Derivatives Service Bureau (UPI)

CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	J. Lim	20 May 2021	Initial Document
2	Draft	J. Lim	22 Jul 2021	Updated attribute data dictionary and reference

<table>
<tr><th>Title</th><th colspan="3">EQUITY OPTION Basket Template Definition</th></tr>
<tr><td rowspan="5">Background</td><td rowspan="5">The following CRF presents a specification for the generation and retrieval of a Unique Product Identifier for the following product:

• Equity : Option : Basket</td><td>DSB-ID</td><td>UPI-0359</td></tr>
<tr><td>Type</td><td>New Template</td></tr>
<tr><td>Owner</td><td>J.Lim</td></tr>
<tr><td>Version</td><td>2</td></tr>
<tr><td>State</td><td>Draft</td></tr>
<tr><td colspan="4">Terms of Reference</td></tr>
<tr><td>Scope</td><td colspan="3">• 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.</td></tr>
<tr><td>Requirements</td><td colspan="3">• 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.</td></tr>
<tr><td>Dependencies</td><td colspan="3">• 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.</td></tr>
<tr><td>Assumptions</td><td colspan="3">• This specification assumes that, unless stated, all values and behaviours are based on those of the equivalent OTC ISIN product definition.
• This specification assumes that no input values are to be defaulted by the system.
• This specification is based on the current ISO 4914 (UPI) specification (CD) – including attributes that are not currently supported by the equivalent OTC ISIN.
• This specification is based on the DSB’s current equivalent OTC ISIN product definition.
• This specification is based on the attributes and values defined in ISO 10962 (CFI:2015).
• In order to provide an example Short Name, this specification defines a format for this attribute that may not conform to the eventually agreed FISN format for the UPI. This specification assumes that the Short Name is defined using the same attributes (where available) as the OTC ISIN Short Name.
• Where possible, this specification derives GUI details from the ISO 4914 (UPI) specification for attributes that are not included in the current OTC ISIN product definition.
• The display information in the GUI for the existing attributes (and values) are taken from the OTC ISIN. If such information contains an "ISIN" in the description, replace the value into "UPI".
• The specification for UPI does not include expiry date as part of the attributes, hence "expired" status does not apply.
• The specification of individual Underlying identifiers and their sources is not required as part of the definition of a product based on a custom basket – as defined in the ISO 4914 (UPI) specification.</td></tr>
</table>

Request Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Enum Source	ORIGIN
Header Section	Asset Class	Set	M	Equity		CFI:2015 Char#2 (HE****)	ISIN
	Instrument Type	Set	M	Option		CFI 2015 Char#1 (HE****)	ISIN
	Product	Set	M	Basket			ISIN
	Level	Set	M	UPI			NEW
Attribute Section	Option Type	Enum	M	PUTO	[CALL; PUTO; OPTL]	ISO 20022	ISIN
	Option Exercise Style	Enum	M	EURO	[AMER; BERM; EURO]	ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Barrier	[Vanilla; Asian; Barrier; Lookback etc.]	CFI:2015 Char#4 (HE****)	ISIN
	Delivery Type	Enum	M	PHYS	[CASH; PHYS; OPTL]	ISO 20022	ISIN

Record Template Layout

Section	Attribute	Format	Cat	Example Value	Validation / Derivation	Enum Source	ORIGIN
Header Section	Asset Class	Set	M	Equity		CFI:2015 Char#2 (HE****)	ISIN
	Instrument Type	Set	M	Option		CFI 2015 Char#1 (HE****)	ISIN
	Product	Set	M	Basket			ISIN
	Level	Set	M	UPI			NEW
	Template Version	Integer	D	1			ISIN
Attribute Section	Option Type	Enum	M	PUTO	[CALL; PUTO; OPTL]	ISO 20022	ISIN
	Option Exercise Style	Enum	M	EURO	[AMER; BERM; EURO]	ISO 20022	ISIN
	Valuation Method or Trigger	Enum	M	Barrier	[Vanilla; Asian; Barrier; Lookback etc.]	CFI:2015 Char#5 (HE****)	ISIN
	Delivery Type	Enum	M	PHYS	[CASH; PHYS; OPTL]	ISO 20022	ISIN
Identifier Section	UPI	String	D	QZGP9LP73HL2	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	HEBDBP	See CRF (Derivations)	ISO 10962:2015	ISIN
	Short Name	String	D	NA/O Bskt Put Epn	See CRF (Derivations)	ISO 18774: 2015	NEW
	Underlying Asset Type	String	D	Basket	Fixed value	CFI:2015 Char#3 (HEB***)	ISIN
	CFI Option Style and Type	String	D	European-Put	See CRF (Derivations)	CFI:2015 Char#4 (HE****)	NEW
	CFI Delivery Type	String	D	Physical	See CRF (Derivations)	CFI:2015 Char#6 (HE****)	NEW

Product Definition	
Attributes	See Template Layout (above).
Validation	Not Required.
Normalization	Not Required.
Attribute Data Dictionary	This section provides the exact reference or source of the attribute.

Full Name	Source	Type
Delivery Type	ISO 20022 FinancialInstrumentReportingReferenceData ReportV01	Enums *[CASH; PHYS; OPTL]*
CFI Delivery Type	ISO 10962 Classification of financial instruments (CFI code)	Enums *[Cash; Physical; Elect at Exercise]*
Option Exercise Style	ISO 20022 FinancialInstrumentReportingReferenceData ReportV01	Enums *[AMER; BERM; EURO]*
Option Type	ISO 20022 FinancialInstrumentReportingReferenceData ReportV01	Enums *[CALL; PUTO; OPTL]*
Valuation Method or Trigger	ISO 10962 Classification of financial instruments (CFI code)	Enums [*Vanilla; Asian; Digital (Binary); Barrier; Digital Barrier; Lookback; Other Path Dependent; Other]*

Derivation	This section provides additional details to the derivation logic specified in the Template Layout sections (above).

Classification Type	Concatenation of the following attributes/values: • Instrument Type: "H"

		• Asset Class: "E" • Underlying Asset Type: "B" • Option Type/Style: from Request.OptionType and Request. OptionExercise Style… - *PUTO/AMER →* *E* - *PUTO/BERM →* *F* - *PUTO/EURO →* *D* - *CALL/AMER →* *B* - *CALL/BERM →* *C* - *CALL/EURO →* *A* - *OPTL/AMER →* *H* - *OPTL/BERM →* *I* - *OPTL/EURO →* *G* • Valuation Method or Trigger: from Request.ValuationMethodorTrigger - *Vanilla →* *V* - *Asian →* *A* - *Digital (Binary) →* *D* - *Barrier →* *B* - *Digital Barrier →* *G* - *Lookback →* *L* - *Other Path Dependent →* *P* - *Other →* *M* • Delivery Type: from Request.DeliveryType… - *CASH →* *C* - *PHYS →* *P* - *OPTL→* *E* E.g.: "HEBDBP"
	Short Name	Concatenation of the following attributes/values: • Issuer Name: "NA/" • Instrument Type: "O" (fixed value) • Underlying Asset Type: "Bskt" (fixed value) • Option Type: from request.OptionType - PUTO "Put" - CALL "Call" - OPTL "Opt" • Option Exercise Style: from request.OptionExerciseStyle - AMER "Amr" - BERM "Brm" - EURO "Epn" E.g.: "NA/O Bskt Put Epn" *Note: The Short Name is based on the OTC ISIN that excludes the following fields:* - *Notional Currency* - *Expiry Date*
	CFI Option Style and Type	Derived from the Underlying Request.OptionType and Request.OptionExerciseStyle • PUTO/AMER → "American-Put" • PUTO/BERM → "Bermudan-Put" • PUTO/EURO → "European-Put" • CALL/AMER → "American-Call" • CALL/BERM → "Bermudan-Call" • CALL/EURO → "European-Call" • OPTL/AMER → "American-Chooser" • OPTL/BERM → "Bermudan-Chooser" • OPTL/EURO → "European-Chooser"
	CFI Delivery Type	Derived from the input Delivery Type… • CASH → "Cash" • PHYS → "Physical" • OPTL → "Elect at Exercise"
GUI Details	The following section provides display information for any attributes (and values) that are not included in the related OTC ISIN definition.	

Attribute	Display Name	Tool Tip (and • *value elaboration*)
UPI	Identification	Unique Product Identifier (ISO 4914).
CFI Option Style and Type	CFI Option Style and Type	The Option Style and Type as defined by CFI code: ISO 10962 • *As defined by CFI Code: ISO 10962*
CFI Delivery Type	CFI Delivery Type	The Delivery Type as defined by CFI code: ISO 10962 • *As defined by CFI Code: ISO 10962*

Additional Information	
Reference	References to external documents can be found on the DSB website at this address [https://www.anna-dsb.com/upi-external-reference-documents/].
Comments	• Text values in the Short Name are taken from “ISO Abbrev w acronyms-Final_v0.5.5.FINAL.” • Option Type enumerated values in the DSB OTC ISIN are [CALL; PUTO; OPTL] whereas in ISO 20022, values are [CALL; PUTO; OTHR]. • The shortname abbreviation for option type – Put is “P” for rates option while in equity and Foreign_Exchange, shortname abbreviation for the option type – Put is “Put”. Same as for Option Type – OPTL whereas in FX it is “O” and “Opt” for Rates and Equity.

ISO 4914 Equivalence

ISO 4914	Request Attribute	Record Attribute
Asset Class	Asset Class	Asset Class
Instrument Type	Instrument Type	Instrument Type
Delivery Type	Delivery Type	Delivery Type CFI Delivery Type
Option style	Option Exercise Style	Option Exercise Style
Option type	Option Type	Option Type
Return, pricing method or payout trigger	Valuation Method or Trigger	Valuation Method or Trigger
Underlier ID*	Not Required.	
Underlier ID source*	Not Required.	
Underlier Type	Not Required	Underlying Asset Type
Underlying contract tenor period **	Not Required	
Underlying contract tenor period multiplier **	Not Required	

*Underlier ID/ Source are not required for a custom of basket defined in the ISO 4914 (UPI) specification.
**Underlying Contract Tenor Period / Multiplier applies only to a derivative contract underlying another derivative.