



**Derivatives Service Bureau**

# **Rates : Swap : Inflation\_Basis**

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
16 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>

## TABLE OF 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 .....	7
4.2	Derivation Rules .....	7
4.2.1	Classification Type.....	7
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

# 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>R</b>	Rates	
<b>Attr #1</b>	<b>Underlying Assets</b>	<b>G</b>	Inflation Rate Index	An interest rate swap in which one party (the fixed rate payer) makes periodic payments to another party (the floating rate payer) based on a fixed rate of interest multiplied by a notional amount in exchange for receipt of periodic payments based on an inflation rate index multiplied by the same notional amount upon which the fixed rate payments are based
<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>S</b>	Single Currency	Single 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	DSB Product Definition Name
Rates	Inflation Swap	Basis*		Inflation_Basis

\*There is no exact match in the ISDA Taxonomy 2.0 for this product template. The current taxonomy 2.0 only provides for transaction type values [Year on Year, Zero Coupon]. This product template is a catch all for products that fall outside of these specified transaction types.

### 3 REQUEST TEMPLATE

This section describes the input message received by UPI service.

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

Section	Attribute	Format	Cat	Example Value	Validation / Derivation
Header Section	Asset Class	Set	M	Rates	
	Instrument Type	Set	M	Swap	
	Product	Set	M	Inflation_Basis	
	Level	Set	M	UPI	
Attribute Section	Underlier ID	Enum	M	EUR-EXT-CPI	Inflation Index
	Underlier ID Source	String	M	FPML	[FPML]
	Reference Rate Term Value	Integer	M	3	-999 to 999 (excluding 0)
	Reference Rate Term Unit	Enum	M	MNTH	[DAYS, WEEK, MNTH, YEAR]
	Other Leg Underlier Type (oneOf)	Object	M	Floating Rate	[Floating Rate]
	Other Leg Underlier ID Source	String	(M)	FPML	[FPML]
	Other Leg Underlier ID	Enum	(M)	GBP-LIBOR-BBA	Floating Rate Index
	Other Leg Underlier Type (oneOf)	String	M	Inflation Rate	[Inflation Rate]
	Other Leg Underlier ID Source	String	(M)	FPML	[FPML]
	Other Leg Underlier ID	Enum	(M)	UK-RPI	Inflation Index
	Other Leg Reference Rate Term Value	Integer	M	3	-999 to 999 (excluding 0)
	Other Leg Reference Rate Term Unit	Enum	M	MNTH	[DAYS, WEEK, MNTH, YEAR]
	Notional Currency	Enum	M	EUR	Enumerated List
	Notional Schedule	Enum	M	Constant	[Constant, Accreting, Amortizing, Custom]
	Delivery Type	Enum	M	PHYS	[CASH, PHYS]

#### 3.1 Underlier Input Method

In order to support products that are based on more than one type of underlier, the Underlier Type selection allows users to choose the type of underlier for the product.

Title	Description
Select Underlier Type	User is able to select a single required Underlier Type from the available options. <ul style="list-style-type: none"> <li>Floating Rate</li> <li>Inflation Rate</li> </ul>
Select Underlier ID Source	User is able to select a single required Underlier ID Source from the available options based on the selected Underlier Type. <ul style="list-style-type: none"> <li>Floating Rate [FPML]</li> <li>Inflation Rate [FPML]</li> </ul>
Input Underlier ID	FPML      These are validated against Floating Rate Index and Inflation 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

This section describes the record returned by the UPI service.

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

Section	Attribute	Format	Cat	Example Value	Derivation
Header Section	Asset Class	Set	M	Rates	
	Instrument Type	Set	M	Swap	
	Product	Set	M	Inflation_Basis	
	Level	Set	M	UPI	
	Template Version	Integer	D	1	
Attribute Section	Reference Rate	Enum	M	EUR-EXT-CPI	Enumerated List
	Reference Rate Term Value	Integer	M	3	-999 to 999 (excluding 0)
	Reference Rate Term Unit	Enum	M	MNTH	[DAYS, WEEK, MNTH, YEAR]
	Other Leg Reference Rate	Enum	M	GBP-LIBOR-BBA	Enumerated List
	Other Leg Reference Rate Term Value	Integer	M	3	-999 to 999 (excluding 0)
	Other Leg Reference Rate Term Unit	Enum	M	MNTH	[DAYS, WEEK, MNTH, YEAR]
	Notional Currency	Enum	M	EUR	Enumerated List
	Notional Schedule	Enum	M	Constant	[Constant, Accreting, Amortizing, Custom]
Identifier Section	Delivery Type	Enum	M	PHYS	[CASH, PHYS]
	UPI	String	D	QZGL629H2T52	
	Status	String	D	New	[New; Updated; Deleted; Deprecated]
	Status Reason	String	D	<null>	
	Last Update Date Time	DtTm	D	2021-02-23T00:00:13	YYYY-MM-DDThh:mm:ss
Derived Section	Classification Type	String	D	SRGCSP	See Derivation Rules
	Short Name	String	D	NA/Swap Infl Idx Flt EUR	See Derivation Rules
	Underlier Name	String	D	EUR-EXT-CPI vs GBP-LIBOR-BBA	See Derivation Rules
	Underlying Asset Type	String	D	Inflation Rate Index	Fixed value
	Single or Multi Currency	String	D	Single Currency	Fixed value
	CFI Delivery Type	String	D	[Cash, Physical]	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 + Notional Schedule + Single or Multi Currency + Delivery Type		
<b>Example</b>	SRGCSP		
<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>	Rates	Fixed Mapping	R
<b>Underlying Asset Type</b>	Inflation Rate Index	Fixed Mapping	G
<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>	Single Currency	Fixed Mapping	S
<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		
<b>Example</b>	NA/Swap Infl Idx Flt EUR		
<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>	Inflation Rate Index	Fixed Abbreviation	Infl Idx
	Floating Rate Index	Fixed Abbreviation	Infl Idx Flt
<b>Notional Currency</b>	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
Pair of Reference Rates	UPI record	Reference Rate vs Other Leg Reference Rate	EUR-EXT-CPI vs GBP-LIBOR-BBA

## 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".
- Existing OTC ISIN product definition methodology in Short Name abbreviation for Underlying Asset Type – Inflation Rate Index, ISO abbreviation "Infl Idx" is applied. However, text values in "ISO Abbrev w acronyms-Final\_v0.5.5.FINAL" shows "Infl Rt Idx".
- The behaviour for underlier id and other leg underlier id will be based on the DSB OTC ISIN where components of "inflation vs inflation" and "inflation vs floating" will apply.

## 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
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
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
		Other Leg Underlier ID	Other Leg Reference Rate
Underlier ID source	C	Underlier ID Source	Not Required
		Other Leg 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
		Other Leg Reference Term Unit	Other Leg Reference Term Unit
Underlying rate index tenor period multiplier	C	Reference Rate Term Value	Reference Rate Term Value
		Other Leg Reference Rate Term Value	Other Leg Reference Rate Term Value

## 7 APPENDIX 2 - OTC ISIN-UPI MAPPING

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

One Of	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	Inflation_Basis	
	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-EXT-CPI	
		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 Leg Reference Rate	Map To	Other Leg Underlier ID	GBP-LIBOR-BBA	
		Set to "FPML"	Other Leg Underlier ID Source	FPML	
	Other Leg Reference Rate Term Value	Direct Map	Other Leg Reference Rate Term Value	3	
	Other Leg Reference Rate Term Unit	Direct Map	Other Leg Reference Rate Term Unit	MNTH	
	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-EXT-CPI	
		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 Leg Reference Rate	Map To	Other Leg Underlier ID	GBP-LIBOR-BBA	
		Set to "FPML"	Other Leg Underlier ID Source	FPML	
	Other Leg Reference Rate Term Value	Direct Map	Other Leg Reference Rate Term Value	3	
	Other Leg Reference Rate Term Unit	Direct Map	Other Leg Reference Rate Term Unit	MNTH	
	Notional Schedule	Direct Map	Notional Schedule	Constant	
	Delivery Type	Direct Map	Delivery Type	PHYS	
	Price Multiplier	No Mapping			