

DERIVATIVES SERVICE BUREAU (DSB) LTD

Credit : Forward : Non_Standard

UPI Product Definition

Version 3

| Date | Status | Version | Revision Details |
|-------------|--------|---------|--|
| 01 Sep 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 layout Insert Underlier Name attribute and Derivation rules |
| 30 Aug 2023 | Draft | 3 | <ul style="list-style-type: none"> Remove “Classified as Confidential” in the Footer section. Remove “RIC” as Alternate Underlier ID Source. 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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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 |
|---|---|-------------------------|
| Enumerations Document | Lists all fixed values used for a product | Enumerations section |
| Product Definition Data Dictionary | Defines attributes in the Request and Record templates; and from which they are referenced on | Other Documents section |
| Product Definition Validations and Normalizations Document | Specifies details on validation and normalization rules | |
| UPI Underlier Input Method | 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. | |
| Best Practice Guidelines and FAQs | Lists answers to queries raised by users and provides guidance on the use of the templates | |
| GitHub Environment Section | 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 |
|----------------|---------------------------------|----------|--|--|
| | Instrument (Category) | J | Forwards | |
| | Asset Class (Group) | C | Credit | |
| Attr #1 | Underlying Assets | A | Single Name | The underlying risk is a single reference entity or reference obligation |
| | | B | Basket | A synthetic credit derivative where the underlying reference entities are a bespoke portfolio whose constituents have been agreed to by the parties to the trade |
| Attr #2 | Not applicable/undefined | X | Not applicable/undefined | Not applicable/undefined |
| Attr #3 | Return or payout trigger | F | Forward price of underlying instrument | Forward price of underlying instrument |
| | | S | Spread-bet | The payout is determined by the movement in the reference price of the underlying instrument to its price at expiry (or the price when the holder wishes to close out) multiplied by an agreed amount per point movement |
| Attr #4 | Delivery Type | C | Cash | The discharge of an obligation by payment or receipt of a net cash amount instead of payment or delivery by both parties |
| | | P | 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 |
|-------------|--------------|-----------------|------------------|-----------------------------|
| Credit | Exotic | Various entries | Various entries | Non_Standard_Forward |

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 Credit spreadsheet that contains the layout of all templates. This can be found in the Credit 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.Credit.Forward.Non_Standard.UPI.json | Initial version | Initial |

3.1 Underlier Input Method

For products that has an option for a Single or Multiple Underliers, users must select an underlying structure applicable [Single Underlier, Basket]. If a Basket is selected, underlier entry is not required.

| Title | Description |
|------------------------------------|--|
| Select Underlying Structure | User is able to select whether the underlying is a single underlier or basket based on its product. <ul style="list-style-type: none">• Single Underlier• Basket |
| Select Underlier ID Source | User is able to select a single required Underlier ID Source from the available options: <ul style="list-style-type: none">• ISIN• FIGI• CUSIP• SEDOL |
| 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 Structure [oneOf structure]

- If Underlying Structure selected is a "Single Underlier", attributes Underlier ID and Underlier ID Source [ISIN, FIGI, CUSIP, SEDOL] will be required in the REQUEST message.
- If Underlying Structure selected is a "Basket", attributes Underlier ID and Underlier ID Source will not be present in the REQUEST and RECORD templates.

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 Credit spreadsheet that contains the layout of all templates. This can be found in the Credit 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 | Credit.Forward.Non_Standard.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 | | |
|---------------------------------|---|-------------------|--------|
| Structure | Instrument Type + Asset Class + Underlying Asset Type + NA + Return or Payout Trigger + Delivery Type | | |
| Example | JCAXFP | | |
| Source | ISO 10962 (CFI) – Third edition 2015-07-15 | | |
| Source Attribute | Source Value | Derivation Method | Result |
| Instrument Type | Forwards | Fixed Mapping | J |
| Asset Class | Credit | Fixed Mapping | C |
| Underlying Asset Type | Single Name | Mapped to => | A |
| | Basket | Mapped to => | B |
| Not applicable/undefined | Not applicable/undefined | Fixed Mapping | X |
| Return or Payout Trigger | Forward price of underlying instrument | Mapped to => | F |
| | Spreadbets | Mapped to => | S |
| Delivery Type | CASH | Mapped to => | C |
| | PHYS | Mapped to => | P |

4.2.2 Short Name

| Attribute | Short Name | | |
|------------------------------|---|--------------------|--------|
| Structure | "NA" + "/" + Instrument Type + Product + Underlying Asset Type | | |
| Example | NA/Fwd Nstd SN | | |
| 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 | Forward | Fixed Abbreviation | Fwd |
| Product Type | Non_Standard | Fixed Abbreviation | Nstd |
| Underlying Asset Type | Single Name | Mapped to => | SN |
| | Basket | Mapped to => | Bskt |

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 [ISIN] | ISIN Reference Data | longName of Underlying Instrument ISIN | ISIN is found in ISIN Reference Data. | VODAFONE GROUP PLC |
| | | | ISIN is found in ISIN Reference Data, but its description is missing. | No name available |
| | | | ISIN is not found in ISIN Reference Data. | No name obtainable |
| Basket | Constant | N/A | | Basket |

4.2.4 Underlying Asset Type

| Attribute | Underlying Asset Type | | |
|-----------------------|-----------------------|-------------------|-------------|
| Source Attribute | Source Value | Derivation Method | Result |
| Underlying Asset Type | Single Underlier | Mapped to => | Single Name |
| | Basket | Mapped to => | Basket |

4.2.5 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

- 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.
- Underlier sub-type (first level) will be represented by the Underlier Characteristic which varies depending on the underlying structure of the product, i.e., a single underlier or a multiple underliers (Basket).

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 |
| Delivery Type | M | Delivery Type | Delivery Type |
| | | | CFI Delivery Type |
| Return, pricing method or payout trigger | M | Return or Payout Trigger | Return or Payout Trigger |
| Seniority* | M | Not Required | Not Required |
| Standard Contract Specification** | C | Not Required | Not Required |
| Underlier ID | C | Underlier ID | Underlying Instrument ISIN |
| Underlier ID source | C | Underlier ID Source | Not Required |
| Underlier type | M | Not Required | Underlying Asset Type |
| Underlier sub-type (first level)*** | M | Underlying Structure | Underlier Characteristic |
| Underlying credit index series**** | C | Not Required | Not Required |
| Underlying credit index version***** | C | Not Required | Not Required |

*Seniority whilst mandatory for Credit Forwards in the ISO 4914 standards has not been included as an attribute for this product. The underlier for this Credit Forwards is the ISIN, FIGI, CUSIP or SEDOL of a bond and seniority is not applicable to bonds.

**Standard Contract Specification applies only to specific Credit Default Swap products, refer to Additional Comments above.

***Underlier sub-type (first level) is represented by Underlier Characteristic, refer to Additional Comments above.

****Underlying credit index series/version applies only if the underlying is a Credit Index or a Proprietary Index. For this product, the underlying is an ISIN, FIGI, CUSIP or SEDOL of a bond and so these attributes are not required.

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 Value | Comments |
|----------------------------|------------------------------|-----------------------------------|--------------------------|--|----------|
| Asset Class | | Direct Map | Asset Class | Credit | |
| Instrument Type | | Direct Map | Instrument Type | Forward | |
| Use Case | | Direct Map | Product | Non_Standard | |
| Level | | Set to "UPI" | Level | UPI | |
| Notional Currency | | No Mapping | | | |
| Expiry Date | | No Mapping | | | |
| Price Multiplier | | No Mapping | | | |
| Underlying Instrument ISIN | If Underlying Instrument = 1 | Map to | Underlier ID | US92857WBQ24 | |
| | | Set to "ISIN, FIGI, CUSIP, SEDOL" | Underlier ID Source | ISIN | |
| | If Underlying Instrument > 1 | Map to | Underlying Structure | Basket | |
| Return or Payout Trigger | | Direct Map | Return or Payout Trigger | Forward price of underlying instrument | |
| Delivery Type | | Direct Map | Delivery Type | PHYS | |