

## DERIVATIVES SERVICE BUREAU (DSB) LTD

Rates : Swap : Cross\_Currency\_Zero\_Coupon

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
12 Aug 2022	Draft	1	Initial Version
19 Jan 2023	Draft	2	<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>
31 Aug 2023	Draft	3	<ul style="list-style-type: none"> <li>• Remove “Classified as Confidential” in the Footer section.</li> <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>

## Contents

1	Introduction .....	3
1.1	Associated Documentation .....	3
2	Product Taxonomy.....	4
2.1	CFI Taxonomy.....	4
2.2	ISDA Taxonomy.....	4
3	Request Template.....	5
3.1	Underlier Input Method.....	5
3.2	Validation Rules.....	5
4	Record Template.....	6
4.1	Normalization Rules.....	6
4.2	Derivation Rules.....	6
4.2.1	Classification Type.....	6
4.2.2	Short Name.....	7
4.2.3	Underlier Name .....	8
4.2.4	CFI Delivery Type.....	8
5	Supplementary Information .....	9
5.1	Best Practice Guidelines.....	9
5.2	Additional Comments.....	9
6	Appendix 1 – ISO 4914 Equivalence .....	10
7	Appendix 2 - OTC ISIN-UPI Mapping .....	11

## I. 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.

### I.1 Associated Documentation

The reference documents below contain values and information maintained by the DSB for consistency and ease of access.

These documents are made available on the ANNA DSB website (Product Definitions page):

Title	Description	Location
<b>Enumerations Document</b>	Lists all fixed values used for a product	Enumerations section
<b>Product Definition Data Dictionary</b>	Defines attributes in the Request and Record templates; and from which they are referenced on	Other Documents section
<b>Product Definition Validations and Normalizations Document</b>	Specifies details on validation and normalization rules	
<b>UPI Underlier Input Method</b>	Defines the structure for the input of the underlier following the rules that allow users to identify the Asset Class, Underlying Structure, Underlying Type, and Underlying ID Source.	
<b>Best Practice Guidelines and FAQs</b>	Lists answers to queries raised by users and provides guidance on the use of the templates	
<b>GitHub Environment Section</b>	ANNA DSB Github Environment where the JSON templates for each product is found	

## 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>R</b>	Rates	
<b>Attr #1</b>	<b>Underlying Assets</b>	<b>Z</b>	Zero Coupon	An interest rate swap in which the fixed rate cash flows are compounded and paid once on the expiration date, rather than periodically; the payments on the other side (which can be based on a floating rate or a fixed rate) follow typical swap payment schedules
<b>Attr #2</b>	<b>Notional Schedule</b>	<b>C</b>	Constant	The notional amount is constant through the life of the contract
		<b>I</b>	Accreting	The notional amount increases through the life of the contract
		<b>D</b>	Amortizing	The notional amount decreases through the life of the contract
		<b>Y</b>	Custom	Customized notional step schedule
<b>Attr #3</b>	<b>Single or Multi Currency</b>	<b>C</b>	Cross Currency	Cross Currency (multi currency)
<b>Attr #4</b>	<b>Delivery Type</b>	<b>C</b>	Cash	The discharge of an obligation by payment or receipt of a net cash amount instead of payment or delivery by both parties
		<b>P</b>	Physical	The meeting of a settlement obligation under a derivative contract through the receipt or delivery of the actual underlying instrument(s) instead of through cash settlement

### 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	Transaction Type	DSB Product Definition Name
Rates	Cross Currency	Fixed Float	Zero Coupon	Cross_Currency_Zero_Coupon

### 3. Request Template

The Request Template describes the input message received by the UPI service.

Users can find the detailed description of this template in the Rates spreadsheet that contains the layout of all templates. This can be found in the Rates section of the Product Definitions page on the ANNA DSB website.

Change details of the template can be found on the appropriate Github page.

Template name	Template details	Release
Request.Rates.Swap.Cross_Currency_Zero_Coupon.UPI.json	Initial version	Initial

#### 3.1 Underlier Input Method

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

Title	Description	
Select Underlier ID Source	User is able to select a Primary or Alternate Underlier from the available options. <ul style="list-style-type: none"><li>FPML</li></ul>	
Input Underlier ID	FPML	This is validated against Floating Rate Index Enumerated 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

The Record Template describes the record returned by the UPI service.

Users can find the detailed description of this template in the Rates spreadsheet that contains the layout of all templates. This can be found in the Rates section of the Product Definitions page on the ANNA DSB website.

Change details of the template can be found on the appropriate Github page.

Version	Template name	Template details	Release
V.1	Rates.Swap.Cross_Currency_Zero_Coupon.UPI.V1.json	Initial version	Initial

### 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 + Notional Schedule + Single or Multi Currency + Delivery Type		
<b>Example</b>	SRZCCP		
<b>Source</b>	<a href="#">ISO 10962</a> (CFI) – Third edition 2015-07-15		
<b>Source Attribute</b>	<b>Source Value</b>	<b>Derivation Method</b>	<b>Result</b>
<b>Instrument Type</b>	Swap	Fixed Mapping	S
<b>Asset Class</b>	Rates	Fixed Mapping	R
<b>Underlying Asset Type</b>	Zero Coupon	Fixed Mapping	Z
<b>Notional Schedule</b>	Constant	Mapped to =>	C
	Accreting	Mapped to =>	I
	Amortizing	Mapped to =>	D
	Custom	Mapped to =>	Y

<b>Single or Multi Currency</b>	Cross Currency	Fixed Mapping	C
<b>Delivery Type</b>	CASH	Mapped to =>	C
	PHYS	Mapped to =>	P

#### 4.2.2 Short Name

Attribute	Short Name		
<b>Structure</b>	"NA" + "/" + Instrument Type + Underlying Asset Type + Notional Currency + Other Notional Currency		
<b>Example</b>	NA/Swap Zero Cpn 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	Swap
<b>Underlying Asset Type</b>	Zero Coupon	Fixed Abbreviation	Zero Cpn
<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
Reference Rate	UPI record	Reference Rate	EUR-EURIBOR-Reuters

### 4.2.4 CFI Delivery Type

Attribute	CFI Delivery Type		
Source Attribute	Source Value	Derivation Method	Result
Delivery Type	CASH	Mapped to =>	Cash
	PHYS	Mapped to =>	Physical

## 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 Asset Class has "NA/Swaps" whereas Rates has "NA/Swap".

## 6. Appendix I – 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
Asset Class	M	Asset Class	Asset Class
Instrument Type	M	Instrument Type	Instrument Type
Currency associated with an underlying reference rate	M	Notional Currency	Notional Currency
		Other Notional Currency	Other Notional Currency
Delivery Type	M	Delivery Type	Delivery Type
			CFI Delivery Type
Notional Schedule	M	Notional Schedule	Notional Schedule
Single or Multiple Currency	M	Not Required	Single or Multi Currency
Underlier ID	C	Underlier ID	Reference Rate
Underlier ID source	C	Underlier ID Source	Not Required
Underlier Type	M	Not Required	Underlying Asset Type
Underlying rate index tenor period	C	Reference Rate Term Unit	Reference Rate Term Unit
Underlying rate index tenor period multiplier	C	Reference Rate Term Value	Reference Rate Term Value

## 7. Appendix 2 - OTC ISIN-UPI Mapping

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

oneOf	ISIN Input Attributes	Mapping Logic	UPI Input Attributes	Example UPI Values	Comments
	Asset Class	Direct Map	Asset Class	Rates	
	Instrument Type	Direct Map	Instrument Type	Swap	
	Use Case	Direct Map	Product	Cross_Currency_Zero_Coupon	
	Level	Set to "UPI"	Level	UPI	
A	Term of Contract (By Effective Date)				
	Notional Currency	Direct Map	Notional Currency	EUR	
	Expiry Date	No Mapping			
	Effective Date	No Mapping			
	Expiry Date Adjusted	No Mapping			
	Tenor Calculator Method	No Mapping			
	Reference Rate	Map To	Underlier ID	EUR-EURIBOR-Reuters	
		Set to "FPML"	Underlier ID Source	FPML	
	Reference Rate Term Value	Direct Map	Reference Rate Term Value	3	
	Reference Rate Term Unit	Direct Map	Reference Rate Term Unit	MNTH	
	Other Notional Currency	Direct Map	Other Notional Currency	USD	
	Notional Schedule	Direct Map	Notional Schedule	Constant	
B	Term of Contract (By Tenor)				
	Notional Currency	Direct Map	Notional Currency	EUR	
	Expiry Date	No Mapping			
	Term of Contract Value	No Mapping			
	Term of Contract Unit	No Mapping			
	Reference Rate	Map To	Underlier ID	EUR-EURIBOR-Reuters	
		Set to "FPML"	Underlier ID Source	FPML	
	Reference Rate Term Value	Direct Map	Reference Rate Term Value	3	
Reference Rate Term Unit	Direct Map	Reference Rate Term Unit	MNTH		

	Other Notional Currency	Direct Map	Other Notional Currency	USD	
	Notional Schedule	Direct Map	Notional Schedule	Constant	
	Delivery Type	Direct Map	Delivery Type	PHYS	
	Price Multiplier	No Mapping			