Derivatives Service Bureau (UPI)

CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	M. Surop	18 May 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.A. Gariplan	27 Aug 2021	Added Assumption on Underlier ID tooltip

Title	COMMODITIES OPTION Single Index Template Definition		
Background	The following CRF presents a specification for the generation and retrieval of a Unique Product Identifier for the following product: • **Commodities : Option : Single_Index**	**DSB-ID**	**UPI-0340**
		Type	New Template
		Owner	M. Surop
		Version	3
		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 of Base Product is based on the DSB's current equivalent OTC ISIN product definition that follows enumerated values based on RTS 23 (EU 2017/585) Table 2 rather than the ISO 20022.		

	• The tooltip for the Underlier ID = Commodity Index is removed temporarily to keep in line with the ISIN behaviour until such time that a source provider is appointed for the Commodity Index identifiers.

Request Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Enum Source	Origin
Header Section	Asset Class	Set	M	Commodities		CFI:2015 Char#2 (HT****)	ISIN
	Instrument Type	Set	M	Option		CFI:2015 Char#1 (HT****)	ISIN
	Product	Set	M	Single_Index			ISIN
	Level	Set	M	UPI			NEW
Attribute Section	Underlier Type (oneOf)	Enum	M	Commodity Index	[Commodity Index]		NEW
	Underlier ID Source	String	D	INDX	[INDX]	Internal	NEW
	Underlier ID	Enum	M	OTHER	See CRF (Validation)	CommoditiesIndex.json	NEW
	Underlier Type (oneOf)	Enum	M	Proprietary Index	[Proprietary Index]		NEW
	Underlier ID Source	String	D	PROP	[PROP]	Internal	NEW
	Underlier ID	Enum	M	11339-MLBXPRAE	See CRF (Validation)	DSB Proprietary Index Enumeration	NEW
	Base Product	Enum	M	NRGY	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]	RTS 23 (EU 2017/585) Table 2	ISIN
	Option Type	Enum	M	PUTO	[CALL; PUTO; OPTL]	ISO 20022	ISIN
	Option Exercise Style	Enum	M	EURO	[AMER; BERM; EURO]	ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Asian	[Vanilla; Asian; Digital (Binary); etc.]	CFI:2015 Char#5 (HT****)	ISIN
	Delivery Type	Enum	M	PHYS	[CASH; PHYS; OPTL]	ISO 20022	ISIN

Record Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Enum Source	Origin
Header Section	Asset Class	Set	M	Commodities		CFI:2015 Char#2 (HT****)	ISIN
	Instrument Type	Set	M	Option		CFI:2015 Char#1 (HT****)	ISIN
	Product	Set	M	Single_Index			ISIN
	Level	Set	M	UPI			NEW
	Template Version	Integer	D	1			ISIN
Attribute Section	Underlying Instrument Index	Enum	C	OTHER	See CRF (Validation)	CommoditiesIndex.json	ISIN
	Underlying Instrument Index Prop	Enum	C	11339-MLBXPRAE	See CRF (Validation)	DSB Proprietary Index Enumeration	ISIN
	Base Product	Enum	M	NRGY	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]	RTS 23 (EU 2017/585) Table 2	ISIN
	Option Type	Enum	M	PUTO	[CALL; PUTO; OPTL]	ISO 20022	ISIN
	Option Exercise Style	Enum	M	EURO	[AMER; BERM; EURO]	ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Asian	[Vanilla; Asian; Digital (Binary); etc.]	CFI:2015 Char#5 (HT****)	ISIN
	Delivery Type	Enum	M	PHYS	[CASH; PHYS; OPTL]	ISO 20022	ISIN
Identifier Section	UPI	String	D	QZFCJ6DM3GV5	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	2021-05-17T08:57:53	YYYY-MM-DDThh:mm:ss		ISIN
Derived Section	Classification Type	String	D	HTIDAP	See CRF (Derivations)	ISO 10962: 2015	ISIN
	Short Name	String	D	NA/O NRGY Put	See CRF (Derivations)	ISO 18774: 2015	NEW
	Underlying Asset Type	String	D	Index	Fixed value	CFI:2015 Char#3 (HTI***)	ISIN
	CFI Option Style and Type	String	D	European-Put	See CRF (Derivations)	CFI:2015 Char#4 (HT****)	NEW
	CFI Delivery Type	String	D	Physical	See CRF (Derivations)	CFI:2015 Char#6 (HT****)	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) 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: • Commodity Index • Proprietary 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. Underlier ID** The following validation will be applied to Underlier ID based on the value selected on Underlier ID Source [INDX; PROP]: a. INDX • Enumeration list is based on JSON codeset (CommoditiesIndex.json). b. PROP • This attribute is to be validated against a list of Commodity 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 Index/ices must be an existing and valid Commodity or Multi-Asset Index”.

Normalization

Not Required.

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]*
Underlying Instrument Index	**At present, OTHER is the only permitted enumerated value for this attribute. See comments for further details.*	Enum *[OTHER]*
Underlying Instrument Index Prop	DSB Proprietary Index Enumerations	(Based on string)
Base Product	RTS 23 (EU 2017/585) Table 2 *Note: Please see Appendix below for corresponding enum_titles of enum values.*	Max35Text (based on string) minLength: 1 maxLength: 35

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: “T”
- Underlying Asset Type: “I”
- Option Type/Style: from Request.OptionType and Request.OptionExerciseStyle
  - *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.: "HTIDAP"
	Short Name	Concatenation of the following attributes/values: • Issuer: "NA/" • Instrument Type: "O" (fixed value) • Base Product: from Request.BaseProduct… - AGRI → AGRI - NRGY → NRGY - ENVR → ENVR - FRGT → FRGT - FRTL → FRTL - INDP → INDP - INFL → INFL - OEST → OEST - METL → METL - PAPR → PAPR - POLY → POLY - OTHC → OTHC - OTHR → OTHR *Note: Please see Appendix below for corresponding enum_titles of enum values.* • Option Type: from Request.OptionType… - PUTO "Put" - CALL "Call" - OPTL "OPTL" E.g.: "NA/O NRGY Put" *Note: The Short Name is based on the OTC ISIN that excludes the following fields:* - *Notional Currency* - *Expiry Date*
	CFI Option Style and Type	Derived from the Underlying 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/EURO → "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*)
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.

	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

- Underlying contract tenor term value/unit are not included in the current DSB OTC ISIN. In UPI, as part of ISO 4914 standard, the attributes are part of the requirement if the underlying is derivative contract underlying another derivative.
- The Option Type enumerated values of UPI will be based on current DSB OTC ISIN values [CALL; PUTO; OPTL] rather than the ISO 20022 values [CALL; PUTO; OTHR].
- In Commodities, the Short name abbreviation for Option Type [CALL; PUTO; OPTL] are [Call; Put; OPTL] whereas Rates has [Call; P; Opt]; Equities [Call; Put; Opt] and Foreign_Exchange [Call; Put; O]. For Credit, option type is not part of the Short name.
- For Commodities, there is no existing reference data that will support the validation of underlying instrument index. In addition, an existing ticket (DSB-8) has been raised to address the issue.
- In DSB OTC ISIN, the Sub product and additional sub product attributes are included in the record as blank fields, while in UPI these attributes will be removed as it is not included in the request template.

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 rowspan="2">Underlier ID</td><td rowspan="2">C</td><td rowspan="2">Underlier ID</td><td>Underlying Instrument Index</td></tr>
<tr><td>Underlying Instrument Index Prop</td></tr>
<tr><td>Underlier ID source</td><td>C</td><td>Underlier ID Source</td><td>Not Required</td></tr>
<tr><td>Underlier type</td><td>M</td><td colspan="2">Base Product</td></tr>
<tr><td>Underlier sub-type (first level)</td><td>M</td><td>Not Required</td><td>Underlying Asset Type</td></tr>
<tr><td>Underlier sub-type (second level)*</td><td>C</td><td colspan="2">Not Required</td></tr>
<tr><td>Underlying contract tenor period**</td><td>C</td><td colspan="2">Not Required</td></tr>
<tr><td>Underlying contract tenor period multiplier**</td><td>C</td><td colspan="2">Not Required</td></tr>
</table>

*Underlier sub-type (second level) is not required, refer to comments above.

**The PC agreed that Underlying contract tenor period/multiplier are not required, refer to comments above.

Appendix

Listed below are the corresponding enum_titles for Base Product based on RTS 23 (EU 2017/585) Table 2:

Base Product	
enum_titles	**enum**
Agricultural[AGRI]	AGRI
Energy[NRGY]	NRGY
Environmental[ENVR]	ENVR
Freight[FRGT]	FRGT
Fertilizer[FRTL]	FRTL
IndustrialProduct[INDP]	INDP
Inflation[INFL]	INFL
OfficialEconomicStatistics[OEST]	OEST
Metal[METL]	METL
Paper[PAPR]	PAPR
Polypropylene[POLY]	POLY
OtherC10[OTHC]	OTHC
Other[OTHR]	OTHR