

Derivatives Service Bureau (UPI)
CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	J. Lim	22 Jun 2021	Initial Document
2	Draft	J. Lim	21 Jul 2021	Updated template layout, attribute section, attribute data dictionary, GUI details and reference
3	Draft	J. Lim	23 Aug 2021	Updated template layout
4	Draft	J. Lim	03 Sep 2021	Updated validation section and format of template layout
5	Draft	J. Lim	04 Oct 2021	Updated record template and derivation section

Title	OTHER OPTION Non Standard Template Definition			
Background	<p>The following CRF presents a specification for the generation and retrieval of a Unique Product Identifier for the following product:</p> <ul style="list-style-type: none"> Other : Option : Non_Standard 		DSB-ID	UPI-0494
			Type	New Template
			Owner	J.Lim
			Version	5
			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. 			

- | | |
|--|--|
| | <ul style="list-style-type: none">• 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 for UPI will not require user to identify individual constituent identifiers if the OTC derivative has more than one underlier ID. This is also in agreement with PC to align with ISO 4914 (UPI) specification and CPMI/IOSCO. |
|--|--|

Request Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Condition	Enum Source	ORIGIN
Header Section	Asset Class	Set	M	Other			CFI:2015 Char#2 (HM****)	ISIN
	Instrument Type	Set	M	Option			CFI 2015 Char#1 (HM****)	ISIN
	Product	Set	M	Non_Standard				ISIN
	Level	Set	M	UPI				NEW
Attribute Section	Underlying Asset Class.Rates	Object	C					NEW
	Notional Currency	Enum	(M)	AUD	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	ISIN
	Other Notional Currency	Enum	(C)	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	ISIN
	Underlying Structure (oneOf)	Object	(M)	Single Underlier	See CRF (Validation)	Populated if not a basket		NEW
	A1 Underlier ID Source	Enum	(M)	FPML	[FPML]		internal	NEW
	Underlier ID	Enum	(M)	AUD-CPI	See CRF (Validation and Normalization)		Fpml Coding Scheme 5.98 & 5.108	NEW
	Reference Rate Term Value	Integer	(M)	3	-999 to 999 (excluding 0)			ISIN
	Reference Rate Term Unit	Enum	(M)	MNTH	[DAYS, WEEK, MNTH, YEAR]		ISO 20022	ISIN
	Underlying Structure (oneOf)	Object	(M)	Basket	See CRF (Validation)	Populated for a basket		NEW
	B1 Underlier Characteristic	Enum	(M)	Basket	See CRF (Validation)	Populated for a basket	Internal	NEW
	Other Leg Underlying Structure (oneOf)	Object	(C)	Single Underlier	See CRF (Validation)			NEW
	A2 Other Leg Underlier ID Source	Enum	(C)	FPML	[FPML]		Internal	NEW
	Other Leg Underlier ID	Enum	(C)	USD-LIBOR-LIBO	See CRF (Validation and Normalization)		Fpml Coding Scheme 5.98 & 5.108	NEW
	Other Leg Reference Rate Term Value	Integer	(C)	3	-999 to 999 (excluding 0)			ISIN
	Other Leg Reference Rate Term Unit	Enum	(C)	MNTH	[DAYS, WEEK, MNTH, YEAR]		ISO 20022	ISIN
	Other Leg Underlying Structure (oneOf)	Object	(C)	Basket	See CRF (Validation)	Populated for a basket		NEW
	B2 Other Leg Underlier Characteristic	Enum	(C)	Basket	See CRF (Validation)	Populated for a basket	Internal	NEW
	Underlying Asset Class.Equity	Object	C					NEW
	Underlying Structure (oneOf)	Object	(M)	Single Underlier	See CRF (Validation)	Populated if not a basket		NEW
	A Underlier Type (oneOf)	Object	(M)	Single Stock	[Single Stock]			NEW
	Underlier ID Source	Enum	(M)	ISIN	[ISIN]		Internal	NEW
	Underlier ID	String	(M)	GB0008706128	See CRF (Validation)			NEW
	Underlier Type (oneOf)	Object	(M)	Equity Index	[Equity Index]			NEW
	Underlier ID Source	Enum	(M)	ESMA	[ESMA]		Internal	NEW
	Underlier ID	Enum	(M)	MSCI EM USD	See CRF (Validation)		ESMA TTC	NEW
	Underlier Type (oneOf)	Object	(M)	Proprietary Index	[Proprietary Index]			NEW
	Underlier ID Source	Enum	(M)	PROP	[PROP]		Internal	NEW
	Underlier ID	String	(M)	34810-JP16LMO	See CRF (Validation)		DSB Proprietary Index Enumeration	NEW
Underlying Structure (oneOf)	Object	(M)	Basket	See CRF (Validation)	Populated for a basket		NEW	
B Underlier Characteristic	Enum	(M)	Basket	See CRF (Validation)		Internal	NEW	
Underlying Asset Class.Credit	Object	C					NEW	
Underlying Structure (oneOf)	Object	(M)	Single Underlier	See CRF (Validation)	Populated if not a basket		NEW	
A Underlier Type (oneOf)	Object	(M)	Fixed Income Secur	[Fixed Income Security]			NEW	
Underlier ID Source	Enum	(M)	ISIN	[ISIN]		Internal	NEW	
Underlier ID	String	(M)	US87331AAB08	See CRF (Validation)			NEW	
Debt Seniority	Enum	(C)	SNDB	[SNDB, MZZD, SBOD, JUND]		If Underlier ID Source = LEI, ISIN	ISO 20022	
Underlier Type (oneOf)	Object	(M)	Legal Entity	[Legal Entity]			NEW	
Underlier ID Source	Enum	(M)	LEI	[LEI]		Internal	NEW	
Underlier ID	String	(M)	5493005BBCF84ICN	See CRF (Validation)		ISO 17442 LEI Codes	NEW	
Debt Seniority	Enum	(C)	SNDB	[SNDB, MZZD, SBOD, JUND]		If Underlier ID Source = LEI, ISIN	ISO 20022	
Underlier Type (oneOf)	Object	(M)	Proprietary Index	[Proprietary Index]			NEW	
Underlier ID Source	Enum	(M)	PROP	[PROP]		Internal	NEW	
Underlier ID	String	(M)	11423-BCRICSTI	See CRF (Validation)		DSB Proprietary Index Enumerations	NEW	
Underlier Type (oneOf)	Object	(M)	Credit Index	[Credit Index]			NEW	
Underlier ID Source	Enum	(M)	MRKT	[MRKT]		Internal	NEW	
Underlier ID	Enum	(M)	ABX.HE.A	See CRF (Validations)		Market Indices	NEW	
Underlying Instrument Index Term Value	Integer	(C)	7	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN	
Underlying Instrument Index Term Unit	Enum	(C)	DAYS	See CRF (Validations)	If Underlier ID Source = MRKT	ISO 20022	ISIN	
Underlying Credit Index Series	Integer	(C)	3	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN	
Underlying Credit Index Version	Integer	(C)	5	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN	
Underlying Structure (oneOf)	Object	(M)	Basket	See CRF (Validation)	Populated for a basket		NEW	
B Underlier Characteristic	Enum	(M)	Basket	See CRF (Validation)		Internal	NEW	
Underlying Asset Class.Foreign_Exchange	Object	C					NEW	
Underlier ID Source	String	(M)	CCY	[CCY]		Internal	NEW	
Underlier ID	Enum	(M)	USD	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	NEW	
Other Underlier ID Source	Enum	(M)	CCY	[CCY]		Internal	NEW	
Other Underlier ID	Enum	(M)	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	NEW	
Settlement Currency	Enum	(C)	EUR	ISOCurrencyCode.json	required if place of settlement is selected	ISO 4217 (3-Char CCY)	ISIN	
Place of Settlement	Enum	(C)	Hong Kong	Country List			ISIN	
Underlying Asset Class.Commodities	Object	C					NEW	
Underlying Structure (oneOf)	Object	(M)	Single Underlier	See CRF (Validation)	Populated if not a basket		NEW	
A1 Underlier Type (oneOf)	Object	(M)	Commodity Ref Price	[Commodity Ref Price]			NEW	
Underlier ID Source	Enum	(M)	ISDA	[ISDA]		internal	NEW	
Underlier ID	Enum	(M)	LEAD-LME CASH	FpmlCommoditiesReferenceRate.json		ISDA Taxonomy 2.0	NEW	
Underlier Type (oneOf)	Object	(M)	Commodity Index	[Commodity Index]			NEW	
Underlier ID Source	Enum	(M)	INDX	[INDX]		Internal	NEW	
Underlier ID	Enum	(M)	OTHER	CommoditiesIndex.json			NEW	
Underlier Type (oneOf)	Object	(M)	Proprietary Index	[Proprietary Index]			NEW	
Underlier ID Source	Enum	(M)	PROP	[PROP]		Internal	NEW	
Underlier ID	String	(M)	11339-MLCIKNC			DSB Proprietary Index Enumeration	NEW	
Base Product	Enum	(M)	ENVR	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]		RTS 23 (EU 2017/585) Table 2	ISIN	
Sub Product	Enum	(M)	EMIS	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN	
Additional Sub Product	Enum	(M)	EJAE	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN	
Underlying Structure (oneOf)	Object	(M)	Basket	See CRF (Validation)	Populated for a basket		NEW	
B1 Underlier Characteristic	Enum	(M)	Basket	See CRF (Validation)		Internal	NEW	
Other Underlying Structure (oneOf)	Object	(C)	Single Underlier	[Single Underlier, Basket]			NEW	
A2 Other Underlier ID Source	Enum	(C)	ISDA	[ISDA]		Internal	NEW	
Other Underlier ID	Enum	(C)	LEAD-LME CASH	FpmlCommoditiesReferenceRate.json		ISDA Taxonomy 2.0	NEW	
Other Base Product	Enum	(C)	METL	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]		RTS 23 (EU 2017/585) Table 2	ISIN	
Other Sub Product	Enum	(C)	NPRM	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN	
Other Additional Sub Product	Enum	(C)	ZINC	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN	
Other Underlying Structure (oneOf)	Object	(C)	Basket	See CRF (Validation)	Populated for a basket		NEW	
B2 Other Underlier Characteristic	Enum	(C)	Basket	See CRF (Validation)		Internal	NEW	
Option Type	Enum	M	CALL	[PUTO; CALL; OPTL]			ISIN	
Option Exercise Style	Enum	M	AMER	[AMER; BERM; EURO]	Required if Option Type <> ""		ISIN	
Valuation Method or Trigger	Enum	M	Vanilla	[Vanilla; Asian; Barrier; Lookback etc.]	Required if Option Type <> ""		ISIN	
Delivery Type	Enum	M	Physical	[Cash; Physical; Auction; Elect At Exercise]		CFI:2015 Char#6 (HM****)	ISIN	

Record Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Condition	Enum Source	ORIGIN	
Header Section	Asset Class	Set	M	Other			CFI:2015 Char#2 (HM****)	ISIN	
	Instrument Type	Set	M	Option			CFI 2015 Char#1 (HM****)	ISIN	
	Product	Set	M	Non_Standard				ISIN	
	Level	Set	M	UPI				NEW	
Attribute Section	Underlying Asset Class.Rates		Object	C				NEW	
	A1	Notional Currency	Enum	(M)	AUD	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	ISIN
		Other Notional Currency	Enum	(C)	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	ISIN
		Reference Rate	Enum	(M)	AUD-CPI	See CRF (Validation and Normalization)		Fpml Coding Scheme 5.98 & 5.108	NEW
		Reference Rate Term Value	Integer	(M)	3	-999 to 999 (excluding 0)			ISIN
		Reference Rate Term Unit	Enum	(M)	MNTH	[DAYS, WEEK, MNTH, YEAR]		ISO 20022	ISIN
		Other Leg Reference Rate	Enum	(C)	USD-LIBOR-LIBO	See CRF (Validation and Normalization)		Fpml Coding Scheme 5.98 & 5.108	NEW
	A2	Other Leg Reference Rate Term Value	Integer	(C)	3	-999 to 999 (excluding 0)			ISIN
		Other Leg Reference Rate Term Unit	Enum	(C)	MNTH	[DAYS, WEEK, MNTH, YEAR]		ISO 20022	ISIN
		Underlying Asset Class.Equity		Object	C				NEW
	A	Underlying Instrument ISIN	String	(M)	GB0008706128	See CRF (Validation)			NEW
		Underlying Instrument Index	Enum	(M)	MSCI EM USD	See CRF (Validation)		ESMA TTC	NEW
		Underlying Instrument Index Prop	String	(M)	34810-JP16LMO	See CRF (Validation)		DSB Proprietary Index Enumeration	NEW
	Underlying Asset Class.Credit		Object	C					NEW
	A	Underlying Instrument ISIN	String	(M)	US87331AAB08	See CRF (Validation)			NEW
		Underlying Instrument LEI	String	(M)	5493005BBCF84ICNQ550	See CRF (Validation)		ISO 17442 LEI Codes	NEW
		Debt Seniority	Enum	(C)	SNDB	[SNDB, MZZD, SBOD, JUND]	If Underlier ID Source = LEI, ISIN	ISO 20022	ISIN
		Underlying instrument Index Prop	String	(M)	11423-BCRICSTI	See CRF (Validation)		DSB Proprietary Index Enumerations	NEW
		Underlying instrument Index	Enum	(M)	ABX.HE.A	See CRF (Validations)		Market Indices	NEW
		Underlying Instrument Index Term Value	Integer	(C)	7	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN
		Underlying Instrument Index Term Unit	Enum	(C)	DAYS	See CRF (Validations)	If Underlier ID Source = MRKT	ISO 20022	ISIN
		Underlying Credit Index Series	Integer	(C)	3	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN
		Underlying Credit Index Version	Integer	(C)	5	See CRF (Validations)	If Underlier ID Source = MRKT		ISIN
		Underlying Asset Class.Foreign_Exchange		Object	C				
		Notional Currency	Enum	(M)	USD	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	NEW
		Other Notional Currency	Enum	(M)	EUR	ISOCurrencyCode.json		ISO 4217 (3-Char CCY)	NEW
		Settlement Currency	Enum	(C)	EUR	ISOCurrencyCode.json	required if place of settlement is selected	ISO 4217 (3-Char CCY)	ISIN
		Place of Settlement	Enum	(C)	Hong Kong	Country List			ISIN
		Underlying Asset Class.Commodities		Object	C				NEW
		A1	Reference Rate	Enum	(M)	LEAD-LME CASH	FpmlCommoditiesReferenceRate.json		ISDA Taxonomy 2.0
Underlying Instrument Index			Enum	(M)	OTHER	CommoditiesIndex.json			NEW
Underlying Instrument Index Prop			String	(M)	11339-MLCIINCK			DSB Proprietary Index Enumeration	NEW
Base Product			Enum	(M)	ENVR	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]		RTS 23 (EU 2017/585) Table 2	ISIN
Sub Product			Enum	(M)	EMIS	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN
Additional Sub Product			Enum	(M)	EUAE	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN
A2		Other Reference Rate	Enum	(C)	LEAD-LME CASH	FpmlCommoditiesReferenceRate.json		ISDA Taxonomy 2.0	NEW
		Other Base Product	Enum	(C)	METL	[AGRI; NRGY; ENVR; FRGT; FRTL; etc.]		RTS 23 (EU 2017/585) Table 2	ISIN
		Other Sub Product	Enum	(C)	NPRM	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN
		Other Additional Sub Product	Enum	(C)	ZINC	See CRF (Validation)		RTS 23 (EU 2017/585) Table 2	ISIN
Option Type		Enum	M	CALL	[PUTO; CALL; OPTL]			ISIN	
Option Exercise Style		Enum	M	AMER	[AMER; BERM; EURO]	Required if Option Type <> ""			ISIN
Valuation Method or Trigger		Enum	M	Vanilla	[Vanilla; Asian; Barrier; Lookback etc.]	Required if Option Type <> ""			ISIN
Delivery Type		Enum	M	Physical	[Cash; Physical; Auction; Elect At Exercise]		CFI:2015 Char#5 (HM****)	ISIN	
Identifier Section		UPI	String	D	QZ92PKL32D20	See UPI Document (UPI Code structure and Annex C)		ISO 4914	NEW
	Status	String	D	New				ISIN	
	Status Reason	String	D	<null>	Not applicable to a New record			ISIN	
	Last Update Date Time	DdTm	D	2021-02-23T00:00:13	YYYY-MM-DDThh:mm:ss			ISIN	
Derived Section	Classification Type	String	D	HMMBVP	See CRF (Derivations)		ISO 10962:2015	ISIN	
	Short Name	String	D	NA/O Oth Nstd	See CRF (Derivations)		ISO 18774: 2015	NEW	
	Underlying Asset Type	String	D	Other	Fixed value		CFI 2015 Char#3 (HMM****)	ISIN	
	CFI Option Style and Type	String	D	American-Call	See CRF (Derivations)		CFI:2015 Char#4 (HM****)	NEW	
	Underlying Asset Class.Rates		Object	C					NEW
	Underlier Characteristic	String	D	Single	See CRF (Validation)	Derived from underlying structure selection	Internal	NEW	
	Other Leg Underlier Characteristic	String	D	Single	See CRF (Validation)	Derived from underlying structure selection	Internal	NEW	
	Underlying Asset Class.Equity		Object	C					NEW
	Underlier Characteristic	String	D	Single	See CRF (Validation)	Derived from underlying structure selection	Internal	NEW	
	Underlying Asset Class.Credit		Object	C					NEW
	Underlier Characteristic	String	D	Single	See CRF (Validation)	Derived from underlying structure selection	Internal	NEW	
	Underlying Asset Class.Foreign_Exchange		Object	C					NEW
	Underlier Characteristic	String	D	Single	Fixed value		Internal	NEW	
	Underlying Asset Class.Commodities		Object	C					NEW
Underlier Characteristic	String	D	Single	See CRF (Validation)	Derived from underlying structure selection	Internal	NEW		
Other Leg Underlier Characteristic	String	D	Single	See CRF (Validation)	Derived from underlying structure selection	Internal	NEW		

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

**See Appendix 1 & 2 for enum_titles and elaboration.

Product Definition	
Attributes	<p>See Template Layout (above).</p> <p>a. Underlier Asset Class 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. 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>

	<p>b. Underlier Structure The above Request template described in this document supports products that can be defined with either a single underlier or a custom basket of (multiple) underliers. For this product the user is asked to select one of the following:</p> <ul style="list-style-type: none"> • Single Underlier • Basket <p>The selection of “Single Underlier” allows the user to enter the identifier for that individual underlier whereas the selection of “Basket” is considered a sufficient level of granularity (see ISO 4914 (UPI)) and so the user is not required to input a set of identifiers.</p> <p><i>Please note that basis-style products are not considered to be custom baskets and so the Request template allows the user to specify the individual underliers for each leg for this product.</i></p> <p>c. 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 with regards to asset class selected:</p> <ul style="list-style-type: none"> i. Equity <ul style="list-style-type: none"> • Single Stock • Equity Index • Proprietary Index ii. Credit <ul style="list-style-type: none"> • Fixed Income Security • Legal Entity • Proprietary Index • Credit Index iii. Commodities <ul style="list-style-type: none"> • Commodity Ref Price • Commodity Index • Proprietary Index <p>Once the Underlier Type is selected, the user will select one of the Underlier ID Sources associated with that Underlier Type and enter a Underlier ID that matches the ID Source.</p> <p><i>* Please see Underlier Input Method Document (see Reference Section below) for further details.</i></p>
<p>Validation</p>	<p>The following validation will apply depending on the selected underlying asset class and user can select single or multiple values in a request.</p> <p>1. Underlying Asset Class - Rates</p> <ul style="list-style-type: none"> a. Underlying Structure [oneOf structure] <ul style="list-style-type: none"> • User can only select either Single Underlier (Single value) or Basket (Multiple values) and is a required field. • If “Single Underlier” is selected, the Underlier ID and its Source [FPML], Reference Rate Term Value/Unit will be present in the request message. • If “Basket” is selected, the underlier ID and its associated attributes will not be present in the REQUEST and RECORD template. • Only “Basket” is allowed value in REQUEST message for underlier characteristic and/or Other Leg Underlier Characteristic. b. Other Leg Underlying Structure [oneOf Structure] <ul style="list-style-type: none"> • Other Leg Underlying Structure is an optional field. • Only one can be selected in the request message if attribute is selected, either Single Underlier (single value) or Basket (multiple value). • If “Single Underlier” is selected, the Other Leg Underlier ID Source [FPML], Other Leg Reference Rate Term Value/Unit will be present in the REQUEST message. • If “Basket” is selected, the Other Leg Underlier ID and its associated attributes will not be present in the REQUEST and RECORD template. • Only “Basket” is allowed value in REQUEST message for underlier characteristic and/or Other Leg Underlier Characteristic. c. Notional and Other Notional Currency <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".

d. Reference Rate and Other Leg Reference Rate

- If the Reference Rate and its term value/unit are the same with Other Leg reference rate and its term value/unit, an error message will apply "Error: Reference Rate and Other Leg Reference Rate with Term Value and Unit cannot be identical".

2. Underlying Asset Class - Equity

a. Underlying Structure [oneOf structure]

- If "Single Underlier" is selected, the Underlier ID and its Source [ISIN; ESMA; PROP] will be present in the request message.
- If "Basket" is selected, the underlier ID and Underlier ID Source will not be present in the REQUEST and RECORD template.
- Only "Basket" is allowed value in REQUEST message for underlier characteristic.

b. Underlier ID Source [ISIN; ESMA; PROP] [oneOf structure]

i. 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 and conformed with the syntactic validation after hitting create, an error message will apply "Error: /Attributes/Underlying: instance failed to match exactly one schema (matched 0 out of 2)".
- If the input ISIN is aligned with the pattern criteria but ISIN value does not conformed with syntactic validation, an error message will apply "Error: ISIN/s must be valid".

ii. ESMA

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

iii. 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 Ind9ex 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".

3. Underlying Asset Class - Credit

a. Underlying Structure [oneOf structure]

- If "Single Underlier" is selected, the Underlier ID and its source [ISIN; LEI; MRKT; PROP] will be present in the request message.
- If "Basket" is selected, the underlier ID and its associated attributes will not be present in the REQUEST and RECORD template.
- Only "Basket" is allowed value in REQUEST message if underlier characteristic is selected.

b. Underlier ID Source [ISIN; LEI; MRKT; PROP] [oneOf structure]

i. 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 and conformed with the syntactic validation after hitting create, an error message will apply "Error: /Attributes/Underlying: instance failed to match exactly one schema (matched 0 out of 2)".
 - If the input ISIN is aligned with the pattern criteria but ISIN value does not conformed with syntactic validation, an error message will apply "Error: ISIN/s must be valid".
- ii. LEI
- The input text by user must be in 20 characters (18 alphanumeric, 2 numeric).
 - A syntactic validation is being performed to confirm LEI.
 - If the input LEI is less or more than 20 characters and/or is not aligned with the above pattern before hitting create, an error message will apply "Value must match the pattern ^[A-Z0-9]{18}[0-9]{2}\$".
 - If the input LEI is not aligned with the pattern and conformed with the syntactic validation after hitting create, an error message will apply "Error: /Attributes/Underlying: instance failed to match exactly one schema (matched 0 out of 2)".
- iii. MRKT
- Enumeration list is based on JSON codeset (MrktCreditIndex.json).
- iv. 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".
- c. Underlying Instrument Index Term Value/ Underlying Instrument Index Term Unit
- i. If the underlier ID Source is "MRKT"
- Underlying Instrument Index Term Unit/Value will be present in the request message.
 - The input text for Underlying Instrument Term value must be an integer (positive or negative but not 0).
- ii. If the Underlier ID Source is not "MRKT", the attributes will not be present in the request message.
- d. Underlying Credit Index Series / Underlying Credit Index Version
- i. If the underlier ID Source is "MRKT"
- The input text by the user must be a positive integer from 1 to 999.
 - If the input text has a prefix of negative (-), an error message will apply: "Value must be at least 1."
 - If the input contains negative (-) or has value of zero "0", an error message will apply "Value must be of type integer. Value must be at most 999. Value must be at least 1."
 - If the input text contains character, remove the character, and retain the integer if exist.
 - If the Underlier ID Source is not "MRKT", the attributes will not be present in the request message.
- ii. If the Underlier ID Source is not "MRKT", the attributes will not be present in the request message.
- e. Debt Seniority
- i. If the Underlier ID Source is "LEI" or "ISIN", the attribute will be present in the request message.
- ii. If the Underlier ID Source is "MRKT" or "PROP", the attribute will not be present in the request message.
- 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 is a required field.
 - 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 "Error: /Attributes: instance failed to match exactly one schema (matched 0 out of 3)".
 - 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".

- c. Place of Settlement
 - 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”.
- 5. Underlying Asset Class - Commodities**
- a. Underlying Structure [oneOf structure]
 - User can only select either Single Underlier (Single value) or Basket (Multiple values) and is a required field.
 - If “Single underlier” is selected, the Underlier ID and its Source [ISDA; INDX; PROP], base product, sub product and additional sub product will be present in the request message.
 - If “Basket” is selected, the underlier ID and its associated attributes will not be present in the REQUEST and RECORD template.
 - Only “Basket” is allowed value in REQUEST message for underlier characteristic and/or Other Underlier Characteristic.
 - b. Other Underlying Structure [oneOf Structure]
 - Other Underlying structure is an optional field.
 - If “Single underlier” is selected, the Other Underlier ID and its Source [ISDA], base product, sub product and additional sub product will be present in the request message.
 - If “Basket” is selected, the Other underlier ID and its associated attributes will not be present in the REQUEST and RECORD template.
 - Only “Basket” is allowed value in REQUEST message for underlier characteristic and/or Other Underlier Characteristic.
 - c. Underlier ID Source [ISDA; INDX; PROP] [oneOf structure]
 - i. ISDA
 - Enumeration list is based on JSON codeset (ISDACommoditiesReferenceRate.json).
 - ii. INDX
 - Enumeration list is based on JSON codeset (CommoditiesIndex.json).
 - iii. 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 Commodities or Multi-Asset Index”.
 - d. Base Product; Sub Product; Additional Sub Product/Other Base Product; Other Sub Product; Other Additional Sub Product
 - The user inputs the Base Product, Sub Product and Additional Sub Product in such order. No default value set for Sub Product and Additional Sub Product.
 - Sub Product and Additional Sub Product enumerated list is dependent on the input Base Product (*refer to Appendix 1 & 2 below*).
 - If Sub Product or Additional Sub Product does not have a corresponding value, attribute(s) will not be present in the request message.
- 6. Underlying Asset Class = “Null”**
- If user did not select any values in the Underlying Asset Class, an error message shall apply “Error: At least one Underlying Asset Class must be selected.”.

Attribute Data Dictionary

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

Full Name	Source	Type
Notional Currency	ISO 4217 Currency Codes	Pattern: [A-Z]{3,3}
Other Notional Currency		

Settlement Currency		
Reference Rate	FpML Coding Schemes – RATES ISDA Taxonomy 2.0 - COMMODITIES	Max25Text (based on string) minLength: 1 maxLength: 25
Other Reference Rate/ Other Leg Reference Rate		
Reference Rate Term Value	Integer – Positive or negative but not 0	Max3Number (based on decimal) fractionDigits: 0 totalDigits: 3
Other Leg Reference Rate Term Value		
Reference Rate Term Unit	ISO 20022 FinancialInstrumentReportingReference DataReportV01	Max35Text (based on string) minLength: 1 maxLength: 35
Other Leg Reference Rate Term Unit		
Underlying Instrument ISIN	Not Available	Max of 12 text (pattern) [A-Z] – firsts 2 characters [A-Z], [0-9] – Next 9 characters [0-9] – Last value is based on ISIN calculation
Underlying Instrument LEI	ISO 17442 LEI Codes	Max of 20 text (pattern) Char 1-4: LOU Identifier Char 5-18: Entity Identifier Char 19-20: Verification ID
Underlying instrument Index	Markit Indices - CREDIT ESMA TTC – EQUITY	Max of 350Text (based on string) minLength: 1 maxLength: 350
Underlying Instrument Index Prop	DSB Proprietary Index Enumerations	(Based on string)
Underlying Credit Index Series	Positive integer (1 – 999)	Max3Number fractionDigits: 0 totalDigits: 3
Underlying Credit Index Version	Positive integer (1 – 999)	Max3Number fractionDigits: 0 totalDigits: 3
Underlying Instrument Index Term Value	Integer – Positive or negative but not 0	Max3Number (based on decimal) fractionDigits: 0 totalDigits: 3
Underlying Instrument Index Term Unit	ISO 20022 FinancialInstrumentReportingReference DataReportV01	Max35Text (based on string) minLength: 1 maxLength: 35
Base Product/Other Base Product	RTS23 (EU 2017/585) Table 2 Note: Please see Appendix 1 & 2 below for the complete list of values and their corresponding product codes.	Max35Text (based on string) minLength: 1 maxLength: 35
Sub Product/Other Sub Product		
Additional Sub Product/ Other Additional Sub Product		
Debt Seniority	ISO 20022 FinancialInstrumentReportingReference DataReportV01 Note: Only applies if Underlier ID Source is [ISIN or LEI].	Enums [SNDB; MZZD; SBOD; JUND]
Place of Settlement	ISO 3166 Country Codes	Max100Text (based on string) minLength: 0

		maxLength: 100
Delivery Type	ISO 10962 Classification of financial instruments (CFI code)	Enums [Cash; Physical; Auction; Elect at Exercise]
Option Type	ISO 20022 FinancialInstrumentReportingReference DataReportV01	Enums [CALL; PUTO; OPTL]
Option Exercise Style	ISO 20022 FinancialInstrumentReportingReference DataReportV01	Enums [AMER; BERM; EURO]
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]

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

b. Notional Currency and Other Notional Currency are different

- 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.

Sample A

Request			→	Record		
	Notional Currency	EUR			Notional Currency	AUD
A.1	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	
	Other Notional Currency	AUD		Other Notional Currency	EUR	
B.1	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	

Sample B

Request			→	Record		
	Notional Currency	EUR			Notional Currency	AUD
A.1	Reference Rate	AUD-LIBOR-BBA		A.2	Underlier Characteristic	Basket
	Reference Rate Term Value	3			Other Notional Currency	EUR
	Reference Rate Term Unit	DAYS		B.1	Other Leg Reference Rate	AUD-LIBOR-BBA
	Other Notional Currency	AUD		Other Leg Reference Rate Term Value	3	
B.2	Other Leg Underlier Characteristic	Basket		Other Leg Reference Rate Term Unit	DAYS	

c. If only "Notional Currency" is selected

- If the input combination is "Reference Rate" and "Other Leg Reference rate". Arrange the Reference rate and Other Leg reference rate alphabetically. The Reference Rate should be first alphabetically and Other Leg Reference rate the second alphabetically. The associated attributes (Reference Rate Term Value + Reference Rate Term Unit) are then moved as part of the normalization.

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

- If the input combination is "Reference rate" and "Other Underlier Characteristic". Record the attributes as is.

Request			→	Record		
	Notional Currency	EUR			Notional Currency	EUR
A.1	Reference Rate	USD-LIBOR-LIBO		Reference Rate	USD-LIBOR-LIBO	
	Reference Rate Term Value	3		Reference Rate Term Value	3	
	Reference Rate Term Unit	DAYS		Reference Rate Term Unit	DAYS	
B.2	Other Leg Underlier Characteristic	Basket		Other Leg Underlier Characteristic	Basket	

- If the input combination is "Underlier Characteristic" and "Other Leg Reference Rate". Record the Other Leg Reference Rate as "Reference Rate" and Underlier Characteristic as "Other Leg Underlier Characteristic". The associated attributes (Other Leg Reference Rate Term Value + Other Leg Reference Rate Term Unit) are then moved as part of the normalization and will change to "Reference Rate Term Value" + "Reference Rate Term Unit".

Request			Record		
	Notional Currency	EUR		Notional Currency	EUR
A.2	Underlier Characteristic	Basket		Reference Rate	USD-LIBOR-LIBO
B.1	Other Leg Reference Rate	USD-LIBOR-LIBO		Reference Rate Term Value	3
	Other Leg Reference Rate Term Value	3		Reference Rate Term Unit	DAYS
	Other Leg Reference Rate Term Unit	DAYS	A.2	Other Leg Underlier Characteristic	Basket

- If the input combination is "Underlier Characteristic" and "Other Underlier Characteristic". Record the attributes as is.

Request			Record		
	Notional Currency	EUR		Notional Currency	EUR
A.2	Underlier Characteristic	Basket	A.2	Underlier Characteristic	Basket
B.2	Other Leg Underlier Characteristic	Basket	B.2	Other Leg Underlier Characteristic	Basket

d. If only Notional Currency is selected, and Reference/ Other Leg Reference Rate are identical. If the Reference Rate and Other Leg Reference Rate submitted by users are identical, a normalization process in the term value/unit is needed to ensure that same UPI s 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. Underlier ID Source [ESMA]

- 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	Underlying Instrument ISIN
KOSPI 200	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	Underlying Instrument Index
MSCI EM USD	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

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 UPI 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. Base Product / Sub Product / Additional Sub Product / Reference Rate / Other Base Product / Other Sub Product / Other Additional Sub Product / Other Reference Rate

- Regardless of the order in which the reference legs are supplied, the DSB assumes the same UPI would be allocated to the instrument, i.e., the following user entries will be considered the same instrument:

Base Product	NRGY	AGRI
Sub Product	NGAS	GROS
Additional Sub Product	GASP	FWHT
Other Base Product	AGRI	NRGY
Other Sub Product	GROS	NGAS
Other Additional Sub Product	FWHT	GASP
Reference Rate	NATURAL GAS-CHICAGO CITY-GATES-INSIDE FERC	WHEAT FEED-NYSE Liffe
Other Reference Rate	WHEAT FEED-NYSE Liffe	NATURAL GAS-CHICAGO CITY-GATES-INSIDE FERC

- Order alphabetically the combination string of “Base Product + Sub Product + Additional Sub Product + Reference Rate” and “Other Base Product + Other Sub Product + Other Additional Sub Product + Other Reference Rate”.
- If “Base Product” and “Other Base Product” are different – alphabetically order them. The Base Product should be the first alphabetically and Other Base Product the second alphabetically. The associated attributes (Sub Product + Additional Sub Product + Reference Rate) are then moved as part of the normalization.
- If Base Product and Other Base Product are the same, and if “Sub product” and “Other Sub product” are different – alphabetically order them. The Sub Product should be the first alphabetically and Other Sub Product the second alphabetically. The associated attributes (Additional Sub Product + Reference Rate) are then moved as part of the normalization.
- If Base Product and Sub Product are the same as Other Base Product and Other Sub Product, and if “Additional Sub Product” and “Other Additional Sub product” are different – alphabetically order them. The Additional Sub Product should be the first alphabetically and Other Additional Sub Product the second alphabetically. The associated Reference Rate is then moved as part of the normalization.
- If “Base Product/ Sub Product/ Additional Sub Product” and “Other Base Product/ Other Sub Product/ Other Additional Sub Product” are the same, alphabetically order Reference Rate and Other Reference Rate.

b. Underlying Structure and Other Underlying Structure

- If the Underlying Structure is “Single underlier” and Other Underlying structure is a “Basket”, record the attribute as is.

Request			Record		
A.1	Underlier ID Source	ISDA	A.1	Reference Rate	LEAD-LME CASH
	Underlier ID	LEAD-LME CASH		Base Product	ENVR
	Base Product	ENVR		Sub Product	EMIS
	Sub Product	EMIS		Additional Sub Product	EUAE
B.2	Additional Sub Product	EUAE	B.2	Other Underlier Characteristic	Basket
B.2	Other Underlier Characteristic	Basket			

- If the Underlying structure is a “Basket” and Other Underlying structure is “Single underlier”, record the Single underlier first as Reference rate and the Basket as Other Underlier characteristic.

Request			Record		
B1	Underlier Characteristic	Basket	A.1	Reference Rate	LEAD-LME CASH
A2	Other Underlier ID Source	ISDA		Base Product	ENVR
	Other Underlier ID	LEAD-LME CASH		Sub Product	EMIS
	Other Base Product	ENVR		Additional Sub Product	EUAE
	Other Sub Product	EMIS	B.2	Other Underlier Characteristic	Basket
	Other Additional Sub Product	EUAE			

	<ul style="list-style-type: none"> If the Underlying Structure combination is "Underlier Characteristic" and "Other Underlier Characteristic". Record the attributes as is. 		
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 Underlying 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" CFI Option Style and Type: "B" Valuation Method or Trigger: "V" Delivery Type: "P" E.g.: "HMMBVP"	
	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) Product: "Nstd" (fixed value) E.g.: "NA/O Oth Nstd" <i>Note: The Short Name is based on the OTC ISIN that excludes the following fields:</i> <ul style="list-style-type: none"> - Notional Currency - Other Notional Currency - Expiry Date 	
	Underlier Characteristic	Based on the underlying structure selected, the following derivations will apply per Underlying Asset Class in the input: <ol style="list-style-type: none"> If the oneOf selected is "Single Underlier"; <ul style="list-style-type: none"> then set the Underlier Characteristic to "Single". If the oneOf selected is "Basket"; <ul style="list-style-type: none"> then set the Underlier Characteristic to "Basket". 	
GUI Details	The following section provides display information for any attributes (and values) that are not included in the related OTC ISIN definition.		
	Attribute	Display Name	Tool Tip (and • value elaboration)
	Underlying Structure/ Other Underlying Structure	Underlying Structure/ Other Underlying Structure	Indicates whether the product is based on a single underlier or a basket of underliers.
	Underlier Type/ Other Underlier Type	Underlier Type/ Other Underlier Type	Indicates the type of underlying asset or entity on which the product is based.
	Underlier ID	Underlier ID	An identifier that can be used to determine the asset(s), index (indices) or benchmark underlying a contract or, in the case of a foreign exchange derivative, identification of the currency pair or index
	Underlier ID Source	Underlier ID Source	The origin, or publisher, of the associated underlier ID.
	Underlier Characteristic/ Other Underlier Characteristic	Underlier Characteristic/ Other 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).	
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"> Text values in the Short Name are taken from "ISO Abbrev w acronyms-Final_v0.5.5.FINAL." 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]. There is a difference in the naming convention of Sub Product and Additional Sub Product between ISO 20022 and the DSB OTC ISIN (refer to Appendix 3 below), therefore the UPI will align with DSB OTC ISIN for these attributes. Currently the system does not hold reference data to support the validation of the LEI or ISIN. This means that it is not possible to validate the existence or classification of the Underlier ID. In addition, this means that human-readable alias is not currently supported for inclusion in the Short Name attribute. Codeset name for Credit Indices must be amended from FpmlCreditIndex.json to MrktCreditIndex.json. Underlying Instrument Index Term Unit/value are required fields in the DSB OTC ISIN having a default value of 0 if Underlying Instrument Index PROP is selected. In the case of UPI, if PROP is selected as underlier ID source, these attributes will be removed instead of default to 0. Underlying Credit Index Series/Version are required fields in the DSB OTC ISIN having a default value of 0 if Underlying Instrument Index PROP is selected. In the case of UPI, if PROP is selected as underlier ID source, these attributes will be removed instead of default to 0. Debt Seniority does not apply for Index and Index Tranche. In DSB OTC ISIN, debt seniority has no value and is included in the template, however in UPI the attribute is removed instead of having no value in the template. Codeset name for Commodities Reference Rate must be amended from FpmlCommoditiesReferenceRate.json to ISDACommoditiesReferenceRate.json. 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 Delivery type "Non-Deliverable" is included in the CFI 2015 but is not supported in OTC ISIN for Other.Option template hence, UPI will follow the same behaviour. 			
ISO 4914 Equivalence	ISO 4914		Request Attribute	Record Attribute
	Asset Class	M	Asset Class	Asset Class
	Instrument Type	M	Instrument Type	Instrument Type
	Currency associated with an underlying reference rate	C	Notional Currency	Notional Currency
	Delivery Type	M	Delivery Type	Delivery Type
	Option Style	C	Option Exercise Style	
	Option Type	C	Option Type	Option Type
	Return, pricing method or payout trigger	M	Valuation Method or Trigger	Valuation Method or Trigger
	Seniority	C	Debt Seniority	Debt Seniority
	Settlement Currency	C	Settlement Currency	Settlement Currency
	Standard Contract Specification*	C	Not Required	
				Reference Rate
				Other Leg Reference Rate
			Other Reference Rate	
			Underlying Instrument ISIN	

Underlier ID	C	Underlier ID	Underlying Instrument Index
			Underlying Instrument Index Prop
			Underlying Instrument LEI
			Notional Currency
			Other Notional Currency
Underlier ID source	C	Underlier ID source	Not Required
Underlier Type	M	Not Required	Further Grouping
Underlier Sub-type (first level)	C	Base Product	Base Product
		Other Base Product	Other Base Product
Underlier Sub-type (second level)	C	Sub Product	Sub Product
		Other Sub Product	Other Sub Product
Underlying Credit Index Series	C	Underlying Credit Index Series	Underlying Credit Index Series
Underlying Credit Index Version	C	Underlying Credit Index Version	Underlying Credit Index Version
Underlying Rate Index Tenor Period	C	Reference Rate Term Unit	Reference Rate Term Unit
		Other Reference Rate Term Unit	Other Reference Rate Term Unit
		Underlying Instrument Index Term Unit	Underlying Instrument Index Term Unit
Underlying Rate Index Tenor Period Multiplier	C	Reference Rate Term Value	Reference Rate Term Value
		Other Reference Rate Term Value	Other Reference Rate Term Value
		Underlying Instrument Index Term Value	Underlying Instrument Index Term Value

* Standard Contract Specification are not included as attributes in OTC ISIN and is a conditional attribute in ISO 4914 (UPI).

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

****Dependent on ISO review and approval for the inclusion of Underlying Debt Issuance Tenor Period/Multiplier as ISO 4914 (UPI) Conditional attributes.

Appendix 1

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	BSDL 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 2

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 3

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