sub-Product	DSB Product Definition Name
Foreign Exchange	Swap		FX_Swap

### 3 REQUEST TEMPLATE

This section describes the input message received by UPI service.

Template name	Template details	Release
Request.Foreign_Exchange.Swap.FX_Swap.UPI.json	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Validation / Derivation
<b>Header Section</b>	Asset Class	Set	M	Foreign_Exchange	
	Instrument Type	Set	M	Swap	
	Product	Set	M	FX_Swap	
	Level	Set	M	UPI	
<b>Attribute Section</b>	Underlier ID	Enum	M	EUR	Enumerated List
	Underlier ID Source	String	M	CCY	[CCY]
	Other Underlier ID	Enum	M	USD	Enumerated List
	Other Underlier ID Source	String	M	CCY	[CCY]
	Delivery Type	Enum	M	PHYS	[PHYS; OPTL]

#### 3.1 Underlier Input Method

For products that has a Single Underlier, users have an option to select a Primary or Alternate Underlier, if available.

Title	Description
<b>Select Underlier ID Source</b>	User is able to select a single required Underlier Source <ul style="list-style-type: none"> <li>Currency Pair [CCY]</li> </ul>
<b>Input Underlier ID</b>	CCY   This is validated against ISO Currency Code List.

#### 3.2 Validation Rules

For non-specific product validation rules, please refer to UPI Product Definition Validations and Normalizations Document can be found in the Other Documents section on the [DSB website](#).

## 4 RECORD TEMPLATE

This section describes the record returned by the UPI service.

Version	Template name	Template details	Release
V.1	Foreign_Exchange.Swap.FX_Swap.UPI.V1.json	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Derivation
<b>Header Section</b>	Asset Class	Set	M	Foreign_Exchange	
	Instrument Type	Set	M	Swap	
	Product	Set	M	FX_Swap	
	Level	Set	M	UPI	
	Template Version	Integer	D	1	
<b>Attribute Section</b>	Notional Currency	Enum	M	EUR	Enumerated List
	Other Notional Currency	Enum	M	USD	Enumerated List
	Delivery Type	Enum	M	PHYS	[PHYS; OPTL]
<b>Identifier Section</b>	UPI	String	D	QZGK72481GT4	
	Status	String	D	New	[New; Updated; Deleted; Deprecated]
	Status Reason	String	D	<null>	
	Last Update Date Time	DtTm	D	2020-11-30T00:00:13	YYYY-MM-DDThh:mm:ss
<b>Derived Section</b>	Classification Type	String	D	SFCXXP	See Derivation Rules
	Short Name	String	D	NA/Swaps EUR USD	See Derivation Rules
	Underlier Name	String	D	EUR USD	See Derivation Rules
	Underlying Asset Type	String	D	Forward-Forward Swap	Fixed Value
	CFI Delivery Type	String	D	[Physical; Non-Deliverable]	See Derivation Rules

## 4.1 Normalization Rules

For non-specific product normalization rules, please refer to UPI Product Definition Validations and Normalizations Document can be found in the Other Documents section on the [DSB website](#).

## 4.2 Derivation Rules

This section describes the derivations of product attributes highlighted in the Record Template.

### 4.2.1 Classification Type

Attribute	Classification Type		
<b>Structure</b>	Instrument Type + Asset Class + Underlying Asset Type + NA + NA + Delivery Type		
<b>Example</b>	SFCXXP		
<b>Source</b>	<a href="#">ISO 10962</a> (CFI) – Third edition 2015-07-15		
Source Attribute	Source Value	Derivation Method	Result
<b>Instrument Type</b>	Swap	Fixed Mapping	S
<b>Asset Class</b>	Foreign Exchange	Fixed Mapping	F
<b>Underlying Asset Type</b>	Forward-Forward swap	Fixed Mapping	C
<b>Not Applicable / Undefined</b>	Not applicable / undefined	Fixed Mapping	X
<b>Not Applicable / Undefined</b>	Not applicable / undefined	Fixed Mapping	X
<b>Delivery Type</b>	Physical	Mapped to =>	P
	Non-deliverable	Mapped to =>	N

### 4.2.2 Short Name

Attribute	Short Name		
<b>Structure</b>	"NA" + "/" + Instrument Type + Notional Currency + Other Notional Currency		
<b>Example</b>	NA/Swaps EUR USD		
<b>Source</b>	<a href="#">ISO 18774</a> (Financial Instrument Short Name) - First edition 2015-11		
Source Attribute	Source Value	Derivation Method	Result
<b>Issuer Name</b>	None	Fixed Value	NA/
<b>Instrument Type</b>	Swap	Fixed Abbreviation	Swaps
<b>Notional Currency</b>	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
<b>Other Notional Currency</b>	Other Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP

## 4.2.3 Underlier Name

Attribute		Underlier Name	
Underlying Asset	Underlier Name Source	Underlier Name Source Attribute	Underlier Name
Currency Pair	UPI record	Notional Currency / Other Notional Currency	EUR USD

## 4.2.4 CFI Delivery Type

Attribute		CFI Delivery Type	
Source Attribute	Source Value	Derivation Method	Result
Delivery Type	PHYS	Mapped to =>	Physical
	OPTL	Mapped to =>	Non-Deliverable



## 5 SUPPLEMENTARY INFORMATION

### 5.1 Best Practice Guidelines

Please refer to Best Practice Guidelines and FAQs that can be found in the Other Documents section on the [DSB website](#).

### 5.2 Additional Comments

- Existing OTC ISIN product definition methodology of the Short Name abbreviation (Issuer of TV + "/" + Instrument Type) for Equity and Foreign\_Exchange Asset Class has "NA/Swaps" whereas Rates has "NA/Swap".
- The Settlement Currency for the UPI will follow the behaviour / definition of the equivalent OTC ISIN templates – including the attribute where the OTC ISIN has one and excluding it where OTC ISIN excludes it.

## 6 APPENDIX 1 – ISO 4914 EQUIVALENCE

This section describes the attributes as per the ISO 4914 Unique Product Identifier (UPI).

ISO 4914 Reference Data Elements		Request Attribute	Record Attribute
<b>Asset Class</b>	M	Asset Class	Asset Class
<b>Instrument Type</b>	M	Instrument Type	Instrument Type
<b>Delivery Type</b>	M	Delivery Type	Delivery Type
			CFI Delivery Type
<b>Settlement Currency*</b>	C	Not Required	
<b>Underlier ID</b>	C	Underlier ID	Notional Currency
	C	Other Underlier ID	Other Notional Currency
<b>Underlier ID source</b>	C	Underlier ID Source	Not Required
	C	Other Underlier ID Source	Not Required
<b>Underlier Type</b>	M	Not Required	Underlying Asset Type

\*Settlement Currency does not apply for this product, refer on Additional Comments above.

## 7 APPENDIX 2 - OTC ISIN-UPI MAPPING

This section describes the mapping between the ISIN and UPI input attributes.

ISIN Input Attributes	Mapping Logic	UPI Input Attributes	Sample UPI Values	Comments
Asset Class	Direct Map	Asset Class	Foreign_Exchange	
Instrument Type	Direct Map	Instrument Type	Swap	
Use Case	Direct Map	Product	FX_Swap	
Level	Set to "UPI"	Level	UPI	
Instrument ISIN Near Leg	Derived from ISIN	Underlier ID	EUR	Underlier ID is derived from the underlying FX Swap Near Leg (OTC ISIN Record).
	Set to "CCY"	Underlier ID Source	CCY	
Instrument ISIN Far Leg	Derived from ISIN	Other Underlier ID	USD	Other Underlier ID is derived from the underlying FX Swap Far Leg (OTC ISIN Record).
	Set to "CCY"	Other Underlier ID Source	CCY	
Delivery Type	Direct Map	Delivery Type	PHYS	
Price Multiplier	No Mapping			