Derivatives Service Bureau (UPI)

CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	M. Surop	02 June 2021	Initial Document
2	Draft	M. Surop	14 July 2021	Updated template layout with Underlier input method, Attributes section, GUI Details, Reference & Comment sections. Removed hyperlinks in Attribute Data Dictionary & Reference Section.
3	Draft	M. Surop	24 Aug 2021	Updated Request Template Layout
4	Draft	M. Surop	27 Aug 2021	Updated Validation for Underlier ID Source [LEI; UPI]. Removed Underlier Issuer Type in the template layout, attribute data dictionary; updated ISO 4914 Equivalence to replace Underlier Issuer Type to Underlier characteristic.

Title	CREDIT SWAP Non Standard Template Definition
Background	The following CRF presents a specification for the generation and retrieval of a Unique Product Identifier for the following product: • **Credit : Option : Non_Standard**
	DSB-ID: **UPI-0413** **Type**: New Template **Owner**: M. Surop **Version**: 4 **State**: Draft
Terms of Reference	
Scope	• This CRF specifies the product definition required for the generation / retrieval of a UPI only. • This CRF covers both the input (Request) and output (Record) templates. • Support for local jurisdiction / alternate underlier identifier input is currently out of scope. • Support for CFI 2019 values is currently out of scope.
Requirements	• The product definition will conform to ISO 4914 (UPI). • Where possible, the product definition is to be based on the attributes, values and behaviour of the equivalent OTC ISIN. • The product definition will return a product short name (FISN). • All UPI records stored on the DSB RDL will include the ISO 10962 (CFI) code associated with the UPI along with an equivalent text value for all attributes that are included in the definition of the CFI.
Dependencies	• This specification is dependent on final sign-off of the ISO 4914 (UPI) specification. • This specification is dependent on PC approval for the use of the OTC ISIN definitions as a basis for the UPI. • This specification is dependent on PC approval for the inclusion of ISO 4914 (UPI) conditional attributes. • This specification is dependent on TAC Approval for the DSB approach to ISO 10962 (CFI:2019) migration. • This specification is dependent on the provision of a human-readable alias for the primary underlier for inclusion in the Short Name (FISN) and a human-readable alias for the Contract Specification. • The format of the Short Name is dependent upon the outcome of the ISO 18774 (FISN) systematic review.
Assumptions	• This specification assumes that, unless stated, all values and behaviours are based on those of the equivalent OTC ISIN product definition. • This specification assumes that no input values are to be defaulted by the system. • This specification is based on the current ISO 4914 (UPI) specification (CD) – including attributes that are not currently supported by the equivalent OTC ISIN. • This specification is based on the DSB's current equivalent OTC ISIN product definition. • This specification is based on the attributes and values defined in ISO 10962 (CFI:2015). • In order to provide an example Short Name, this specification defines a format for this attribute that may not conform to the eventually agreed FISN format for the UPI. This specification assumes that the Short Name is defined using the same attributes (where available) as the OTC ISIN Short Name. • Where possible, this specification derives GUI details from the ISO 4914 (UPI) specification for attributes that are not included in the current OTC ISIN product definition.

	• The display information in the GUI for the existing attributes (and values) are taken from the OTC ISIN. If such information contains an "ISIN" in the description, replace the value into "UPI". • The specification for UPI does not include expiry date as part of the attributes, hence "expired" status does not apply. • The specification assumes that underlying instrument index term unit/value is to be included as part of the definition of the underlier. • The specification for underlying debt issuance tenor period/underlying debt issuance tenor period multiplier is subject for review and approval by CDIDE as part of ISO 4914 standard. • The specification for UPI will not require user to identify individual constituent identifiers if the OTC derivative has more than one underlier ID. This is also in agreement with PC to align with ISO 4914 (UPI) specification and CPMI/IOSCO.

Request Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Condition	Enum Source	Origin
Header Section	Asset Class	Set	M	Credit			CFI:2015 Char#2 (HC****)	ISIN
	Instrument Type	Set	M	Option			CFI:2015 Char#1 (HC****)	ISIN
	Product	Set	M	Non_Standard				ISIN
	Level	Set	M	UPI				NEW
Attribute Section	Underlying Asset Type (oneOf)	Enum	M	CDS on Single Name	See CRF (Validations)		CFI:2015 Char#3 (HC****)	NEW
	Underlier Type (oneOf)	Enum	M	Fixed Income Security	[Fixed Income Security]			NEW
	Underlier ID Source	String	(C)	ISIN	[ISIN]		Internal	NEW
	Underlier ID	Enum	(C)	XS2273922158	See CRF (Validations)			NEW
	Debt Seniority	Enum	(C)	SNDB	[SNDB; MZZD; SBOD; JUND]	If Underlier Type = Fixed Income Security, Legal Entity	ISO 20022	ISIN
	Underlier Type (oneOf)	Enum	M	Legal Entity	[Legal Entity]			NEW
	Underlier ID Source	String	(C)	LEI	[LEI]		Internal	NEW
	Underlier ID	Enum	(C)	213800M7M4DOLSQUTI15	See CRF (Validations)		ISO 17442 LEI Codes	NEW
	Debt Seniority	Enum	(C)	SNDB	[SNDB; MZZD; SBOD; JUND]	If Underlier Type = Fixed Income Security, Legal Entity	ISO 20022	ISIN
	Underlier Type (oneOf)	Enum	M	UPI	[UPI]			NEW
	Underlier ID Source	String	(C)	UPI	[UPI]		Internal	NEW
	Underlier ID	Enum	(C)	QZLPDFD5N6T3	See CRF (Validations)		UPI RDL	NEW
	Underlying Asset Type (oneOf)	Enum	M	CDS on Index	See CRF (Validations)		CFI:2015 Char#3 (HC****)	NEW
	Underlier Type (oneOf)	Enum	M	Proprietary Index	[Proprietary Index]			NEW
	Underlier ID Source	String	(C)	PROP	[PROP]		Internal	NEW
	Underlier ID	Enum	(C)	58354-NMCDAN5W	See CRF (Validations)		DSB Proprietary Index Enumerations	NEW
	Underlier Type (oneOf)	Enum	M	Credit Index	[Credit Index]			NEW
	Underlier ID Source	String	(C)	MRKT	[MRKT]		Internal	NEW
	Underlier ID	Enum	(C)	CDX.NA.HY	MrktCreditIndex.json [See CRF (Validations)]		Markit Indices	NEW
	Underlying Instrument Index Term Value	Integer	(C)	21	See CRF (Validations)			ISIN
	Underlying Instrument Index Term Unit	Enum	(C)	DAYS	See CRF (Validations)		ISO 20022	ISIN
	Underlying Credit Index Series	Integer	(C)	2	See CRF (Validations)			ISIN
	Underlying Credit Index Version	Integer	(C)	4	See CRF (Validations)			ISIN
	Underlier Type (oneOf)	Enum	M	UPI	[UPI]			NEW
	Underlier ID Source	String	(C)	UPI	[UPI]		Internal	NEW
	Underlier ID	Enum	(C)	QZLPDFD5N6T3	See CRF (Validations)		UPI RDL	NEW
	Underlying Asset Type (oneOf)	Enum	M	CDS on Index Tranche	See CRF (Validations)		CFI:2015 Char#3 (HC****)	NEW
	Underlier Type (oneOf)	Enum	M	Proprietary Index	[Proprietary Index]			NEW
	Underlier ID Source	String	(C)	PROP	[PROP]		Internal	NEW
	Underlier ID	Enum	(C)	58354-NMCDAN5W	See CRF (Validations)		DSB Proprietary Index Enumerations	NEW
	Underlier Type (oneOf)	Enum	M	Credit Index	[Credit Index]			NEW
	Underlier ID Source	String	(C)	MRKT	[MRKT]		Internal	NEW
	Underlier ID	Enum	(C)	CDX.NA.HY	MrktCreditIndex.json [See CRF (Validations)]		Markit Indices	NEW
	Underlying Instrument Index Term Value	Integer	(C)	21	See CRF (Validations)			ISIN
	Underlying Instrument Index Term Unit	Enum	(C)	DAYS	See CRF (Validations)		ISO 20022	ISIN
	Underlying Credit Index Series	Integer	(C)	2	See CRF (Validations)			ISIN
	Underlying Credit Index Version	Integer	(C)	4	See CRF (Validations)			ISIN
	Underlier Type (oneOf)	Enum	M	UPI	[UPI]			NEW
	Underlier ID Source	String	(C)	UPI	[UPI]		Internal	NEW
	Underlier ID	Enum	(C)	QZLPDFD5N6T3	See CRF (Validations)		UPI RDL	NEW
	Underlying Asset Type (oneOf)	Enum	M	Swaps	See CRF (Validations)		CFI:2015 Char#3 (HC****)	NEW
	Underlying Structure (oneOf)	Enum	M	Single Underlier	See CRF (Validations)	Populated if not a basket	Internal	NEW
	Underlier Type (oneOf)	Enum	M	Fixed Income Security	[Fixed Income Security]			NEW
	Underlier ID Source	String	(C)	ISIN	[ISIN]		Internal	NEW
	Underlier ID	Enum	(C)	XS2273922158	See CRF (Validations)			NEW
	Debt Seniority	Enum	(C)	SNDB	[SNDB; MZZD; SBOD; JUND]	If Underlier Type = Fixed Income Security, Legal Entity	ISO 20022	ISIN
	Underlier Type (oneOf)	Enum	M	UPI	[UPI]			NEW
	Underlier ID Source	String	(C)	UPI	[UPI]		Internal	NEW
	Underlier ID	Enum	(C)	QZLPDFD5N6T3	See CRF (Validations)		UPI RDL	NEW
	Underlying Structure (oneOf)	Enum	C	Basket	See CRF (Validations)	Populated for a basket	Internal	NEW
	Underlier Characteristic	Enum	(C)	Basket	See CRF (Validations)			NEW
	Underlying Asset Type (oneOf)	Enum	M	Other	See CRF (Validations)		CFI:2015 Char#3 (HC****)	NEW
	Underlying Structure (oneOf)	Enum	M	Single Underlier	See CRF (Validations)	Populated if not a basket	Internal	NEW
	Underlier Type (oneOf)	Enum	M	Fixed Income Security	[Fixed Income Security]			NEW
	Underlier ID Source	String	(C)	ISIN	[ISIN]		Internal	NEW
	Underlier ID	Enum	(C)	XS2273922158	See CRF (Validations)			NEW
	Debt Seniority	Enum	(C)	SNDB	[SNDB; MZZD; SBOD; JUND]	If Underlier Type = Fixed Income Security, Legal Entity	ISO 20022	ISIN

Underlier Type (oneOf)	Enum	M	Legal Entity	[Legal Entity]			NEW
Underlier ID Source	String	(C)	LEI	[LEI]		Internal	NEW
Underlier ID	Enum	(C)	213800M7M4DOLSQUTI15	See CRF (Validations)		ISO 17442 LEI Codes	NEW
Debt Seniority	Enum	(C)	SNDB	[SNDB; MZZD; SBOD; JUND]	If Underlier Type = Fixed Income Security, Legal Entity	ISO 20022	ISIN
Underlier Type (oneOf)	Enum	M	Credit Index	[Credit Index]			NEW
Underlier ID Source	String	(C)	MRKT	[MRKT]		Internal	NEW
Underlier ID	Enum	(C)	CDX.NA.HY	MrktCreditIndex.json [See CRF (Validations)]		Markit Indices	NEW
Underlying Instrument Index Term Value	Integer	(C)	21	See CRF (Validations)			ISIN
Underlying Instrument index Term Unit	Enum	(C)	DAYS	See CRF (Validations)		ISO 20022	ISIN
Underlying Credit Index Series	Integer	(C)	2	See CRF (Validations)			ISIN
Underlying Credit Index Version	Integer	(C)	4	See CRF (Validations)			ISIN
Underlier Type (oneOf)	Enum	M	Proprietary Index	[Proprietary Index]			NEW
Underlier ID Source	String	(C)	PROP	[PROP]		Internal	NEW
Underlier ID	Enum	(C)	58354-NMCDAN5W	See CRF (Validations)		DSB Proprietary Index Enumerations	NEW
Underlier Type (oneOf)	Enum	M	UPI	[UPI]			NEW
Underlier ID Source	String	(C)	UPI	[UPI]		Internal	NEW
Underlier ID	Enum	(C)	QZLPDFD5N6T3	See CRF (Validations)		UPI RDL	NEW
Underlying Structure (oneOf)	Enum	M	Basket	See CRF (Validations)	Populated for a basket	Internal	NEW
Underlier Characteristic	Enum	(C)	Basket	See CRF (Validations)			NEW
Option Exercise Style	Enum	M	BERM	[AMER, BERM, EURO]		ISO 20022	ISIN
Option Type	Enum	M	OPTL	[CALL, PUTO, OPTL]		ISO 20022	ISIN
Valuation Method or Trigger	Enum	M	Asian	[Vanilla; Asian; Digital (Binary); Barrier; etc.]		CFI:2015 Char#5 (HC****)	ISIN
Delivery Type	Enum	M	PHYS	[CASH; PHYS; OPTL]		ISO 20022	ISIN

Record Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Condition	Enum Source	Origin
Header Section	Asset Class	Set	M	Credit			CFI:2015 Char#2 (HC****)	ISIN
	Instrument Type	Set	M	Option			CFI:2015 Char#1 (HC****)	ISIN
	Product	Set	M	Non_Standard				ISIN
	Level	Set	M	UPI				NEW
	Template Version	Integer	D	1				ISIN
Attribute Section	Underlying Asset Type	Enum	M	CDS on Index	See CRF (Validations)		CFI:2015 Char#3 (HC****)	ISIN
	Underlying Instrument ISIN	String	C	XS2273922158	See CRF (Validations)			ISIN
	Underlying Instrument LEI	String	C	213800M7M4DOLSQUTI15	See CRF (Validations)		ISO 17442 LEI Codes	ISIN
	Underlying Instrument Index	Enum	C	CDX.NA.HY	See CRF (Validations)		Markit Indices	ISIN
	Underlying Instrument Index Prop	Enum	C	58354-NMCDAN5W	See CRF (Validations)		DSB Proprietary Index Enumeration	ISIN
	Underlying Instrument UPI	String	C	QZLPDFD5N6T3	See CRF (Validations)		UPI RDL	NEW
	Underlying Instrument Index Term Value	Integer	C	3	See CRF (Validations & Normalization)	If Underlier ID Source = MRKT		ISIN
	Underlying Instrument Index Term Unit	Enum	C	WEEK	See CRF (Validations & Normalization)	If Underlier ID Source = MRKT	ISO 20022	ISIN
	Underlying Credit Index Series	Integer	C	2	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN
	Underlying Credit Index Version	Integer	C	4	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN
	Option Exercise Style	Enum	M	BERM	[AMER, BERM, EURO]		ISO 20022	ISIN
	Option Type	Enum	M	OPTL	[CALL, PUTO, OPTL]		ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Asian	[Vanilla; Asian; Digital (Binary); Barrier; etc.]		CFI:2015 Char#5 (HC****)	ISIN
	Debt Seniority	Enum	C	SNDB	[SNDB; MZZD; SBOD; JUND]	If Underlier ID Source = ISIN; LEI	ISO 20022	ISIN
	Delivery Type	Enum	M	PHYS	[CASH; PHYS; OPTL]		ISO 20022	ISIN
Identifier Section	UPI	String	D	QZHMCJH8SR72	UPI		ISO 4914	NEW
	Status	String	D	New				ISIN
	Status Reason	String	D	<null>	Not applicable to a New record			ISIN
	Last Update Date Time	DtTm	D	2021-06-02T08:26:18	YYYY-MM-DDThh:mm:ss			ISIN
Derived Section	Classification Type	String	D	HCIIAP	See CRF (Derivations)		ISO 10962: 2015	ISIN
	Short Name	String	D	NA/CDS Nstd ASIN	See CRF (Derivations)		ISO 18774: 2015	NEW
	Underlier Characteristic	String	D	Single	See CRF (Derivations)	Derived from underlier attributes	internal	NEW
	CFI Option Style and Type	String	D	Bermudan-Chooser	See CRF (Derivations)		CFI:2015 Char#4 (HC****)	NEW
	CFI Delivery Type	String	D	Physical	See CRF (Derivations)		CFI:2015 Char#6 (HC****)	NEW

Product Definition

Attributes

See Template Layout (above).

In order to support the different ways in which underliers need to be supported in the definition of this product, the above Request template layout allows the user to specify the following:

a) **Underlying Structure**
The above Request template described in this document supports products that can be defined with either a single underlier or a custom basket of (multiple) underliers. For this product, the user is asked to select one of the following:

- Single Underlier
- Basket

The selection of "Single Underlier" allows the user to enter the identifier for that individual underlier whereas the selection of "Basket" is considered a sufficient level of granularity (see ISO 4914 (UPI)) and so the user is not required to input a set of identifiers.

b) **Underlier Type**
The Request template described in this document supports products that can be defined on the basis of more than one type of underlier. For this product, the user is asked to select one of the following:

- Legal Entity

	• Fixed Income Security • UPI • Proprietary Index • Credit Index Once the Underlier Type is chosen, the user will be asked to select one of the Underlier ID Sources associated with that Underlier Type and enter the Underlier ID that matches the ID Source. ** Please see Underlier Input Method Document (link provided in the Reference Section below) for further details.*
Validation	**1. Underlying Asset Type** The following validations will apply based on the Underlying Asset Type selected: **a. "CDS on Single Name"** • Underlier ID is present and Underlier ID Source must be [ISIN, LEI or UPI]. • Validation of the Underlier ID will apply based on the Underlier ID Source [ISIN, LEI or UPI] indicated below. **b. "CDS on Index"** or **"CDS on Index Tranche"** • Underlier ID is present and Underlier ID Source must be [MRKT, PROP or UPI]. • Validation of the Underlier ID will apply based on the Underlier ID Source [MRKT, PROP or UPI] indicated below. **c. "Swaps"** • User can select Underlier ID (single underlier) or Underlier Characteristic (multiple underliers). • If Underlier ID is present, Underlier ID Source must be [ISIN or UPI]. • If Underlier Characteristic is selected, Underlier ID, Underlier ID Source and Underlying Instrument attributes will not be present in the REQUEST and RECORD messages. • Validation of the Underlier ID will apply based on the Underlier ID Source [ISIN or UPI] indicated below. **d. "Other"** • User can select Underlier ID (single underlier) or Underlier Characteristic (multiple underliers). • If Underlier ID is present, Underlier ID Source must be [ISIN, LEI, MRKT, PROP or UPI] • If the Underlier Characteristic is selected, Underlier ID, Underlier ID Source and Underlying Instrument attributes will not be present in the REQUEST and RECORD messages. • Validation of the Underlier ID will apply based on the Underlier ID Source [ISIN, LEI, MRKT, PROP or UPI] indicated below. **2. Underlier ID and Underlier Characteristic [oneOf structure]** • If Underlier ID selected, attributes Underlier ID and Underlier ID Source [ISIN, LEI, MRKT, PROP or UPI] must be present in the REQUEST message and only one value can be selected in the enumeration depending on the Underlying Asset Type selected. • If Underlier Characteristic is selected, attributes Underlier ID and Underlier ID Source will not be present in the REQUEST and RECORD messages. • Only "Basket" is the allowed value in the REQUEST message if Underlier Characteristic is selected. **3. Underlier ID Source** The following validations will be applied to Underlier ID based on the value selected on Underlier ID Source: [ISIN, LEI, MRKT, PROP, UPI]: a. ISIN • The input text by user must be in 12 characters (2 alpha, 9 alphanumeric, 1 numeric). • The input text must not have a prefix of "QZ" or "EZ". • A syntactic validation is being performed to confirm an ISIN when hitting create. • If the input ISIN is less or more than 12 characters and/or is not aligned with the above pattern before hitting create, an error message will apply "Value must match the pattern ^(?!(EZ|QZ))[A-Z]{2}[A-Z0-9]{9}[0-9]$." • If the input ISIN is not aligned with the above pattern after hitting create, an error message will apply "Error: /Attributes/Underlying: instance failed to match exactly one schema (matched 0 out of 2)". • If the input ISIN is aligned with the pattern criteria but ISIN value does not conform with syntactic validation, an error message will apply "Error: ISIN/s must be valid". b. LEI

	• The input text by user must be in 20 characters (18 alphanumeric, 2 numeric). • A syntactic validation is being performed to confirm LEI. • If the input LEI is less or more than 20 characters and/or is not aligned with the above pattern before hitting create, an error message will apply "Value must match the pattern ^[A-Z0-9]{18}[0-9]{2}$. • If the input LEI is not aligned with the pattern and conformed with the syntactic validation after hitting create, an error message will apply "Error: /Attributes/UnderlyingAssetType: instance failed to match exactly one schema (matched 0 out of 6)". c. MRKT • Enumeration list is based on JSON codeset (MrktCreditIndex.json). d. PROP • This attribute is to be validated against a list of Credit Proprietary Indices that must have been pre-submitted to the DSB. • The input text by user must exist in the DSB Proprietary Index Enumeration. • The Proprietary Index is made on a per asset class and only relevant to the particular asset class based on DSB data. The only exception is asset class "Other" which is applicable to all asset class. • If the input Prop Index does not exist in the DSB Proprietary Index Enumeration, value will be rejected with an error message "Error: Given Proprietary Indices must be valid for Asset Class Credit or Other". e. UPI • The input text by user must be in 12 characters (prefix "QZ", 9 alphanumeric, 1 alphanumeric check character). UPI Code structure is based on UPI 4914 (UPI) specification. • A syntactic validation is being performed to confirm a UPI when hitting create. • If input UPI is less or more than 12 characters and/or is not aligned with the above pattern before hitting create, an error message will apply "Value must match the pattern ^QZ([0-9BCDFGHJ-NPQ-TVWXZ]){10}$". • If the input UPI is not aligned with the above pattern after hitting create, an error message will apply "Error: /Attributes/Underlying: instance failed to match exactly one schema (matched 0 out of 2)". • If the input UPI is aligned with the pattern criteria but UPI value does not conform with syntactic validation, an error message will apply "Error: UPI/s must be valid". • If input Underlier ID does not exists in UPI RDL, an error message will apply "Error: Underlier ID [UPI] not found". • The Underlying Instrument UPI record returned from the UPI RDL must have the following data attributes: a. Asset Class "Credit" b. Instrument Type "Swap" If the above validation rules are not satisfied, an error message will apply: "Error: Underlier ID [UPI] must be a valid and existing Credit Swap". **4. Underlying Instrument Index Term Value / Underlying Instrument Index Term Unit** • If Underlier ID Source selected is MRKT, Underlying Instrument Index Term Value and Underlying Instrument Index Term Unit must be present in the REQUEST and RECORD messages. • If Underlier ID Source selected is [ISIN, LEI, PROP or UPI], Underlying Instrument Index Term Value and Underlying Instrument Index Term Unit attributes will not be present in the REQUEST and RECORD messages. • For Underlying Instrument Index Term Value, the input text must be either a positive or negative integer but not 0. If the input text is 0, an error message will apply: "Value must not validate against the provided schema. Value can't be 0". **5. Underlying Credit Index Series / Underlying Credit Index Version** • If Underlier ID Source selected is MRKT, Underlying Credit Index Series and Underlying Credit Index Version attributes must be present in the REQUEST and RECORD messages. • If Underlier ID Source selected is [ISIN, LEI, PROP or UPI], Underlying Credit Index Series and Underlying Credit Index Version attributes will not be present in the REQUEST and RECORD messages. • The input text by the user must be a positive integer from 1 to 999. • If the input text has a prefix of negative (-), an error message will apply: "Value must be at least 1." • If the input contains negative (-) after the integer, an error message will apply "Value must be of type integer. Value must be at most 999. Value must be at least 1." • If the input text contains character, remove the character and retain the integer if exists.

6. Debt Seniority

- If Underlier ID Source selected is either [ISIN or LEI], list the enumerated values for Debt Seniority *[SNDB; MZZD; SBOD; JUND].*
- If Underlier ID Source selected is either [MRKT, PROP or UPI], Debt Seniority attribute will not be present in the REQUEST and RECORD messages.

Normalization

1. Underlying Instrument Index Term Value / Underlying Instrument Index Term Unit

- If Underlying Instrument Index Term Unit = "DAYS" and Underlying Instrument Index Term Value is divisible by 7, record it in weeks:

Underlying Instrument Index Term Value	7	→	Underlying Instrument Index Term Value	1
Underlying Instrument Index Term Unit	DAYS		Underlying Instrument Index Term Unit	WEEK

- If Underlying Instrument Index Term Unit = "MNTH" and Underlying Instrument Index Term Value is divisible by 12, record it in years:

Underlying Instrument Index Term Value	12	→	Underlying Instrument Index Term Value	1
Underlying Instrument Index Term Unit	MNTH		Underlying Instrument Index Term Unit	YEAR

Attribute Data Dictionary

This section provides the exact reference or source of the attribute.

Full Name	Source	Type
Delivery Type	ISO 20022 FinancialInstrumentReportingReferenceDataReportV01	Enums *[CASH; PHYS; OPTL]*
CFI Delivery Type	ISO 10962 Classification of financial instruments (CFI code)	Enums *[Cash; Physical; Elect at Exercise]*
Option Exercise Style	ISO 20022 FinancialInstrumentReportingReferenceDataReportV01	Enums *[AMER, BERM, EURO]*
Option Type	ISO 20022 FinancialInstrumentReportingReferenceDataReportV01	Enums *[CALL, PUTO, OPTL]*
Valuation Method or Trigger	ISO 10962 Classification of financial instruments (CFI code)	Enums *[Vanilla; Asian; Digital (Binary); Barrier; Digital Barrier; Lookback; Other Path Dependent; Other]*
Debt Seniority	ISO 20022 FinancialInstrumentReportingReferenceDataReportV01 *Note: Only applies if Underlier ID Source is [ISIN or LEI].*	Enums *[SNDB, MZZD, SBOD, JUND]*
Underlying Instrument ISIN	Not Available	Max of 12 text (pattern) [A-Z] – firsts 2 characters [A-Z], [0-9] – Next 9 characters [0-9] – Last value is based on ISIN calculation
Underlying Instrument LEI	ISO 17442 LEI Codes	Max of 20 text (pattern) Char 1-4: LOU Identifier Char 5-18: Entity Identifier Char 19-20: Verification ID
Underlying Instrument Index	Markit Indices	Max350Text (based on string) minLength: 1 maxLength: 350
Underlying Instrument Index Prop	DSB Proprietary Index Enumerations	(Based on string)

	Underlying Instrument UPI	UPI RDL *Note: Prefixed with "QZ", the next 10 characters exclude vowels [A, E, I, O, U] and the character Y.*	Max of 12 text (pattern) [QZ] – firsts 2 characters [A-Z], [0-9] – Next 9 characters [A-Z], [0-9] – Last value based on UPI check calculation
	Underlying Asset Type	ISO 10962 Classification of financial instruments (CFI code)	Max35Text (based on string) minLength: 1 maxLength: 35
	Underlying Credit Index Series	Positive Integer (1 to 999) *Note: Only applies if Underlier ID Source is MRKT.*	Max3Number fractionDigits: 0 totalDigits: 3
	Underlying Credit Index Version	Positive Integer (1 to 999) *Note: Only applies if Underlier ID Source is MRKT.*	Max3Number fractionDigits: 0 totalDigits: 3
	Underlying Instrument Index Term Value	Integer – Positive or negative but not 0 *Note: Only applies if Underlier ID Source is MRKT.*	Max3Number (based on decimal) fractionDigits: 0 totalDigits: 3
	Underlying Instrument Index Term Unit	ISO 20022 FinancialInstrumentReportingReferenceDataReportV01 *Note: Only applies if Underlier ID Source is MRKT.*	Enums *[DAYS; WEEK; MNTH; YEAR]*

Derivation	This section provides additional details to the derivation logic specified in the Template Layout sections (above).	
	Classification Type	Concatenation of the following attributes/values: • Instrument Type: "H" • Asset Class: "C" • Underlying Asset Type: from Request.UnderlyingAssetType… - *CDS on Single Name →* *U* - *CDS on Index Tranche →* *V* - *CDS on Index →* *I* - *Swaps →* *W* - *Other →* *M* • Option Type/Style: from Request.OptionType and Request.OptionExercise Style… - *PUTO/AMER →* *E* - *PUTO/BERM →* *F* - *PUTO/EURO →* *D* - *CALL/AMER →* *B* - *CALL/BERM →* *C* - *CALL/EURO →* *A* - *OPTL/AMER →* *H* - *OPTL/BERM →* *I* - *OPTL/EURO →* *G* • Valuation Method or Trigger: from Request.ValuationMethodorTrigger… - *Vanilla →* *V* - *Asian →* *A* - *Digital (Binary) →* *D* - *Barrier →* *B* - *Digital Barrier →* *G* - *Lookback →* *L* - *Other Path Dependent →* *P* - *Other →* *M* • Delivery Type: from Request.DeliveryType… - *CASH →* *C* - *PHYS →* *P* - *OPTL →* *E* E.g.: "HCIIAP"

	Short Name	Concatenation of the following attributes/values: • Issuer: “NA/” • Product Type: “CDS Nstd” (fixed value) • Valuation Method or Trigger: from Request.ValuationMethodorTrigger… - *Vanilla →* *“Van”* - *Asian →* *“ASIN”* - *Digital (Binary) →* *“Dig”* - *Barrier →* *“Bar”* - *Digital Barrier →* *“DigBar”* - *Lookback →* *“Lkbck”* - *Other Path Dependent →* *“OthDep”* - *Other →* *“Oth”* • Debt Seniority: from Request.DebtSeniority… - *SNDB →* *“Sr”* - *MZZD →* *“Mz”* - *SBOD →* *“Sub”* - *JUND →* *“Jr”* *Note: Debt Seniority only applies if Underlier ID Source is [ISIN; LEI].* E.g.: “NA/CDS Nstd ASIN” *Note: The Short Name is based on the OTC ISIN that excludes the following fields:* - *Notional Currency* - *Expiry Date*
	Underlier Characteristic	Based on the attribute selected, the following derivations will apply: 1. If in the oneOf a single underlier [ISIN, LEI, MRKT, PROP or UPI] is selected: • then set the Underlier Characteristic to “Single”. 2. If in the oneOf a Basket is selected: • then set the Underlier Characteristic to “Basket”.
	CFI Option Style and Type	Derived from the input Request.OptionType and Request.OptionExerciseStyle… • PUTO/AMER → “American-Put” • PUTO/BERM → “Bermudan-Put” • PUTO/EURO → “European-Put” • CALL/AMER → “American-Call” • CALL/BERM → “Bermudan-Call” • CALL/EURO → “European-Call” • OPTL/AMER → “American-Chooser” • OPTL/BERM → “Bermudan-Chooser” • OPTL/EUROP → “European-Chooser”
	CFI Delivery Type	Derived from the input Delivery Type… • CASH → “Cash” • PHYS → “Physical” • OPTL → “Elect at Exercise”

GUI Details

The following section provides display information for any attributes (and values) that are not included in the related OTC ISIN definition.

Attribute	**Display Name**	**Tool Tip (and • *value elaboration*)**
Underlying Structure	Underlying Structure	Indicates whether the product is based on a single underlier or a basket of underliers.
Underlier Type	Underlier Type	Indicates the type of underlying asset or entity on which the product is based.
Underlier ID	Underlier ID	An identifier that can be used to determine the asset(s), index (indices) or benchmark underlying a contract or, in the case of a foreign exchange derivative, identification of the currency pair or index.
Underlier ID Source	Underlier ID Source	The origin, or publisher, of the associated underlier ID.
Underlier Characteristic	Underlier Characteristic	An attribute that is used to specify whether the product is based on a single or multiple underliers.

UPI	Identification	Unique Product Identifier (ISO 4914).
CFI Option Style and Type	CFI Option Style and Type	The Option Style and Type as defined by CFI code: ISO 10962 • *As defined by CFI Code: ISO 10962*
CFI Delivery Type	CFI Delivery Type	The Delivery Type as defined by CFI code: ISO 10962 • *As defined by CFI Code: ISO 10962*

Additional Information

Reference

References to external documents can be found on the DSB website at this address [https://www.anna-dsb.com/upi-external-reference-documents/].

Comments

- Currently the system does not hold reference data to support the validation of the LEI or ISIN. This means that it is not possible to validate the existence or classification of the Underlier ID. In addition, this means that human-readable alias is not currently supported for inclusion in the Short Name attribute.
- Codeset name for Credit Indices must be amended from FpMLCreditIndex.json to MrktCreditIndex.json.
- The Contract Specification only applies to Credit.Swap.Corporate; Credit.Swap.Municipal; Credit.Swap.Sovereign & Credit.Swap.Non_Standard and does not apply to Credit.Swap.Loan; Credit.Swap.ABS; Credit.Swap.Index; Credit.Swap.Index_Tranche; & Credit.Swap.Total_Return_Swap.
- Underlying Instrument Index Term Unit/value are required fields in the DSB OTC ISIN having a default value of 0 if Underlying Instrument Index PROP is selected. In the case of UPI, if PROP is selected as Underlier ID Source, these attributes will not be present in the REQUEST message instead of default to 0.
- Underlying Credit Index Series/Version are required fields in the DSB OTC ISIN having a default value of 0 if Underlying Instrument Index PROP is selected. In the case of UPI, if PROP is selected as Underlier ID Source, these attributes will not be present in the REQUEST message instead of default to 0.
- Debt Seniority is a required field in DSB OTC ISIN having a default of N/A if underlying instrument selected is Markit Index or Index Prop. In the case of UPI, if MRKT or PROP is selected as Underlier ID Source, Debt Seniority will not be present in the REQUEST message instead of having a default "n/a" value.
- The enumerations made available for Underlier ID are dependent upon the choice of Underlier ID Source. At present, the proposed template layout is under review and to be verified by the Technical Team.
- Current DSB OTC ISIN methodology accepts "Swaps" as underlying asset type if single or combination of multiple ISINs is selected. However for UPI, the underlying asset type – "Swaps" will only apply if Underlier ID Source selected is either a single underlier [ISIN or UPI] or Underlier Characteristics - multiple underliers [ISINs or UPIs].
- Underlier Sub-Type (First Level) will be represented by the Underlier Characteristic which varies depending on how many underlier a product has, i.e., Single underlier or Multiple underliers (Basket).

ISO 4914 Equivalence

<table>
<tr><th colspan="2">ISO 4914</th><th>Request Attribute</th><th>Record Attribute</th></tr>
<tr><td>Asset Class</td><td>M</td><td colspan="2">Asset Class</td></tr>
<tr><td>Instrument type</td><td>M</td><td colspan="2">Instrument Type</td></tr>
<tr><td rowspan="2">Delivery type</td><td rowspan="2">M</td><td rowspan="2">Delivery Type</td><td>Delivery Type</td></tr>
<tr><td>CFI Delivery Type</td></tr>
<tr><td>Option style</td><td>M</td><td colspan="2">Option Exercise Style</td></tr>
<tr><td>Option type</td><td>M</td><td colspan="2">Option Type</td></tr>
<tr><td>Return, pricing method or payout trigger</td><td>M</td><td colspan="2">Valuation Method or Trigger</td></tr>
<tr><td>Seniority*</td><td>M</td><td colspan="2">Debt Seniority</td></tr>
<tr><td>Standard Contract Specification**</td><td>C</td><td colspan="2">Not Required</td></tr>
<tr><td rowspan="3">Underlier ID</td><td rowspan="3">C</td><td rowspan="3">Underlier ID</td><td>Underlying Instrument ISIN</td></tr>
<tr><td>Underlying Instrument LEI</td></tr>
<tr><td>Underlying Instrument Index</td></tr>
</table>

				Underlying Instrument Index Prop
				Underlying Instrument UPI
	Underlier ID source	C	Underlier ID Source	Not Required
	Underlier type	M	Underlying Asset Type	
	Underlier sub-type (first level)***	M	Underlier Characteristic	
	Underlying credit index series****	C	Underlying Credit Index Series	
	Underlying credit index version****	C	Underlying Credit Index Version	
	Underlying contract tenor period*****	C	Not Required	
	Underlying contract tenor period multiplier*****	C	Not Required	
	Underlying debt issuance tenor period******	C	Not Required	
	Underlying debt issuance tenor period multiplier******	C	Not Required	

*Seniority applies only if underlying is a Legal Entity or Debt Instrument, refer to comments section above.

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

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

****Underlying Credit Index Series/Version applies only if underlying is MRKT Indices, refer to comments section above.

*****Underlying Contract Tenor Period/Multiplier applies only to a derivative contract underlying another derivative. For this product, the underlying is [ISIN, LEI, MRKT, PROP, or UPI] and so these attributes are not required.

******Subject for review and approval by CDIDE as part of ISO 4914 standard.