



## Derivatives Service Bureau

# Rates : Swap : Inflation\_Fixed\_Float\_YoY

## UPI Product Definition

Version 3

| Date        | Status | Version | Revision Details   |
|-------------|--------|---------|--|
| 15 Aug 2022 | Draft  | 1       | Initial Version  |
| 24 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>  |
| 30 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> |

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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>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 | Fixed Float | Year on Year | Inflation_Fixed_Float_YoY   |

### 3 REQUEST TEMPLATE

This section describes the input message received by UPI service.

| Template name   | Template details | Release |
|---|------------------|---------|
| Request.Rates.Swap.Inflation_Fixed_Float_YoY.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_Fixed_Float_YoY |   |
|                   | Level                     | Set     | M   | UPI                       |   |
| Attribute Section | Underlier ID              | Enum    | M   | EUR-EXT-CPI               | Inflation Rate 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]                  |
|                   | 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

For products that has a Single Underlier, user has 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 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_Fixed_Float_YoY.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_Fixed_Float_YoY |   |
|                    | 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]                  |
|                    | 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   | QZGF63K72828              |   |
|                    | 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 EUR      | See Derivation Rules                      |
|                    | Underlier Name              | String  | D   | EUR-EXT-CPI               | See Derivation Rules                      |
|                    | Underlying Asset Type       | String  | D   | Inflation Rate Index      | Fixed value                               |
|                    | Single or Multiple 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 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            |
| <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 |
| Reference Rate   | UPI record            | Reference Rate                  | EUR-EXT-CPI    |

## 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".

## 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            |
| 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.

| 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_Fixed_Float_YoY |          |
|        | 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                      |          |
|        | 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                      |          |
|        | Notional Schedule                    | Direct Map    | Notional Schedule         | Constant                  |          |
|        | Delivery Type                        | Direct Map    | Delivery Type             | PHYS                      |          |
|        | Price Multiplier                     | No Mapping    |                           |                           |          |