

Derivatives Service Bureau (UPI)
CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	M. Surop	24 June 2021	Initial Document
2	Draft	M. Surop	19 July 2021	Removed active hyperlinks in Data Dictionary; Amended References section with standard text; Removed Short Name comment in the Comment section.
3	Draft	M. Surop	02 Nov 2021	Updated Derivation and GUI Details sections.

Title	COMMODITIES OPTION Multi Exotic Option Template Definition			
Background	The following CRF presents a specification for the generation and retrieval of a Unique Product Identifier for the following product:		DSB-ID	UPI-0496
	<ul style="list-style-type: none"> Commodities : Option : Multi_Exotic_Option 		Type	New Template
			Owner	M. Surop
			Version	3
			State	Draft
Terms of Reference				
Scope	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 			

	<ul style="list-style-type: none"> 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 solution assumes that all multi exotics are only used to support a product based on multiple underliers (i.e., Basket). Therefore, it is not required to define the individual underliers. The specification of individual underlying identifiers and their sources is not required as part of the definition of a product based on a custom basket – as defined in the ISO 4914 (UPI) specification.
--	--

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	Multi_Exotic_Option			ISIN
	Level	Set	M	UPI			NEW
Attribute Section	Base Product	Enum	M	AGRI	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]	RTS 23 (EU 2017/585) Table 2	ISIN
	Option Type	Enum	M	CALL	[CALL; PUTO; OPTL]	ISO 20022	ISIN
	Option Exercise Style	Enum	M	BERM	[AMER; BERM; EURO]	ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Vanilla	[Vanilla; Asian; Digital (Binary); etc.]	CFI:2015 Char#5 (HT****)	ISIN
	Delivery Type	Enum	M	CASH	[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	Multi_Exotic_Option			ISIN
	Level	Set	M	UPI			NEW
	Template Version	Integer	D	1			ISIN
Attribute Section	Base Product	Enum	M	AGRI	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]	RTS 23 (EU 2017/585) Table 2	ISIN
	Option Type	Enum	M	CALL	[CALL; PUTO; OPTL]	ISO 20022	ISIN
	Option Exercise Style	Enum	M	BERM	[AMER; BERM; EURO]	ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Vanilla	[Vanilla; Asian; Digital (Binary); etc.]	CFI:2015 Char#5 (HT****)	ISIN
	Delivery Type	Enum	M	CASH	[CASH; PHYS; OPTL]	ISO 20022	ISIN
Identifier Section	UPI	String	D	QZV528G6MP4	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	2021-06-24T03:40:28	YYYY-MM-DDThh:mm:ss		ISIN
Derived Section	Classification Type	String	D	HTACVC	See CRF (Derivations)	ISO 10962: 2015	ISIN
	Short Name	String	D	NA/O AGRI Call	See CRF (Derivations)	ISO 18774: 2015	NEW
	Underlier Characteristic	String	D	Basket	Fixed Value	Internal	NEW
	Underlying Asset Type	String	D	Agriculture	See CRF (Derivations)	CFI:2015 Char#3 (HT****)	ISIN
	CFI Option Style and Type	String	D	Bermudan-Call	See CRF (Derivations)	CFI:2015 Char#4 (HT****)	NEW
	CFI Delivery Type	String	D	Cash	See CRF (Derivations)	CFI:2015 Char#6 (HT****)	NEW

Product Definition			
Attributes	See Template Layout (above).		
Validation	Not Required.		
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]

	Base Product	RTS23 (EU 2017/585) Table 2 <i>Note: Please see Appendix below for corresponding enum_titles of enum values.</i>	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).		
	Underlying Asset Type	<p>The following underlying asset type derivations will apply:</p> <ul style="list-style-type: none"> • Set the Underlying Asset Type based on the input Base Product: <ul style="list-style-type: none"> - AGRI → "Agriculture" - NRGY → "Energy" - ENVR → "Environmental" - FRGT → "Freight" - FRTL → "Fertilizer" - INDP → "Other" - INFL → "Other" - OEST → "Other" - METL → "Metals" - MCEX → "Multi Commodity" - PAPR → "Paper" - POLY → "Polypropylene Products" - OTHC → "Other" - OTHR → "Other" 	
	Classification Type	<p>Concatenation of the following attributes/values:</p> <ul style="list-style-type: none"> • Instrument Type: "H" • Asset Class: "T" • Underlying Asset Type: Derived.UnderlyingAssetType <ul style="list-style-type: none"> - Agriculture → A - Energy → J - Environmental → N - Freight → G - Fertilizer → S - Metals → K - Multi Commodity → Q - Paper → T - Polypropylene products → P - Other → M • Option Type/Style: from Request.OptionType and Request.OptionExerciseStyle <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - CASH → C - PHYS → P - OPTL → E <p>E.g.: "HTACVC"</p>	
	Short Name	Concatenation of the following attributes/values:	

		<ul style="list-style-type: none"> • Issuer: "NA/" • Instrument Type: "O" (fixed value) • Base Product: from Request.BaseProduct... <ul style="list-style-type: none"> - AGRI → AGRI - NRGY → NRGY - ENVR → ENVR - FRGT → FRGT - FRTL → FRTL - INDP → INDP - INFL → INFL - OEST → OEST - METL → METL - MCEX → MCEX - PAPR → PAPR - POLY → POLY - OTHC → OTHC - OTHR → OTHR <p><i>Note: Please see Appendix below for corresponding enum_titles of enum values.</i></p> • Option Type: from Request.OptionType... <ul style="list-style-type: none"> - PUTO "Put" - CALL "Call" - OPTL "OPTL" <p>E.g.: "NA/O AGRI Call"</p> <p><i>Note: The Short Name is based on the OTC ISIN that excludes the following fields:</i></p> <ul style="list-style-type: none"> - Notional Currency - Expiry Date 															
	CFI Option Style and Type	<p>Derived from the Underlying Request.OptionType and Request.OptionExerciseStyle</p> <ul style="list-style-type: none"> • 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	<p>Derived from the input Delivery Type...</p> <ul style="list-style-type: none"> • CASH → "Cash" • PHYS → "Physical" • OPTL → "Elect at Exercise" 															
GUI Details	<p>The following section provides display information for any attributes (and values) that are not included in the related OTC ISIN definition.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Display Name</th> <th>Tool Tip (and • value elaboration)</th> </tr> </thead> <tbody> <tr> <td>Underlier Characteristic</td> <td>Underlier Characteristic</td> <td>An attribute that is used to specify whether the product is based on a single or multiple underliers.</td> </tr> <tr> <td>UPI</td> <td>Identification</td> <td>Unique Product Identifier (ISO 4914).</td> </tr> <tr> <td>CFI Option Style and Type</td> <td>CFI Option Style and Type</td> <td>The Option Style and Type as defined by CFI code: ISO 10962 <ul style="list-style-type: none"> • As defined by CFI Code: ISO 10962 </td> </tr> <tr> <td>CFI Delivery Type</td> <td>CFI Delivery Type</td> <td>The Delivery Type as defined by CFI code: ISO 10962 <ul style="list-style-type: none"> • As defined by CFI Code: ISO 10962 </td> </tr> </tbody> </table>		Attribute	Display Name	Tool Tip (and • value elaboration)	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 <ul style="list-style-type: none"> • As defined by CFI Code: ISO 10962 	CFI Delivery Type	CFI Delivery Type	The Delivery Type as defined by CFI code: ISO 10962 <ul style="list-style-type: none"> • As defined by CFI Code: ISO 10962
Attribute	Display Name	Tool Tip (and • value elaboration)															
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 <ul style="list-style-type: none"> • As defined by CFI Code: ISO 10962 															
CFI Delivery Type	CFI Delivery Type	The Delivery Type as defined by CFI code: ISO 10962 <ul style="list-style-type: none"> • As defined by CFI Code: ISO 10962 															
Additional Information																	
Reference	<p>References to external documents can be found on the DSB website at this address https://www.anna-dsb.com/upi-external-reference-documents/.</p>																

<p>Comments</p>	<ul style="list-style-type: none"> 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. In DSB OTC ISIN, the Sub product and additional sub product attributes are included in the RECORD message as blank fields, while in UPI these attributes are not required. 			
<p>ISO 4914 Equivalence</p>	<p>ISO 4914</p>		<p>Request Attribute</p>	<p>Record Attribute</p>
	<p>Asset Class</p>	<p>M</p>	<p>Asset Class</p>	
	<p>Instrument type</p>	<p>M</p>	<p>Instrument Type</p>	
	<p>Delivery type</p>	<p>M</p>	<p>Delivery Type</p>	<p>Delivery Type</p>
				<p>CFI Delivery Type</p>
	<p>Option style</p>	<p>M</p>	<p>Option Exercise Style</p>	
	<p>Option type</p>	<p>M</p>	<p>Option Type</p>	
	<p>Return, pricing method or payout trigger</p>	<p>M</p>	<p>Valuation Method or Trigger</p>	
	<p>Underlier ID*</p>	<p>C</p>	<p>Not Required</p>	
	<p>Underlier ID source*</p>	<p>C</p>	<p>Not Required</p>	
	<p>Underlier type</p>	<p>M</p>	<p>Base Product</p>	
	<p>Underlier sub-type (first level)**</p>	<p>M</p>	<p>Not Required</p>	<p>Underlying Asset Type</p>
	<p>Underlier sub-type (second level)***</p>	<p>C</p>	<p>Not Required</p>	
	<p>Underlying contract tenor period****</p>	<p>C</p>	<p>Not Required</p>	
<p>Underlying contract tenor period multiplier****</p>	<p>C</p>	<p>Not Required</p>		

*Underlier ID/Source are not required for a custom basket defined in the ISO 4914 (UPI) specification.

**Underlier Asset Type will be used as the Underlier sub-type (first level) for this product.

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

**** Underlying Contract Tenor Period/Multiplier applies only to a derivative contract underlying another derivative. For this product, the underlying is Basket and so these attributes are not required.

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
MultiCommodityExotic[MCEX]	MCEX
Paper[PAPR]	PAPR
Polypropylene[POLY]	POLY
OtherC10[OTHC]	OTHC
Other[OTHR]	OTHR