



Derivatives Service Bureau

Credit : Swap : Index_Tranche

UPI Product Definition

Version 3

| Date | Status | Version | Revision Details |
|-------------|--------|---------|---|
| 09 Aug 2022 | Draft | 1 | Initial Version |
| 06 Feb 2023 | Draft | 2 | <ul style="list-style-type: none">Update example values in the Request and Record templates layoutInsert Underlier Name attribute and Derivation rules |
| 29 Aug 2023 | Draft | 3 | <ul style="list-style-type: none">Update Associated Documentation to include Best Practice Guidelines and FAQs.Update Best Practice Guidelines to include the link to Best Practice Guidelines and FAQs. |

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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 |
|----------------|---------------------------------|----------|----------------|---|
| | Instrument (Category) | S | Swap | |
| | Asset Class (Group) | C | Credit | |
| Attr #1 | Underlying Assets | V | Index Tranche | A synthetic Collateralized Debt Obligation (CDO) based on a CDS index where each tranche references a different segment of the loss distribution of the underlying CDS index; each tranche has a different priority of claims on the principal and interest flows from the collateral pool, and are traditionally portioned into rising levels of seniority |
| Attr #2 | Return or payout trigger | C | Credit Default | Credit Default |
| Attr #3 | Underlying Issuer Type | C | Corporate | The underlying exposure is a corporate (a private sector entity) |
| | | S | Sovereign | The underlying exposure is a sovereign, e.g. country; thus, investor's risk is that a country may not (be able to) pay its debt obligations; supranationals would be included here |
| | | L | Local | A municipality or local government authority |
| Attr #4 | Delivery Type | C | Cash | Cash |
| | | P | Physical | Physical |
| | | A | Auction | An independently administered synthetic auction process on a set of defined deliverable obligations that sets a reference final price that can be used to facilitate cash settlement of all covered transactions following a credit event |

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 |
|-------------|---------------|------------------------|------------------------|-----------------------------|
| Credit | Index Tranche | <i>Various entries</i> | <i>Various entries</i> | Index Tranche |

3 REQUEST TEMPLATE

This section describes the input message received by UPI service.

| Template name | Template details | Release |
|--|------------------|---------|
| Request.Credit.Swap.Index_Tranche.UPI.json | Initial version | Initial |

| Section | Attribute | Format | Cat | Example Value | Validation |
|-------------------|--|---------|-----|-------------------|-----------------------------------|
| Header Section | Asset Class | Set | M | Credit | |
| | Instrument Type | Set | M | Swap | |
| | Product | Set | M | Index_Tranche | |
| | Level | Set | M | UPI | |
| Attribute Section | Underlier Type (oneOf) | Object | M | Proprietary Index | [Proprietary Index] |
| | Underlier ID Source | Enum | M | PROP | [PROP] |
| | Underlier ID | String | M | 11339-MLSREISU | DSB Proprietary Index Enumeration |
| | Underlying Instrument Index Term Value | Integer | M | 0 | See Validation Rules |
| | Underlying Instrument Index Term Unit | Enum | M | DAYS | [DAYS, WEEK, MNTH, YEAR] |
| | Underlying Credit Index Series | Integer | M | 0 | See Validation Rules |
| | Underlying Credit Index Version | Integer | M | 0 | See Validation Rules |
| | Underlier Type (oneOf) | Object | M | Credit Index | [Credit Index] |
| | Underlier ID Source | Enum | M | CRIDX | [CRIDX] |
| | Underlier ID | Enum | M | ITRAXX EUROPE | Enumeration list |
| | Underlying Instrument Index Term Value | Integer | M | 2 | See Validation Rules |
| | Underlying Instrument Index Term Unit | Enum | M | MNTH | [DAYS, WEEK, MNTH, YEAR] |
| | Underlying Credit Index Series | Integer | M | 10 | See Validation Rules |
| | Underlying Credit Index Version | Integer | M | 25 | See Validation Rules |
| | Underlying Issuer Type | Enum | M | Corporate | [Corporate, Sovereign, Local] |
| | Delivery Type | Enum | M | OPTL | [CASH, PHYS, OPTL] |

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"> Credit Index Proprietary Index |
| 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"> Credit Index [CRIDX] Proprietary Index [PROP] |
| Input Underlier ID | User enters a valid Underlier ID based on the selected Underlier ID Source. |

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](#).

3.2.1 Underlying Instrument Index Term Value / Term Unit

If the Underlier ID selected is PROP, the following validation will apply:

- Underlying Instrument Index Term Value / Term Unit will be present in the REQUEST and RECORD messages.
- Underlying Instrument Index Term Value / Term Unit will have a constant value of "0 DAYS".

3.2.2 Underlying Credit Index Series / Index Version

If the Underlier ID selected is PROP, the following validation will apply:

- Underlying Credit Index Series / Index Version will be present in the REQUEST and RECORD messages.
- Underlying Credit Index Series / Index Version will have a constant value of "0".

4 RECORD TEMPLATE

This section describes the record returned by the UPI service.

| Version | Template name | Template details | Release |
|---------|---------------------------------------|------------------|---------|
| V.1 | Credit.Swap.Index_Tranche.UPI.V1.json | Initial version | Initial |

| Section | Attribute | Format | Cat | Example Value | Derivation |
|--------------------|--|---------|-----|---------------------------|-------------------------------------|
| Header Section | Asset Class | Set | M | Credit | |
| | Instrument Type | Set | M | Swap | |
| | Product | Set | M | Index_Tranche | |
| | Level | Set | M | UPI | |
| | Template Version | Integer | D | 1 | |
| Attribute Section | Underlying Instrument Index | Enum | C | ITRAXX EUROPE | Enumerated List |
| | Underlying Instrument Index Prop | String | C | 11339-MLSREISU | Enumerated List |
| | Underlying Instrument Index Term Value | Integer | M | 2 | See Validation Rules |
| | Underlying Instrument Index Term Unit | Enum | M | MNTH | [DAYS, WEEK, MNTH, YEAR] |
| | Underlying Credit Index Series | Integer | M | 10 | See Validation Rules |
| | Underlying Credit Index Version | Integer | M | 25 | See Validation Rules |
| | Underlying Issuer Type | Enum | M | Corporate | [Corporate, Sovereign, Local] |
| Identifier Section | Delivery Type | Enum | M | OPTL | [CASH, PHYS, OPTL] |
| | UPI | String | D | QZ5HBMRTJTS3 | |
| | Status | String | D | New | [New; Updated; Deleted; Deprecated] |
| | Status Reason | String | D | <null> | |
| Derived Section | Last Update Date Time | DtTm | D | 2021-04-19T03:48:10 | YYYY-MM-DDThh:mm:ss |
| | Classification Type | String | D | SCVCCA | See Derivation Rules |
| | Short Name | String | D | NA/CDS Corp Idx Tra | See Derivation Rules |
| | Underlier Name | String | D | 11339-MLSREISU | See Derivation Rules |
| | Underlying Asset type | String | D | Index Tranche | Fixed value |
| | Return or Payout Trigger | String | D | Credit Default | Fixed value |
| | CFI Delivery Type | String | D | [Cash, Physical, Auction] | 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 | |
|--------------------------|---|---------------------|--------|
| Structure | Instrument Type + Asset Class + Underlying Asset Type + Return or Payout Trigger + Underlying Issuer Type + Delivery Type | | |
| Example | SCVCCA | | |
| Source | ISO 10962 (CFI) – Third edition 2015-07-15 | | |
| Source Attribute | Source Value | Derivation Method | Result |
| Instrument Type | Swap | Fixed Mapping | S |
| Asset Class | Credit | Fixed Mapping | C |
| Underlying Asset Type | Index Tranche | Fixed Mapping | V |
| Return or Payout Trigger | Credit Default | Fixed Mapping | C |
| Underlying Issuer Type | Corporate | Mapped to => | C |
| | Sovereign | Mapped to => | S |
| | Local | Mapped to => | L |
| Delivery Type | CASH | Mapped to => | C |
| | PHYS | Mapped to => | P |
| | OPTL | Mapped to => | A |

4.2.2 Short Name

| Attribute | Short Name | | |
|------------------------|---|--------------------|---------|
| Structure | “NA” + "/" + Instrument Type + Underlying Issuer Type + Underlying Asset Type | | |
| Example | NA/CDS Corp Idx Tra | | |
| Source | ISO 18774 (Financial Instrument Short Name) - First edition 2015-11 | | |
| Source Attribute | Source Value | Derivation Method | Result |
| Issuer Name | None | Fixed Value | NA/ |
| Instrument Type | Swap | Fixed Abbreviation | CDS |
| Underlying Issuer Type | Corporate | Mapped to => | Corp |
| | Sovereign | Mapped to => | Sov |
| | Local | Mapped to => | Mun |
| Underlying Asset Type | Index Tranche | Fixed Abbreviation | Idx Tra |

4.2.3 Underlier Name

| Attribute | Underlier Name | | |
|---|-----------------------|----------------------------------|----------------|
| Underlying Asset | Underlier Name Source | Underlier Name Source Attribute | Underlier Name |
| Underlying ID with Underlying ID Source [CRIDX] | UPI record | Underlying Instrument Index | ITRAXX EUROPE |
| Underlying ID with Underlying ID Source [PROP] | UPI record | Underlying Instrument Index Prop | 11423-BCRICSTI |

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 |
| | OPTL | Mapped to => | Auction |

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

- The Contract Specification attribute only applies to Credit.Swap.Corporate; Credit.Swap.Municipal; Credit.Swap.Sovereign and Credit.Swap.Non_Standard. It does not apply to Credit.Swap.Loan; Credit.Swap.ABS; Credit.Swap.Index; Credit.Swap.Index_Tranche and Credit.Swap.Total_Return_Swap.
- Underlying Instrument Index Term Value and Term Unit has a constant value of "0 DAYS" if Underlier ID Source selected is PROP.
- Underlying Credit Index Series and Index Version has a constant value of "0" if Underlier ID Source selected is PROP.

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 |
| Delivery Type | M | Delivery Type | Delivery Type |
| | | | CFI Delivery Type |
| Return, pricing method or payout trigger | M | Not Required | Return or Payout Trigger |
| Seniority* | M | Not Required | |
| Standard Contract Specification** | C | Not Required | |
| Underlier ID | C | Underlier ID | Underlying Instrument Index |
| | | | Underlying Instrument Index Prop |
| Underlier ID Source | C | Underlier ID Source | Not Required |
| Underlier Type | M | Not Required | Underlying Asset Type |
| Underlier sub-type (first level) | M | Underlying Issuer Type | Underlying Issuer Type |
| Underlying Credit Index Series | C | Underlying Credit Index Series | Underlying Credit Index Series |
| Underlying Credit Index Version | C | Underlying Credit Index Version | Underlying Credit Index Version |

*Seniority applies only if the underlying is a Legal Entity or a Fixed Income Security. For this product, the underlying is either a Credit Index or Proprietary Index, so this attribute is not required.

**Standard Contract Specification does not apply for this product, refer to Additional Comments section above.

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 | Sample UPI Value | Comments |
|--------|--|----------------------------|--|-------------------|-------------------------|
| | Asset Class | Direct Map | Asset Class | Credit | |
| | Instrument Type | Direct Map | Instrument Type | Swap | |
| | Use Case | Direct Map | Product | Index_Tranche | |
| | Level | Set to "UPI" | Level | UPI | |
| | Notional Currency | No Mapping | | | |
| | Expiry Date | No Mapping | | | |
| A | Underlying Instrument Index | Set to "Credit Index" | Underlier Type | Credit Index | "One Of" Underlier Type |
| | | Map to | Underlier ID | ITRAXX EUROPE | |
| | | Set to "CRIDX" | Underlier ID Source | CRIDX | |
| | Underlying Instrument Index Term Value | Direct Map | Underlying Instrument Index Term Value | 2 | |
| | Underlying Instrument Index Term Unit | Direct Map | Underlying Instrument Index Term Unit | MNTH | |
| | Underlying Credit Index Series | Direct Map | Underlying Credit Index Series | 10 | |
| | Underlying Credit Index Version | Direct Map | Underlying Credit Index Version | 25 | |
| B | Underlying Instrument Index Prop | Set to "Proprietary Index" | Underlier Type | Proprietary Index | "One Of" Underlier Type |
| | | Map to | Underlier ID | 11339-MLSREISU | |
| | | Set to "PROP" | Underlier ID Source | PROP | |
| | Underlying Instrument Index Term Value | Direct Map | Underlying Instrument Index Term Value | 0 | |
| | Underlying Instrument Index Term Unit | Direct Map | Underlying Instrument Index Term Unit | DAYS | |
| | Underlying Credit Index Series | Direct Map | Underlying Credit Index Series | 0 | |
| | Underlying Credit Index Version | Direct Map | Underlying Credit Index Version | 0 | |
| | Debt Seniority | No Mapping | | | |
| | Underlying Issuer Type | Direct Map | Underlying Issuer Type | Corporate | |
| | Delivery Type | Direct Map | Delivery Type | OPTL | |
| | Price Multiplier | No Mapping | | | |