

Derivatives Service Bureau (ISIN)
CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	J. Lim	18 Aug 2021	Initial Document
2	Draft	M. Surop	26 Nov 2021	Updated Request & Record templates layout, added Validation for Term of Contract and Strike Price, updated Validation and Comment for Debt Seniority.
3	Draft	M. Surop	26 Jan 2022	Updated Request template layout, Validation and Comment Section for Debt Seniority.
4	Draft	M. Surop	31 Jan 2022	<ul style="list-style-type: none"> Allowing value of 0 integer for attributes "Reference Rate Term Value" / "Other Leg Reference Rate Term Value" and "Underlying Instrument Index Term Value" in Request template layout. Removed the derived attribute "Underlying Asset Type" in Record template layout. <p>- Updated Request & Record templates layout, Validation, Normalization, Comments and Appendix 1 sections.</p>
5	Draft	M. Surop	15 Feb 2022	Updated Request & Record templates layout and added Validation rules for Debt Seniority.
6	Draft	M. Surop	10 March 2022	Updated templates layout, Validation, Derivation and Comments sections related to Underlying Instrument Index Term Value/Unit, Credit Index Series/Version, Delivery Type and ISO Delivery Type.
7	Draft	M. Surop	25 Apr 2022	Updated templates layout, Validation for error messages, Normalisation, Derivation and Appendix 1 sections.
8	Draft	M. Surop	06 May 2022	Updated Derivation section to include ISO Reference Rate, ISO Other Leg Reference Rate and ISO Underlying Instrument Index.
9	Draft	M. Surop	11 May 2022	Updated Record template layout for Underlying oneOf structure and GUI details to include CFI Option Style and Type.
10	Draft	M. Surop	20 May 2022	Updated Request and Record templates layout and Validation section for Strike Price components.
11	Draft	M. Surop	13 Jun 2022	Updated Derivation Section of the Short Name Notes for Currency Notional.
12	Draft	M. Surop	28 Jul 2022	Updated Derived Section in the Record Template Layout, ISO derivation statement and Comment Section.
13	Draft	M. Surop	12 Sep 2022	Updated error message for Underlying Credit Index Series/Version.

Title	OTHER OPTION Non Standard Template Definition		
Background	<p>The following CRF presents a specification for the generation and retrieval of a ISIN for the following product:</p> <ul style="list-style-type: none"> Other : Option : Non_Standard 	DSB-ID	1441
		Type	New Template
		Owner	J.Lim
		Version	13

		State	Final
Terms of Reference			
Scope	<ul style="list-style-type: none"> • This CRF specifies the product definition required for the generation / retrieval of a ISIN 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 is to be based on the attributes, values and behaviour of the current OTC ISIN and equivalent UPI. • The product definition will return an equivalent UPI based on the new requirements of the OTC ISIN. 		
Dependencies	<ul style="list-style-type: none"> • 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 TAC Approval for the DSB approach to ISO 10962 (CFI:2019) migration. • This specification is dependent on ISO 4914 (UPI) requirements, to be able to create an equivalent UPI parent for created OTC ISIN. 		
Assumptions	<ul style="list-style-type: none"> • This specification assumes that, unless stated, all values and behaviours are based on DSB's current OTC product definition. • The specification assumes that no defaulted or blank values in the input request to align the requirements with the ISO 4914 (UPI) requirement. • The specification will support the requirement of ISO 4914 (UPI) – including the attributes that are not currently supported in the current OTC ISIN. • This specification is based on the attributes and values defined in ISO 10962 (CFI:2015). 		

Request Template Layout

Section	Attribute	Format	Cat	Array	Example Value	Validation / Derivation	Condition	Enum Source	in UPI	
Header Section	Asset Class	Set	M	N	Other					
	Instrument Type	Set	M	N	Option					
	Product	Set	M	N	Non_Standard					
	Level	Set	M	N	InstRefDataReporting					
Attribute Section	Expiry Date	String	M	N	2021-08-27			RTS23/ Field 13	N	
	Price Multiplier	number	M	N	1			RTS23/ Field 25	N	
	Option Type	Enum	M	N	CALL	[PUTO; CALL; OPTL]		CFI:2015 Char#4 (HM****)	Y	
	Option Exercise Style	Enum	M	N	AMER	[AMER; BERM; EURO]		CFI:2015 Char#4 (HM****)	Y	
	Valuation Method or Trigger	Enum	M	N	Vanilla	[Vanilla; Asian; Barrier; Lookback etc.]		CFI:2015 Char#5 (HM****)	Y	
	Delivery Type	Enum	M	N	Auction	[Cash; Physical; Auction; Elect At Exercise, Non-Deliverable]		CFI:2015 Char#6 (HM****)	Y	
	Underlying Asset Class Rates	Object	C	Y					Y	
	Term of Contract (oneOf)	String	(M)	N	By Tenor				N	
	Term of Contract Value	Integer	(M)	N	1	1 to 999 (excluding 0)		RTS23/ Field 41	N	
	Term of Contract Unit	Enum	(M)	N	DAYS	[DAYS, WEEK, MNTH, YEAR]		RTS23/ Field 41	N	
	Term of Contract (oneOf)	String	(M)	N	By Effective Date				N	
	Effective Date	String	(M)	N	2021-08-27				N	
	Expiry Date Adjusted	Boolean	(C)	N	FALSE				N	
	Tenor Calculation Method	String	(C)	N	ESMA				N	
	Notional Currency	Enum	(M)	N	AUD	ISOCurrencyCode.json	required if asset is selected	ISO 4217 (3-Char CCY)	Y	
	Reference Rate	Enum	(M)	Y	AUD-CPI		required if asset is selected	Fpml Coding Scheme 5.98 & 5.108	Y	
	Reference Rate Term Value	Integer	(M)	N	3	-999 to 999 (including 0)	required if asset is selected		Y	
	Reference Rate Term Unit	Enum	(M)	N	MNTH	[DAYS, WEEK, MNTH, YEAR]	required if asset is selected	ISO 20022	Y	
	Other Notional Currency	Enum	(C)	N	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	Y	
	Other Leg Reference Rate	Enum	(C)	Y	USD-LIBOR-LIBO			Fpml Coding Scheme 5.98 & 5.108	Y	
	Other Leg Reference Rate Term Value	Integer	(C)	N	3	-999 to 999 (including 0)			Y	
	Other Leg Reference Rate Term Unit	Enum	(C)	N	MNTH	[DAYS, WEEK, MNTH, YEAR]		ISO 20022	Y	
	Underlying Asset Class Foreign_Exchange	Object	C	Y					Y	
	Notional Currency	Enum	(M)	N	AUD	ISOCurrencyCode.json	both pairs are required	ISO 4217 (3-Char CCY)	Y	
	Other Notional Currency	Enum	(M)	N	EUR	ISOCurrencyCode.json	both pairs are required	ISO 4217 (3-Char CCY)	Y	
	Settlement Currency	Enum	(C)	N	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	Y	
	Place of Settlement	Enum	(C)	N	Hong Kong			ISO 3166	Y	
	Underlying Asset Class Credit	Object	C	Y					Y	
	Debt Seniority	Enum	(C)	N	SN08	[SNDB, MZZD, SBOD, JUND]		Only applicable if Underlier = Underlying Instrument LEI / ISIN	ISO 20022	Y
	Underlying Instrument Index Term Value	Integer	(M)	N	7	-999 to 999 (including 0)		applicable for Underlying Instrument Index / Index Prop		Y
	Underlying Instrument Index Term Unit	Enum	(C)	N	DAYS			applicable for Underlying Instrument Index / Index Prop	ISO 20022	Y
	Underlying Credit Index Series	Integer	(C)	N	3			applicable for Underlying Instrument Index / Index Prop		Y
	Underlying Credit Index Version	Integer	(C)	N	5			applicable for Underlying Instrument Index / Index Prop		Y
	Underlying (anyOf)	String	(M)	N	Underlying Instrument ISIN				Y	
	Underlying Instrument ISIN	String	(M)	Y	US87331AA808				Y	
	Underlying (anyOf)	String	(M)	N	Underlying Instrument LEI				Y	
	Underlying Instrument LEI	String	(M)	Y	54930058BCF84ICNQ550				Y	
	Underlying (anyOf)	String	(M)	N	Underlying Instrument Index				Y	
	Underlying Instrument Index	Enum	(M)	Y	ABX.HEA			FpmlCreditIndex.json	Y	
	Underlying (anyOf)	String	(M)	N	Underlying Instrument Index Prop				Y	
	Underlying Instrument Index Prop	String	(M)	Y	11423-8CRICSTI			DSB Proprietary Index Enumeration	Y	
	Underlying Asset Class Equity	Object	C	Y					Y	
	Strike Price Type	Enum	(M)	N	Monetary Value				N	
	Strike Price Type	Enum	(M)	N	Monetary Value	[Monetary Value; Percentage; Yield; Basis Points; etc.]			N	
	Strike Price	String	(M)	N	1.5				N	
Strike Price Currency	Enum	(M)	N	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	N		
Underlying (anyOf)	String	(M)	N	Underlying Instrument ISIN				Y		
Underlying Instrument ISIN	String	(M)	Y	GB0008706128				Y		
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index				Y		
Underlying Instrument Index	Enum	(M)	Y	MSCI EM USD			ESMA TTC	Y		
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index Prop				Y		
Underlying Instrument Index Prop	String	(M)	Y	34810-JP1&LMO			DSB Proprietary Index Enumeration	Y		
Underlying Asset Class Commodities	Object	C	Y					Y		
Notional Currency	Enum	(M)	N	AUD	ISOCurrencyCode.json	required if asset is selected	ISO 4217 (3-Char CCY)	N		
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index				Y		
Underlying Instrument Index	Enum	(M)	Y	OTHER	CommoditiesIndex.json			Y		
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index Prop				Y		
Underlying Instrument Index Prop	String	(M)	Y	11339-MLCINKC			DSB Proprietary Index Enumeration	Y		
Underlying (anyOf)	String	(M)	N	Reference Rate				Y		
Reference Rate	Enum	(M)	Y	LEAD-LME CASH	FpmlCommoditiesReferenceRate.json		ISDA Taxonomy 2.0	Y		
Base Product	Enum	(M)	N					Y		
Base Product	Enum	(M)	N	ENVR			RTS 23 (EU 2017/585) Table 2	Y		
Sub Product	Enum	(M)	N	EMIS			RTS 23 (EU 2017/585) Table 2	Y		
Additional Sub Product	Enum	(M)	N	ELAE			RTS 23 (EU 2017/585) Table 2	Y		
Transaction Type	Enum	(M)	N	FUTR				N		
Final Price Type	Enum	(M)	N	ARGM				N		

Record Template Layout

Section	Attribute	Format	Cat	Array	Example Value	Validation / Derivation	Condition	Enum Source	In LPI	
Header Section	Asset Class	Set	M	N	Other					
	Instrument Type	Set	M	N	Option					
	Product Level	Set	M	N	Non_Standard					
Attribute Section	Expiry Date	String	M	N	2021-08-27			RTS23 / Field 13	N	
	Price Multiplier	number	M	N	1			RTS23 / Field 25	N	
	Option Type	Enum	M	N	CALL	{PUTO; CALL; OPTL}			Y	
	Option Exercise Style	Enum	M	N	AMER	{AMER; BERM; EURO}			Y	
	Valuation Method or Trigger	Enum	M	N	Vanilla	{Vanilla; Asian; Barrier; Lookback etc.}			CFI-2015 Char#5 (HM****)	Y
	Delivery Type	Enum	M	N	Auction	{Cash; Physical; Auction; Elect At Exercise, Non-Deliverable}			CFI-2015 Char#6 (HM****)	Y
	Underlying Asset Class Rates									
	Term of Contract Value	Integer	(M)	N	1		-999 to 999 (excluding 0)		RTS23 / Field 41	N
	Term of Contract Unit	Enum	(M)	N	DAYS		{DAYS, WEEK, MNTH, YEAR}		RTS23 / Field 41	N
	Notional Currency	Enum	(M)	N	AUD		ISOCurrencyCode.json	required if asset is selected	ISO 4217 (3-Char CCY)	Y
	Reference Rate	Enum	(M)	Y	AUD-CPI			required if asset is selected	Fpml Coding Scheme 5.98 & 5.108	Y
	Reference Rate Term Value	Integer	(M)	N	3		-999 to 999 (including 0)	required if asset is selected		Y
	Reference Rate Term Unit	Enum	(M)	N	MNTH		{DAYS, WEEK, MNTH, YEAR}	required if asset is selected	ISO 20022	Y
	Other Notional Currency	Enum	(C)	N	EUR		ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	Y
	Other Leg Reference Rate	Enum	(C)	Y	USD-LIBOR-LIBO				Fpml Coding Scheme 5.98 & 5.108	Y
	Other Leg Reference Rate Term Value	Integer	(C)	N	3		-999 to 999 (including 0)			Y
	Other Leg Reference Rate Term Unit	Enum	(C)	N	MNTH		{DAYS, WEEK, MNTH, YEAR}		ISO 20022	Y
	Underlying Asset Class.Foreign_Exchange									
	Notional Currency	Enum	(M)	N	AUD		ISOCurrencyCode.json	both pairs are required	ISO 4217 (3-Char CCY)	Y
	Other Notional Currency	Enum	(M)	N	EUR		ISOCurrencyCode.json	both pairs are required	ISO 4217 (3-Char CCY)	Y
	Settlement Currency	Enum	(C)	N	EUR		ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	Y
	Place of Settlement	Enum	(C)	N	Hong Kong				ISO 3166	Y
	Underlying Asset Class.Credit									
	Underlying (anyOf)	String	(M)	N	Underlying Instrument ISIN					Y
	Underlying Instrument ISIN	String	(M)	Y	US87331AAB08					Y
	Underlying (anyOf)	String	(M)	N	Underlying Instrument LEI					Y
	Underlying Instrument LEI	String	(M)	Y	54930058BCF841CQ550					Y
	Underlying (anyOf)	String	(M)	N	Underlying Instrument Index					Y
	Underlying Instrument Index	Enum	(M)	Y	ABX.HEA				FpmlCreditIndex.json	Y
	Underlying (anyOf)	String	(M)	N	Underlying Instrument Index Prop					Y
	Underlying Instrument Index Prop	String	(M)	Y	11423-BCRIST1				DSB Proprietary Index Enumeration	Y
	Underlying Instrument Index Term Value	Integer	(C)	N	7		-999 to 999 (including 0)	applicable for Underlying Instrument Index / Index Prop		Y
	Underlying Instrument Index Term Unit	Enum	(C)	N	DAYS			applicable for Underlying Instrument Index / Index Prop	ISO 20022	Y
	Underlying Credit Index Series	Integer	(C)	N	3			applicable for Underlying Instrument Index / Index Prop		Y
	Underlying Credit Index Version	Integer	(C)	N	5			applicable for Underlying Instrument Index / Index Prop		Y
	Debt Seniority	Enum	(C)	N	SNDB		{SNDB, MZZD, SBOD, JUNO}	Only applicable if Underlier = Underlying Instrument LEI / ISIN	ISO 20022	Y
	Underlying Asset Class.Equity									
	Strike Price Type	Enum	(M)	N	Monetary Value					Y
	Strike Price	Enum	(M)	N	Monetary Value		{Monetary Value; Percentage; Yield; Basis Points; etc.}			N
	Strike Price	String	(M)	N	1.5					N
	Strike Price Currency	Enum	(M)	N	EUR		ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	N
	Underlying (anyOf)	String	(M)	N	Underlying Instrument ISIN					Y
	Underlying Instrument ISIN	String	(M)	Y	GB0008706128					Y
	Underlying (anyOf)	String	(M)	N	Underlying Instrument Index					Y
	Underlying Instrument Index	Enum	(M)	Y	MSCI-EM_USD				ESMA TTC	Y
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index Prop					Y	
Underlying Instrument Index Prop	String	(M)	Y	34810-3P16LMO				DSB Proprietary Index Enumeration	Y	
Underlying Asset Class.Commodities										
Notional Currency	Enum	(M)	N	AUD		ISOCurrencyCode.json	required if asset is selected	ISO 4217 (3-Char CCY)	N	
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index					Y	
Underlying Instrument Index	Enum	(M)	Y	OTHER		CommoditiesIndex.json			Y	
Underlying (anyOf)	String	(M)	N	Underlying Instrument Index Prop					Y	
Underlying Instrument Index Prop	String	(M)	Y	11339-RUCINWC				DSB Proprietary Index Enumeration	Y	
Underlying (anyOf)	String	(M)	N	Reference Rate					Y	
Reference Rate	Enum	(M)	Y	LEAD-LME CASH		FpmlCommoditiesReferenceRate.json		ISDA Taxonomy 2.0	Y	
Base Product	Enum	(M)	N	ENVR				RTS 23 (EU 2017/585) Table 2	Y	
Sub Product	Enum	(M)	N	EMIS				RTS 23 (EU 2017/585) Table 2	Y	
Additional Sub Product	Enum	(M)	N	EUAE				RTS 23 (EU 2017/585) Table 2	Y	
Transaction Type	Enum	(M)	N	FUTR					N	
Final Price Type	Enum	(M)	N	ARGM					N	
Identification	String	D	N	E28DQGTBNK06					Y	
Status	String	D	N	New					Y	
Status Reason	String	D	N	<null>		Not applicable to a New record			Y	
Last Update Date Time	String	D	N	2021-02-23T00:00:13		YYYY-MM-DDThh:mm:ss			Y	
Derived Section	Full Name	String	M	N	Other Option Non_Standard 1 DAYS Multiple ISINs Multiple LEIs Multiple Indices ENVR EUAE ENVR EUAE Multiple Currencies 20210827				N	
	Classification Type	String	M	N	HMMBVA				Y	
	Commodity Derivative Indicator	String	M	N	FALSE				N	
	Issuer or Operator of the Trading Venue Identifier	String	M	N	NA				N	
	Short Name	String	M	N	NA/O Oth Nstd Mkt Mit 20210827				Y	
	ISO Underlying Instrument Index	String	C	N	Multiple Indices				N	
	ISO Reference Rate	String	C	N	Multiple Indices				N	
	ISO Other Leg Reference Rate	String	C	N	Multiple Indices				N	
	ISO Place of Settlement	String	C	N	HK				N	
	ISO Delivery Type	String	M	N	OPTL		See CRF (Derivations)		ISO 20022	N
CFI Option Style and Type	String	M	N	American-Call		See CRF (Derivations)		CFI-2015 Char#4 (HM****)	Y	

*(M) – Mandatory if underlying asset class is selected; (C) – Conditional if underlying asset class is selected.

**See Appendix 2 & 3 for enum_titles and elaboration

Product Definition	
Attributes	<p>See Template Layout (above).</p> <p>a. Underlying Asset Class</p> <p>The Request template described in this document supports multi-asset products and so the Request template allows the user to select asset classes of the underliers.</p> <p>For this product the user is asked to select one of the following:</p> <ul style="list-style-type: none"> • Rates • Credit • Equities • Foreign Exchange • Commodities <p>Once an asset class is selected the user is then able to input the values for any attributes that are associated with underliers within that asset class.</p>

Validation	<p>The following validations will apply depending on the underlying asset class selected. The product supports multi-asset products and attributes associated to it will be available upon the selection of the underlying asset class.</p> <p>1. Underlying Asset Class - Rates</p> <p>a. Term of Contract (oneOf)</p> <ul style="list-style-type: none"> • User can select either “By Tenor” or “By Effective Date”. • If user selects “By Tenor”, attributes “Term of Contract Value” and “Term of Contract Unit” must be present in the REQUEST and RECORD templates. • If user selects “By Effective Date”, attribute “Effective Date” must be present in the REQUEST template, the attributes “Expiry Date Adjusted” and “Tenor Calculation Method” are optional fields. • Effective Date, Expiry Date Adjusted and Tenor Calculation Method attributes will not be present in the RECORD template. <p>b. Reference Rate and Other Leg Reference Rate</p> <ul style="list-style-type: none"> • User can select Reference Rate only or both Reference Rate/ Other Leg Reference Rate • If Reference Rate is selected, the Reference Rate Term Value/ Unit must be populated. • If Other Leg Reference Rate is selected, the Other Leg Reference Rate Term Value/ Unit must be populated. • Reference Rate and its term value unit cannot be identical with Other Leg Reference Rate and its term value unit, otherwise an error message will apply: “Error: Reference Rate and Other Leg Reference Rate with Term Value and Unit cannot be identical”. • The input text for Reference Rate Term Value/Other Leg Reference Rate Term Value must be an integer (-999 to 999 including 0). <p>c. Notional and Other Notional Currency</p> <ul style="list-style-type: none"> • User can select Notional Currency only or both Notional/Other Notional Currency. • Notional Currency is a required field, whilst the Other Notional Currency is an optional field. • Currency for both legs cannot be identical. • If the following attributes have the same currency, an error message will apply “Error: Notional Currency and Other Notional Currency cannot be identical”. <p>2. Underlying Asset Class - Equity</p> <p>a. Underlying Instrument ISIN/ Index/ Index PROP User must select at least one of the following underlying instruments and below validation will apply depending on the selection.</p> <p>i. Underlying Instrument ISIN</p> <ul style="list-style-type: none"> • 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 <code>^(?!EZ QZ)[A-Z]{2}[A-Z0-9]{9}[0-9]\$</code>.” • If the input ISIN is not aligned with the above pattern after hitting create, an error message will apply: “/Attributes/UnderlyingAssetClass/Equity/Underlying/UnderlyingInstrumentISIN/0: ECMA 262 regex <code>^(?!EZ QZ)[A-Z]{2}[A-Z0-9]{9}[0-9]\$</code> does not match input string “<invalid input string>””. • If the input ISIN is aligned with the pattern criteria but ISIN value does not conformed with syntactic validation, an error message will apply “Error: ISIN/s must be valid”. <p>ii. Underlying Instrument Index</p> <ul style="list-style-type: none"> • Enumeration list is based on JSON codeset (EsmEquityIndex.json). <p>iii. Underlying Instrument Index PROP</p> <ul style="list-style-type: none"> • 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 selected in the request message. The only exception is asset class “Other” which is applicable to all asset classes. • 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 Equity or Multi-Asset Index”.
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b. Strike Price Type

The Strike Price value is validated pending on the Strike Price Type selected:

- Strike Price component attributes [Strike Price Type, Strike Price, Strike Price Currency] are mandatory fields in the REQUEST and RECORD templates.
- Strike Price Type must be populated for any Strike Price based on the enumeration list [Monetary Value; Percentage; Yield; Basis Points; No Price].
- The Strike Price input value can be a positive or negative integer including 0 or PNDG.
- For Strike Price Currency, the following validation will apply:
 - Enumeration list is based on JSON codeset (ISOCurrencyCode.json).
 - Strike Price Currency is required for an input when Strike Price Type is set to 'Monetary Value' or 'No Price' (PNDG).
 - Strike Price Currency is not required for an input when Strike Price Type is set to 'Percentage', 'Yield' or 'Basis Points'.
 - For Cross-Asset Option, Strike Price Currency is a mandatory user input if Strike Price Type is set to 'Monetary Value'.
- Strike Price value is validated depending on the Strike Price Type selected:
 - DECIMAL – 18,13 if the price is expressed as monetary value.
 - DECIMAL – 11,10 if the price is expressed as percentage.
 - DECIMAL – 11,10 if the price is expressed as yield.
 - DECIMAL – 18,17 if the price is expressed as basis points.
 - For 'No Price', Strike Price must be 'PNDG'.

3. Underlying Asset Class - Credit

a. Underlying Instrument ISIN/ LEI/ Index/ Index PROP

User must select at least one of the following underlying instruments and below validation will apply depending on the selection.

i. Underlying Instrument 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]$`."
- If the input ISIN is not aligned with the above pattern after hitting create, an error message will apply `"/Attributes/UnderlyingAssetClass/Credit/Underlying/UnderlyingInstrumentISIN/<index>: ECMA 262 regex ^(?!((EZ|QZ)))[A-Z]{2}[A-Z0-9]{9}[0-9]$ does not match input string "<invalid input string>"`.
- If the input ISIN is aligned with the pattern criteria but ISIN value does not conformed with syntactic validation, an error message will apply "Error: ISIN/s must be valid".

ii. Underlying Instrument 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}$`."
- If the input LEI is not aligned with the pattern and conformed with the syntactic validation after hitting create, an error message will apply: `"/Attributes/UnderlyingAssetClass/Credit/Underlying/UnderlyingInstrumentLEI/<index>: ECMA 262 regex ^[A-Z0-9]{18}[0-9]{2}$ does not match input string "<invalid input string>"`.

iii. Underlying Instrument Index

- Enumeration list is based on JSON codeset (MrktCreditIndex.json).

iv. Underlying Instrument Index PROP

- 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 selected in the request message. The only exception is asset class "Other" which is applicable to all asset classes.
- 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 Credit or Multi-Asset Index".

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

- i. If the Underlying Instrument selected is either an Index, an Index Prop, these attributes must be present in the REQUEST and RECORD templates.

- If Underlying Instrument selected is an Index or Index Prop and these attributes are not selected, an error message will apply:
 - Must have property UnderlyingInstrumentIndexTermValue
 - Must have property UnderlyingInstrumentIndexTermUnit
 - If single or multiple Underlying Instrument Index / Index Prop is selected, input text must be an integer (-999 to 999) including 0. Otherwise, an error message will apply:
 - If the input text is less than -999, an error message will apply: "Value must be at least -999."
 - If the input text is greater than 999, an error message will apply: "Value must be at most 999."
 - If the input text 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 -999."
 - If the input text contains character, remove the character and retain the integer if exists.
 - If Underlying Instrument selected is a combination of Index and Index Prop and these attributes are not selected, an error message will apply:
 - Must have property UnderlyingInstrumentIndexTermValue
 - Must have property UnderlyingInstrumentIndexTermUnit
 - If Underlying Instrument selected is a combination of Index or Index Prop, input text must be an integer (-999 to 999) including 0. Otherwise, an error message will apply:
 - If the input text is less than -999, an error message will apply: "Value must be at least -999."
 - If the input text is greater than 999, an error message will apply: "Value must be at most 999."
 - If the input text 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 -999."
 - If the input text contains character, remove the character and retain the integer if exists.
- ii. If the Underlying Instrument is an ISIN or LEI:
- An error message will apply: "Error: Term Value, Index Series and Index Version requires at least one Underlying Instrument Index".
- c. Underlying Credit Index Series / Underlying Credit Index Version
- i. If Underlying Instrument is an Index, the following validation will apply:
- Underlying Credit Index Series and Underlying Credit Index Version attributes must be present in the REQUEST and RECORD templates.
 - If Underlying Instrument selected is an Index and these attributes are not selected, an error message will apply:
 - Must have property UnderlyingCreditIndexSeries
 - Must have property UnderlyingCreditIndexVersion
 - The input text by the user must be a positive integer from 1 to 999. Otherwise, an error message will apply: "Error: Index Series and Index Version can only be zero if there are more than 1 Underlying Instrument Indices or at least 1 Index Prop."
 - If the input text is less than 0, an error message will apply: "Value must be at least 0."
 - If the input text is greater than 999, an error message will apply: "Value must be at most 999".
 - If the input text 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 0."
 - If the input text contains character, remove the character, and retain the integer if exist.
- ii. If the Underlying Instrument selected is an Index Prop, the following validation will apply:
- Underlying Credit Index Series and Underlying Credit Index Version attributes must be present in the REQUEST and RECORD templates.
 - If Underlying Instrument selected is an Index Prop and these attributes are not selected, an error message will apply:
 - Must have property UnderlyingCreditIndexSeries
 - Must have property UnderlyingCreditIndexVersion
 - The input text by the user must be a positive integer from 0 to 999. Otherwise, an error message will apply based on the following scenarios:
 - If the input text is less than 0, an error message will apply: "Value must be at least 0".
 - If the input text is greater than 999, an error message will apply: "Value must be a most 999".
 - If the input text 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 0."
 - If the input text contains character, remove the character and retain the integer if exists.
- iii. If multiple Underlying Instrument Index or multiple Underlying Instrument Index Prop are selected, the following validation will apply:

- Underlying Credit Index Series and Underlying Credit Index Version attributes must be present in the REQUEST and RECORD templates.
 - If multiple Underlying Instrument Index/Index Prop are selected and these attributes are not selected, an error message will apply:
 - Must have property UnderlyingCreditIndexSeries
 - Must have property UnderlyingCreditIndexVersion
 - The input text must be a positive integer from 0 to 999. Otherwise, an error message will apply: "Error: UnderlyingCreditIndexSeries and Version must be populated and must be equal to 0."
 - If the input text is less than 0, an error message will apply: "Value must be at least 0".
 - If the input text is greater than 999, an error message will apply: "Value must be a most 999".
 - If the input text 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 0."
 - If the input text contains character, remove the character and retain the integer if exists.
- iv. If Underlying Instrument selected is a combination of Index or Index Prop, the following validations will apply:
- Underlying Credit Index Series and Underlying Credit Index Version attributes must be present in the REQUEST and RECORD templates.
 - If a combination of Underlying Instrument Index/Index Prop are selected and these attributes are not selected, an error message will apply:
 - Must have property UnderlyingCreditIndexSeries
 - Must have property UnderlyingCreditIndexVersion
 - The input text must be a positive integer from 0 to 999. Otherwise, an error message will apply:
 - If the input text is less than 0, an error message will apply: "Value must be at least 0".
 - If the input text is greater than 999, an error message will apply: "Value must be a most 999".
 - If the input text 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 0."
 - If the input text contains character, remove the character and retain the integer if exists.
- v. If the Underlying Instrument selected is either an ISIN or LEI:
- An error message will apply: "Error: Term Value, Index Series and Index Version requires at least one Underlying Instrument Index".
- d. Debt Seniority
- i. Debt Seniority is an optional attribute with enumerated values [SNDB, MZZD, SBOD, JUND] and should only be present if the Underlying Instrument selected is an ISIN or LEI.
 - ii. If the Underlying Instrument selected is an ISIN or LEI and the attribute is not selected in the list, an error message will apply "Error: Debt Seniority must be one of (SNDB, MZZD, SBOD, JUND) if Underlying Instrument ISIN/LEI is selected".
 - iii. If Underlying Instrument selected is an Index or Index Prop and the attribute is selected in the list, an error message will apply "Error: Debt Seniority can't be one of (SNDB, MZZD, SBOD, JUND) if Underlying Instrument Index is selected".
 - iv. If multiple values are selected for underlier type, e.g., ISIN and/or LEI, attribute is not required. Otherwise, an error message will apply "Error: Debt Seniority can't be one of (SNDB, MZZD, SBOD, JUND) if multiple Underlying Instruments are selected".

Underlier ID Sources selected	Example Input Values	Error Message
Underlying Instrument ISIN	DE0001848083	→ "Error: Debt Seniority can't be one of (SNDB, MZZD, SBOD, JUND) if multiple Underlying Instruments are selected".
Underlying Instrument LEI	549300BZXZ66F6DTIF20	

4. Underlying Asset Class - Foreign_Exchange

- a. Notional and Other Notional Currency
 - Currency for both legs cannot be identical.
 - If the following attributes have the same currency, an error message will apply "Error: Notional Currency and Other Notional Currency cannot be identical".
- b. Settlement Currency
 - If Place of Settlement is selected, Settlement Currency must be populated.
 - If Place of Settlement is selected and Settlement currency is not selected in the list, an error message will apply before hitting create "Must have property SettlementCurrency".
 - If Place of settlement is selected and Settlement currency is not selected in the list, an error message will apply after hitting create: "/Attributes/UnderlyingAssetClass/Foreign_Exchange: property "PlaceofSettlement" of object has missing property dependencies (schema requires ["SettlementCurrency"]; missing: ["SettlementCurrency"])".

	<ul style="list-style-type: none"> • If Settlement Currency is selected, the delivery type must be “Cash”. • If Settlement currency is selected and delivery type is not “Cash”, an error message shall apply “Error: Delivery Type must be Cash”. <p>c. Place of Settlement</p> <ul style="list-style-type: none"> • If the Notional and Other Notional Currency are both CNY and has no Place of Settlement attribute, an error message will apply “Error: Notional Currency and Other Notional Currency cannot be identical”. • If the Notional and Other Notional Currency are both CNY and has Place of Settlement of “Hong Kong”, the combination string is acceptable. • If the Notional and Other Notional Currency is both CNY and Place of Settlement is not “Hong Kong, an error message will apply “Error: Place of Settlement must be Hong Kong for CNY/CNY request”. <p>5. Underlying Asset Class - Commodities User must select at least one of the following underlying instruments and below validation will apply depending on the selection.</p> <p>a. Underlying Instrument Index/ Index PROP</p> <p>i. Underlying Instrument Index</p> <ul style="list-style-type: none"> • Enumeration list is based on JSON codeset (CommoditiesIndex.json). <p>ii. Underlying Instrument Index Prop</p> <ul style="list-style-type: none"> • 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 selected in the request message. The only exception is asset class “Other” which is applicable to all asset classes. • 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 Commodities or Multi-Asset Index”. <p>b. Reference Rate</p> <ul style="list-style-type: none"> • Enumeration list is based on JSON codeset (FpmlCommoditiesReferenceRate.json). <p>c. Notional Currency</p> <ul style="list-style-type: none"> • User can only select Notional Currency and is a required field. <p>d. Base Product; Sub Product; Additional Sub Product</p> <ul style="list-style-type: none"> • The user inputs the Base Product, Sub Product and Additional Sub Product in such order. • Sub Product and Additional Sub Product enumerated list is dependent on the input Base Product (<i>refer to Appendix 1 & 2 below</i>). • If Sub Product or Additional Sub Product does not have a corresponding value, attribute(s) will not be present in the request message. <p>6. Underlying Asset Class = “Null”</p> <ul style="list-style-type: none"> • If user did not select any values in the Underlying Asset Class, an error message shall apply: <ul style="list-style-type: none"> ○ If user sends in a payload with Underlying Asset Class but with no value, an error message will apply: “/Attributes/UnderlyingAssetClass: object has too few properties (found 0 but schema requires at least 1)”. ○ If user sends in a payload with no Underlying Asset Class, an error message will apply: “/Attributes:object has missing required properties ([\UnderlyingAssetClass\])”.
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Additional Attribute Dictionary	This section provides the exact reference or source of the attribute that are not currently supported in the OTC ISIN.		
	Full Name	Source	Type
	Delivery Type	ISO 10962 Classification of financial instruments (CFI code)	Enums [Cash; Physical; Auction; Elect at Exercise; Non-Deliverable]
	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]
Strike Price Type	FIRDS Reference Data System Reporting Instructions	Enums [Monetary Value; Percentage; Yield; Basis Points; No Price]	

Normalization

1. Underlying Asset Class - Rates

a. Reference Rate Term Value and Reference Rate Term Unit

If Reference Rate Term Unit = "DAYS" and Reference Rate Term Value is divisible by 7, record it in weeks

Reference Rate Term Value	7	→	Reference Rate Term Value	1
Reference Rate Term Unit	DAYS		Reference Rate Term Unit	WEEK

If Reference Rate Term Unit = "MNTH" and Reference Rate Term Value is divisible by 12, record it in years

Reference Rate Term Value	12	→	Reference Rate Term Value	1
Reference Rate Term Unit	MNTH		Reference Rate Term Unit	YEAR

If Reference Rate Term Value is 0 and Reference Rate Term Unit is anything other than DAYS, it will be recorded as 0 DAYS:

Reference Rate Term Value	0	→	Reference Rate Term Value	0
Reference Rate Term Unit	WEEK		Reference Rate Term Unit	DAYS

Reference Rate Term Value	0	→	Reference Rate Term Value	0
Reference Rate Term Unit	MNTH		Reference Rate Term Unit	DAYS

Reference Rate Term Value	0	→	Reference Rate Term Value	0
Reference Rate Term Unit	YEAR		Reference Rate Term Unit	DAYS

b. Notional Currency and Other Notional Currency

The input Notional and Other Notional Currency submitted by users need to normalize to ensure that same ISIN is returned for a same set of attributes.

- Order the attributes alphabetically. The Notional Currency should be first alphabetically and Other Leg Notional Currency the second alphabetically. The associated attributes of the Notional Currency will move as part of Normalization.

Request			→	Record		
A.1	Notional Currency	EUR			Notional Currency	AUD
	Reference Rate	AUD-LIBOR-BBA	Reference Rate		AED-EBOR-Reuters	
	Reference Rate Term Value	3	Reference Rate Term Value		3	
	Reference Rate Term Unit	DAYS	Reference Rate Term Unit		DAYS	
B.1	Other Notional Currency	AUD		Other Notional Currency	EUR	
	Other Leg Reference Rate	AED-EBOR-Reuters		Other Leg Reference Rate	AUD-LIBOR-BBA	
	Other Leg Reference Rate Term Value	3		Other Leg Reference Rate Term Value	3	
	Other Leg Reference Rate Term Unit	DAYS		Other Leg Reference Rate Term Unit	DAYS	

c. Reference Rate and Other Leg Reference Rate

If only "Notional Currency" is selected, the input reference rate and other reference rate submitted by users need to normalize to ensure that same ISIN is returned for a same set of attributes.

The normalization applies if same code set is used for both attributes.

- Order the "Reference Rate" and "Other Reference Rate" alphabetically.
- If the "Reference Rate" is first alphabetically, then record it as "Reference Rate".
- If the "Reference Rate" is not first alphabetically, then record the fields as below:

Reference Rate	→	Other Leg Reference Rate
Reference Rate Term Value		Other Leg Reference Rate Term Value
Reference Rate Term Unit		Other Leg Reference Rate Term Unit

Other Leg Reference Rate	→	Reference Rate
Other Leg Reference Rate Term Value		Reference Rate Term Value
Other Leg Reference Rate Term Unit		Reference Rate Term Unit

If the Reference rate and Other reference rate are identical, the term value and unit will normalize to ensure that singular ISIN is returned for same set of attributes.

- If the Term unit is the same, then order the Term Value numerically from lowest to highest.
- If the Term unit is different, then convert the term unit as per order term multiplier below:

DAYS = 1
 WEEK = 7
 MNTH = 30
 YEAR = 365

- Multiply the number of Term value and order term multiplier for both reference rate legs. Then order the equivalent value numerically from lowest to highest as per below:

Reference Rate	AUD-LIBOR-BBA	→	Reference Rate	AUD-LIBOR-BBA
Reference Rate Term Value	15		Reference Rate Term Value	1
Reference Rate Term Unit	DAYS		Reference Rate Term Unit	WEEK
Other Leg Reference Rate	AUD-LIBOR-BBA		Other Leg Reference Rate	AUD-LIBOR-BBA
Other Leg Reference Rate Term Value	1		Other Leg Reference Rate Term Value	15
Other Leg Reference Rate Term Unit	WEEK		Other Leg Reference Rate Term Unit	DAYS

If the Reference Rate Term Value/Unit and Other Reference Rate Term Value/Unit has same equivalent value based on the order term multiplier, the details for the said attributes will be as is in the record template.

2. Underlying Asset Class - Equity

a. Underlying Instrument Index

- For any given Equity Index submission, a validation will apply against the existence of an ISIN and return the Index ISIN as part of the record in place of the Index Name.

Request Template	→	Record Template
Underlying Instrument Index KOSPI 200		Underlying Instrument ISIN KRD020020016

- If Index name has no associated Index ISIN, the index name input by the user will return in the record.

Request Template	→	Record Template
Underlying Instrument Index MSCI EM USD		Underlying Instrument Index MSCI EM USD

List of Indices and associated ISINs can be found [here](#).

3. Underlying Asset Class - Credit

a. 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

- If Underlying Instrument Index Term Value is 0 and Underlying Instrument Index Term Unit is anything other than DAYS, it will be recorded as 0 DAYS:

Underlying Instrument Index Term Value	0	→	Underlying Instrument Index Term Value	0
Underlying Instrument Index Term Unit	WEEK		Underlying Instrument Index Term Unit	DAYS

Underlying Instrument Index Term Value	0	→	Underlying Instrument Index Term Value	0
Underlying Instrument Index Term Unit	MNTH		Underlying Instrument Index Term Unit	DAYS

Underlying Instrument Index Term Value	0	→	Underlying Instrument Index Term Value	0
Underlying Instrument Index Term Unit	YEAR		Underlying Instrument Index Term Unit	DAYS

4. Underlying Asset Class – Foreign_Exchange

a. Notional Currency and Other Notional Currency

The input Notional and Other Notional Currency submitted by users need to normalize to ensure that same ISIN is returned for a same set of attributes.

- Order the "Notional currency" and "Other Notional Currency" alphabetically.
- If the "Notional Currency" is first alphabetically, then record it as "Notional Currency".
- If the "Notional Currency" is not first alphabetically, then record it as "Other Notional Currency".

Notional Currency	EUR	→	Notional Currency	AUD
Other Notional Currency	AUD		Other Notional Currency	EUR

5. Underlying Asset Class – Commodities

a. Not Required.

6. Full Name derivation

- After the derivation of each attribute defined in the long name, the normalisation will take place to remove the repeated derived values for attributes with same classification e.g., "Multiple Indices".

- Combination string: ISO Underlying Instrument Index, ISO Reference Rate, and ISO Other Leg Reference Rate – If user inputs multiple underlying for each attribute or any two of the attributes, the long name abbreviation will be “Multiple Indices”. The normalisation will remove repeated values in the derivation.

Attribute	Long Name Abbreviation	
	before normalisation	after normalisation
ISO Underlying Instrument Index	Multiple Indices	Multiple Indices
ISO Reference Rate	Multiple Indices	
ISO Other Leg Reference Rate	Multiple Indices	
- Combination string: Notional Currency and Other Notional Currency – if user inputs multiple currency for each attribute or any two of the attributes, the long name abbreviation will be “Multiple Currencies”. The normalisation will remove repeated values in the derivation.

Attribute	Long Name Abbreviation	
	before normalisation	after normalisation
Notional Currency	Multiple Currencies	Multiple Currencies
Other Notional Currency	Multiple Currencies	

Derivation	This section provides additional details to the derivation logic specified in the Template Layout sections (above).	
CFI Option Style and Type	Derived from the Request.OptionType and Request.OptionExerciseStyle <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” 	
Classification Type	Concatenation of the following attributes/values: <ul style="list-style-type: none"> Instrument Type: “H” Asset Class: “M” Underlying Asset Type: “M” Option Type/Style: from Request.OptionType and Request. OptionExercise Style... <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 Physical → P Elect at Exercise → E Non-Deliverable → N Auction → A E.g.: “HMMBVA”	
Short Name	Concatenation of the following attributes/values:	

		<ul style="list-style-type: none"> • Issuer Name: "NA/" • Instrument Type: "O" (fixed value) • Asset Class: "Oth" (fixed value) • Use Case: "Nstd" • Notional Currency <ul style="list-style-type: none"> - Single currency → from Request.NotionalCurrency - Multiple currency → "Mlt" • Other Notional Currency <ul style="list-style-type: none"> - Single currency → from Request.OtherNotionalCurrency - Multiple Currency → "Mlt" • Expiry Date <p>E.g.: "NA/O Oth Nstd Mlt Mlt 20210827"</p> <p>Note: The multiple currencies short name abbreviation is based on ISO Abbrev w acronyms-Final_v0.5.5.FINAL.xlsm.</p> <ul style="list-style-type: none"> • If the Notional Currency is either from Underlying Asset Class Rates, Foreign Exchange, or Commodities, the Notional currency will be taken from the input value. • If the Notional Currency is both from Underlying Asset Class Rates, Foreign Exchange and Commodities, the Notional Currency will be "Mlt". • Same behaviour will apply for Other Notional Currency.
	<p>Full Name</p>	<p>Concatenation of the following attributes/values:</p> <ul style="list-style-type: none"> • Asset Class: "Other" (fixed value) • Instrument Type: "Option" (fixed value) • Use Case: "Non_Standard" (fixed value) • Term of Contract Value: from Request.TermofContractValue • Term of Contract Unit: from Request.TermofContractUnit • Underlying Instrument ISIN: from Request.UnderlyingInstrumentISIN (Underlying AssetClass.Credit & UnderlyingAssetClass.Equity) <ul style="list-style-type: none"> - Single input → same value - Multiple input → "Multiple ISINs" • Underlying Instrument LEI: from Request.UnderlyingInstrumentLEI (Underlying AssetClass.Credit) <ul style="list-style-type: none"> - Single input → same value - Multiple input → "Multiple LEIs" • ISO Underlying Instrument Index: from Request.UnderlyingInstrumentIndex (Underlying AssetClass.Credit & UnderlyingAssetClass.Equity) & from Request.UnderlyingInstrumentIndexProp (UnderlyingAssetClass.Credit & UnderlyingAssetClass.Equity & UnderlyingAssetClass.Commodities) <ul style="list-style-type: none"> - Single input → Derived.UnderlyingInstrumentIndex of the input - Multiple input → "Multiple Indices" • Base Product: from Request.BaseProduct • Additional Sub Product: from Request.AdditionalSubProduct • ISO Reference Rate from Request.ReferenceRate (UnderlyingAssetClass.Rates) <ul style="list-style-type: none"> - Single input → Derived.ISOReferenceRate of the input - Multiple input → "Multiple Indices" • ISO Other Leg Reference Rate from Request.OtherLegReference Rate (UnderlyingAssetClass.Rates) <ul style="list-style-type: none"> - Single input → Derived.ISOReferenceRate of the input - Multiple input → "Multiple Indices" • Notional Currency <ul style="list-style-type: none"> - Single currency → from Request.NotionalCurrency - Multiple input → "Multiple Currencies" • Other Notional Currency <ul style="list-style-type: none"> - Single currency → from Request.OtherNotionalCurrency - Multiple input → "Multiple Currencies" • Expiry Date: from Request.ExpiryDate <p>E.g.: "Other Other Non_Standard 1 DAYS Multiple ISINs Multiple LEIs Multiple Indices ENVR EUAE ENVR EUAE Multiple Currencies 20210827"</p> <p>Notes:</p>

	<ul style="list-style-type: none"> If the Notional Currency is either from Underlying Asset Class Rates, Foreign Exchange, or Commodities, the Notional currency will be taken from the input value. If the Notional Currency is both from Underlying Asset Class Rates, Foreign Exchange, and Commodities, the Notional Currency will be "Multiple Currencies". Same behaviour will apply for Other Notional Currency. Normalisation of the Long name is indicated in Normalisation section of the document.
ISO Underlying Instrument Index	<p>Derived from the input Underlying Instrument Index & Underlying Instrument Index Prop...</p> <ul style="list-style-type: none"> Single input → Derived.UnderlyingInstrumentIndex of the input Multiple input → "Multiple Indices" <p>Notes:</p> <ul style="list-style-type: none"> Underlying Instrument Index input value is from Underlying Asset Class Credit & Equity. Underlying Instrument Index Prop input value is from Underlying Asset Class Credit, Equity & Commodities. If Underlying Instrument Index and Index Prop are not selected, the ISO Underlying Instrument Index attribute must not be present in the RECORD template.
ISO Reference Rate / ISO Other Leg Reference Rate	<p>Derived from the input Reference Rate...</p> <ul style="list-style-type: none"> Single input → Derived.ISOReferenceRate of the input Multiple input → "Multiple Indices" <p>Derived from the input Other Leg Reference Rate...</p> <ul style="list-style-type: none"> Single input → Derived.ISOOtherLegReferenceRate of the input Multiple input → "Multiple Indices" <p>Note:</p> <ul style="list-style-type: none"> Reference Rate and Other Leg Reference Rate input value is from Underlying Asset Class Rates. If Reference Rate and Other Leg Reference Rate are not selected, the ISO Reference Rate/ISO Other Leg Reference Rate attributes must not be present in the RECORD template.
ISO Delivery Type	<p>Derived from the input Delivery Type...</p> <ul style="list-style-type: none"> Cash → "CASH" Physical → "PHYS" Auction → "OPTL" Elect at Exercise → "OPTL" Non-Deliverable → "OPTL"

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)
Delivery Type	Delivery Type	The Delivery Type as defined by CFI code: ISO 10962 (2015) • As defined by CFI Code: ISO 10962 (2015)
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
Enum	Enum_Title	Tool Tip (and • value elaboration)
Cash	Cash	The discharge of an obligation by payment or receipt of a net cash amount instead of payment or delivery by both parties
Physical	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
Auction	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
Elect at Exercise	Elect at Exercise	The method of delivery of the underlying instrument when the option is exercised shall be determined at the time of exercise
Non-Deliverable	Non-Deliverable	The Delivery Type as defined by CFI code: ISO 10962 (2015) • As defined by CFI Code: ISO 10962 (2015)

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	<ul style="list-style-type: none"> • Code set name for Commodities, Credit and Equity of OTC ISIN should be aligned with UPI code set name. • Defaulted values will be removed in the input to align the requirements with the ISO 4914 (UPI) • Additional attributes are added in accordance with ISO 4914 (UPI) requirement. • There is no existing reference data that will support the validation of underlying instrument index for Commodities. In addition, an existing ticket (DSB-8) has been raised to address the issue. • Normalization of Notional and Other Notional Currency in OTC ISIN for Other.Other has invalid error message relating to an existing ticket (DSB-646). • The current behaviour in the OTC ISIN for attributes "Reference Rate Term Value/Unit", "Other Leg Reference Rate Term Value/Unit" and "Underlying Instrument Index Term Value/Unit" wherein 0 is an acceptable integer value remain unchanged. This only applies to OTC ISIN Multi-Asset Non-Standard templates. • For OTC ISIN Multi-Asset Non-Standard template, there is no requirement to provide a text version of the CFI character. Hence, the removal of the derived attribute "Underlying Asset Type". • The Delivery type "Non-Deliverable" is included in the CFI 2015 but is not supported in OTC ISIN for Other.Option.Non-Standard template. However, both OTC ISIN and UPI will support this enumerated value for this product. • In order to maintain the hierarchy of OTC ISIN/UPI, the Delivery Type enumerated values [Cash; Physical; Auction; Elect at Exercise, Non-Deliverable] are the CFI 2015 values that also applied in UPI. • ISO Delivery Type derivation is being maintained for standardization to all OTC ISIN Multi-Asset Non-Standard templates. • The current behaviour in the OTC ISIN for attributes "ISO Underlying Instrument Index", "ISO Reference Rate", "ISO Other Leg Reference Rate", "ISO Place of Settlement" remain unchanged.

Appendix 1

Below table shows the supported fields in the Current OTC ISIN against the Proposed ISIN change.

Current ISIN	Proposed ISIN		Comment
Asset Class		Asset Class	
Instrument Type		Instrument Type	
Product		Product	
Level		Level	
Underlying Instrument ISIN	EQUITY	Underlying Instrument ISIN	Original attribute does not define the asset class
	CREDIT	Underlying Instrument ISIN	Original attribute does not define the asset class
Notional Currency	RATES	Notional Currency	Original attribute does not define the asset class
	FOREIGN_EXCHANGE	Notional Currency	Original attribute does not define the asset class
	COMMODITIES	Notional Currency	Original attribute does not define the asset class
Expiry Date		Expiry Date	
Price Multiplier		Price Multiplier	
By Tenor		By Tenor	
Term of Contract Value		Term of Contract Value	
Term of Contract Unit		Term of Contract Unit	
By Effective Date		By Effective Date	
Effective Date		Effective Date	
Expiry Date Adjusted		Expiry Date Adjusted	
Tenor Calculation Method		Tenor Calculation Method	
Underlying Instrument LEI	CREDIT	Underlying Instrument LEI	Original attribute does not define the asset class
Underlying Instrument Index	EQUITY	Underlying Instrument Index	Original attribute does not define the asset class
	COMMODITIES	Underlying Instrument Index	Original attribute does not define the asset class
	CREDIT	Underlying Instrument Index	Original attribute does not define the asset class
Underlying Instrument Index Prop	EQUITY	Underlying Instrument Index Prop	Original attribute does not define the asset class
	COMMODITIES	Underlying Instrument Index Prop	Original attribute does not define the asset class
	CREDIT	Underlying Instrument Index Prop	Original attribute does not define the asset class
Underlying Instrument Index Term Value	CREDIT	Underlying Instrument Index Term Value	Original attribute does not define the asset class
Underlying Instrument Index Term Unit	CREDIT	Underlying Instrument Index Term Unit	Original attribute does not define the asset class
Underlying Credit Index Series	CREDIT	Underlying Credit Index Series	Original attribute does not define the asset class
Underlying Credit Index Version	CREDIT	Underlying Credit Index Version	Original attribute does not define the asset class
Debt Seniority	CREDIT	Debt Seniority	Original attribute does not define the asset class
Strike Price Type		Strike Price Type	
Strike Price		Strike Price	
Strike Price Currency		Strike Price Currency	

Option Type		Option Type	
Option Exercise Style		Option Exercise Style	
Base Product		Base Product	
Sub Product		Sub Product	
Additional Sub Product		Additional Sub Product	
Other Base Product		Other Base Product	
Other Sub Product		Other Sub Product	
Other Additional Sub Product		Other Additional Sub Product	
Transaction Type		Transaction Type	
Final Price Type		Final Price Type	
Reference Rate Commodities		Reference Rate Commodities	
Other Reference Rate Commodities		Other Reference Rate Commodities	
Reference Rate		Reference Rate	
Reference Rate Term Value		Reference Rate Term Value	
Reference Rate Term Unit		Reference Rate Term Unit	
Other Leg Reference Rate		Other Leg Reference Rate	
Other Leg Reference Rate Term Value		Other Leg Reference Rate Term Value	
Other Leg Reference Rate Term Unit		Other Leg Reference Rate Term Unit	
Other Notional Currency	RATES	Other Notional Currency	Original attribute does not define the asset class
	FOREIGN_EXCHANGE	Other Notional Currency	Original attribute does not define the asset class
Settlement Currency		Settlement Currency	
Place of Settlement		Place of Settlement	
Valuation Method or Trigger		Valuation Method or Trigger	
Delivery Type		Delivery Type	
Identification		Identification	
Status		Status	
Status Reason		Status Reason	
Last Update Date Time		Last Update Date Time	
Full Name		Full Name	Amended contents
Classification Type		Classification Type	
Commodity Derivative Indicator		Commodity Derivative Indicator	
Issuer or Operator of the Trading Venue Identifier		Issuer or Operator of the Trading Venue Identifier	
Short Name		Short Name	Amended contents
Underlying Asset Type		N/A	See Comments section above
ISO Underlying Instrument Index		ISO Underlying Instrument Index	
ISO Reference Rate		ISO Reference Rate	
ISO Other Leg Reference Rate		ISO Other Leg Reference Rate	
ISO Place of Settlement		ISO Place of Settlement	
ISO Delivery Type		ISO Delivery Type	See Comments section above
N/A		CFI Option Style and Type	New attribute to align with UPI requirement

Appendix 2

Below is the limited set of enumerations based on RTS 23 (EU 2017/585) Table 2 to support the following entries:

Base Product	Code	Sub Product	Code	Additional Sub Product	Code
Agricultural	AGRI	GrainOilSeed	GROS	FeedWheat Soybeans Rapeseed Other Maize Rice	FWHT SOYB RPSD OTHR CORN RICE
		Dairy Forestry Livestock Seafood	DIRY FRST LSTK SEAF		
		Soft	SOFT	RobustaCoffee Cocoa RawSugar WhiteSugar Other	ROBU CCOA BRWN WHSG OTHR
		OliveOil	OOLI	Lampante	LAMP
		Potato	POTA		
		Grain	GRIN	MillingWheat	MWHT
		Energy	NRGY	Coal Distillates InterEnergy LightEnd RenewableEnergy	COAL DIST INRG LGHT RNNG
Electricity	ELEC			Baseload FinancialTransmissionRights PeakLoad OffPeak Other	BSLD FITR PKLD OFFP OTHR
NaturalGas	NGAS			GasPool LNG NCG TTF NBP	GASP LNGG NCGG TTFG NBPG
Oil	OILP			Bakken Biodiesel Brent BrentNX Canadian Condensate Diesel Dubai ESPO Ethanol Fuel FuelOil Gasoil Gasoline HeatingOil JetFuel Kerosene LightLouisianaSweet Mars Naphta NGL Tapis WTI Urals	BAKK BDSL BRNT BRNX CNDA COND DSEL DUBA ESPO ETHA FUEL FOIL GOIL GSLN HEAT JTFL KERO LLSO MARS NAPH NGLO TAPI WTIO URAL

Base Product	Code	Sub Product	Code	Additional Sub Product	Code
Environmental	ENVR	Emissions	EMIS	CER ERU EUA EUAA Other	CERE ERUE EUAE EUAA OTHR
		CarbonRelated	CRBR		
		Weather	WTHR		
Freight	FRGT	Dry	DRYF	DryBulkCarrier	DBCR
		Wet	WETF	Tanker	TNKR
		ContainerShip	CSHP		
Fertilizer	FRTL	Ammonia	AMMO		
		DiammoniumPhosphate	DAPH		
		Potash	PTSH		
		Sulphur	SLPH		
		Urea UreaAndAmmoniumNitrate	UREA UAAN		
IndustrialProduct	INDP	Construction	CSTR		
		Manufacturing	MFTG		
Inflation	INFL				
OfficialEconomicStatistics	OEST				
Metal	METL	NonPrecious	NPRM	Aluminum AluminumAlloy Cobalt Copper IronOre Molybdenum NASAAC Nickel Steel Tin Zinc Other Lead	ALUM ALUA CBLT COPR IRON MOLY NASC NICK STEL TINN ZINC OTHR LEAD
		Precious	PRME	Gold Other Palladium Platinum Silver	GOLD OTHR PLDM PTNM SLVR
MultiCommodityExotic	MCEX				
Paper	PAPR	Containerboard	CBRD		
		Newsprint	NSPT		
		Pulp	PULP		
		RecoveredPaper	RCVP		
Polypropylene	POLY	Plastic	PLST		
OtherC10	OTHC	Deliverable	DLVR		
		NonDeliverable	NDLV		
Other	OTHR				

Appendix 3

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

Base Product		Sub Product		Additional Sub Product		Additional Sub Product	
enum_titles	enum	enum_titles	enum	enum_titles	enum	enum_titles	enum
Agricultural[AGRI]	AGRI	GrainOilSeed[GROS]	GROS	FeedWheat[FWHT]	FWHT	LightLouisianaSweet[LLSO]	LLSO
Energy[NRGY]	NRGY	Dairy[DIRY]	DIRY	Soybeans[SOYB]	SOYB	Mars[MARS]	MARS
Environmental[ENVR]	ENVR	Forestry[FRST]	FRST	Rapeseed[RPSD]	RPSD	Naphta[NAPH]	NAPH
Freight[FRGT]	FRGT	Livestock[LSTK]	LSTK	Other[OTHR]	OTHR	NGL[NGLO]	NGLO
Fertilizer[FRTL]	FRTL	Seafood[SEAF]	SEAF	Maize[CORN]	CORN	Tapis[TAPI]	TAPI
IndustrialProduct[INDP]	INDP	Soft[SOFT]	SOFT	Rice[RICE]	RICE	WTI[WTIO]	WTIO
Inflation[INFL]	INFL	OliveOil[OOLI]	OOLI	RobustaCoffee[ROBU]	ROBU	Urals[URAL]	URAL
OfficialEconomicStatistics[OEST]	OEST	Potato[POTA]	POTA	Cocoa[CCOA]	CCOA	CER[CERE]	CERE
Metal[METL]	METL	Grain[GRIN]	GRIN	RawSugar[BRWN]	BRWN	ERU[ERUE]	ERUE
MultiCommodityExotic[MCEX]	MCEX	Coal[COAL]	COAL	WhiteSugar[WHSG]	WHSG	EUA[EUAE]	EUAE
Paper[PAPR]	PAPR	Distillates[DIST]	DIST	Other[OTHR]	OTHR	EUAA[EUAA]	EUAA
Polypropylene[POLY]	POLY	InterEnergy[INRG]	INRG	Lampante[LAMP]	LAMP	Other[OTHR]	OTHR
OtherC10[OTHC]	OTHC	LightEnd[LGHT]	LGHT	MillingWheat[MWHT]	MWHT	DryBulkCarrier[DBCR]	DBCR
Other[OTHR]	OTHR	RenewableEnergy[RNNG]	RNNG	BaseLoad[BSLD]	BSLD	Tanker[TNKR]	TNKR
		Electricity[ELEC]	ELEC	FinancialTransmissionRights[FITR]	FITR	Aluminium[ALUM]	ALUM
		NaturalGas[NGAS]	NGAS	PeakLoad[PKLD]	PKLD	AluminiumAlloy[ALUA]	ALUA
		Oil[OILP]	OILP	OffPeak[OFFP]	OFFP	Cobalt[CBLT]	CBLT
		Emissions[EMIS]	EMIS	Other[OTHR]	OTHR	Copper[COPR]	COPR
		CarbonRelated[CRBR]	CRBR	GasPool[GASP]	GASP	IronOre[IRON]	IRON
		Weather[WTHR]	WTHR	LNG[LNGG]	LNGG	Molybdenum[MOLY]	MOLY
		Dry[DRYF]	DRYF	NCG[NCGG]	NCGG	NASAAC[NASC]	NASC
		Wet[WETF]	WETF	TTF[TTFG]	TTFG	Nickel[NICK]	NICK
		ContainerShip[CSHP]	CSHP	NBP[NBPG]	NBPG	Steel[STEL]	STEL
		Ammonia[AMMO]	AMMO	Bakken[BAKK]	BAKK	Tin[TINN]	TINN
		DiammoniumPhosphate[DAPH]	DAPH	Biodiesel[BDSL]	BDSL	Zinc[ZINC]	ZINC
		Potash[PTSH]	PTSH	Brent[BRNT]	BRNT	Other[OTHR]	OTHR
		Sulphur[SLPH]	SLPH	BrentNX[BRNX]	BRNX	Lead[LEAD]	LEAD
		Urea[UREA]	UREA	Canadian[CNDA]	CNDA	Gold[GOLD]	GOLD
		UreaAndAmmoniumNitrate[UAAN]	UAAN	Condensate[COND]	COND	Other[OTHR]	OTHR
		Construction[CSTR]	CSTR	Diesel[DSEL]	DSEL	Palladium[PLDM]	PLDM
		Manufacturing[MFTG]	MFTG	Dubai[DUBA]	DUBA	Platinum[PTNM]	PTNM
		NonPrecious[NPRM]	NPRM	ESPO[ESPO]	ESPO	Silver[SLVR]	SLVR
		Precious[PRME]	PRME	Ethanol[ETHA]	ETHA		
		Containerboard[CBRD]	CBRD	Fuel[FUEL]	FUEL		
		Newsprint[NSPT]	NSPT	FuelOil[FOIL]	FOIL		
		Pulp[PULP]	PULP	Gasoil[GOIL]	GOIL		
		RecoveredPaper[RCVP]	RCVP	Gasoline[GSLN]	GSLN		
		Plastic[PLST]	PLST	HeatingOil[HEAT]	HEAT		
		Deliverable[DLVR]	DLVR	JetFuel[JTFL]	JTFL		
		NonDeliverable[NDLV]	NDLV	Kerosene[KERO]	KERO		

Appendix 4

Naming convention differences between RTS 23 (EU 2017/585) Table 2 and the DSB OTC ISIN.

Base Product	ISO 20022		RTS23	DSB OTC ISIN
	Sub Product			
Agricultural	GrainOilSeed	GrainOilSeeds	Grains and Oil Seeds	GrainOilSeed
	Soft	Softs	Softs	Soft
Energy	LightEnd	LightEnds	Light Ends	LightEnd
	Carbon	Carbon	-	-
Environmental	Emissions	Emission	Emissions	Emissions
Fertilizer	UreaAndAmmoniumNitrate	UreaAndAmmoniumNitrite	Urea and Ammonium Nitrate	UreaAndAmmoniumNitrate
Freight	ContainerShip	ContainerShip	Container Ships	ContainerShip
OtherC10	Deliverable	Deliverable	-	Deliverable
	NonDeliverable	NonDeliverable	-	NonDeliverable

Sub Product	ISO 20022		RTS23	DSB OTC ISIN
	Additional Sub Product			
Dry	DryBulkCarrier	DryBulkCarrier	Dry bulk carriers	DryBulkCarrier