DERIVATIVES SERVICE BUREAU (DSB) LTD

Credit : Option : Non_Standard

ISIN Product Definition

Version 1

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Contents

1. Introduction

This document is designed to act as a manual for users to interpret the Product Definitions in the DSB OTC ISIN Service.

This document provides the user with a detailed description of the ISIN Product Definition content such as attribute enumerations, validation, normalization, and derivation where applicable.

1.1 Associated Documentation

The reference documents below contain values and information maintained by the DSB for consistency and ease of access.

These documents are made available on the ANNA DSB website (Product Definitions page):

Title	Description	Location
Enumerations Document	Lists all fixed values used for a product	Enumerations section
Product Definition Data Dictionary	Defines attributes in the Request and Record templates; and from which they are referenced on	Other Documents section
Product Definition Validations and Normalizations Document	Specifies details on validation and normalization rules	
Best Practice Guidelines and FAQs	Lists answers to queries raised by users and provides guidance on the use of the templates	
GitHub Environment Section	ANNA DSB Github Environment where the JSON templates for each product is found	

2. Product Taxonomy

2.1 CFI Taxonomy

Source: ISO 10962 (CFI Code) – Third edition 2015-07-15

Attr #	Title	Values	Name	Description
	Instrument (Category)	**H**	Non-listed and complex listed options	
	Asset Class (Group)	**C**	Credit	
Attr #1	**Underlying Assets**	**U**	CDS on a single name	A CDS where the underlying risk is a single reference entity or single reference obligation
		V	CDS on an index tranche	A synthetic CDO based on a CDS index where each tranche references a different segment of the loss distribution of the underlying CDS index; each tranche has a different priority of claims on the principal and interest flows from the collateral pool, and are traditionally portioned into rising levels of seniority
		I	CDS on an index	Family of standardized credit derivative indices, where the underlying reference entities are a defined basket of credit from a particular geographic region (for instance, Asia, North America, Europe, etc.), and/or credit rating level (for instance Emerging Markets, high yield, investment grade, etc.); credit default indices trade in standard maturities, and the reference entities are typically the most liquid; the reference portfolio is reassessed periodically to maintain this
		W	Swaps	Swaps
		M	Others	Others (miscellaneous)
Attr #2	**Option style and type**	**A**	European-Call	An option on a contract which allows its holder (buyer) to exercise the right to buy specified assets (interest rates product) at a fixed price only on the expiration date of the call
		B	American-Call	An option on a contract which allows its holder (buyer) to exercise the right to buy specified assets (interest rates product) at a fixed price at any time during the term of the call option, up to and including the expiration date of the call
		C	Bermudan-Call	An option on a contract which allows its holder (buyer) to exercise the right to buy specified assets (interest rates product) at a fixed price on a number of specific dates within the exercise period of the call
		D	European-Put	An option on a contract which allows its holder (buyer) to exercise the right to sell specified assets (interest rates product) at a fixed price only on the expiration date of the put

		E	American-Put	An option on a contract which allows its holder (buyer) to exercise the right to sell specified assets (interest rates product) at a fixed price at any time during the term of the put option, up to and including the expiration date of the put
		F	Bermudan-Put	An option on a contract which allows its holder (buyer) to exercise the right to sell specified assets (interest rates product) at a fixed price on a number of specific dates within the exercise period of the put
		G	European-Chooser	An option on a contract which allows its holder (buyer) to exercise the right to buy (call) or sell (put) specified assets (interest rates product) at a fixed price, only on the contract's expiration date; the buyer does not have to decide whether the contract will be a put or a call until an agreed future date, prior to expiration
		H	American-Chooser	An option on a contract which allows its holder (buyer) to exercise the right to buy (call) or sell (put) specified assets (interest rates product) at a fixed price at any time during the term of the contract, up to and including the expiration date of the call or put; the buyer does not have to decide whether the contract will be a put or a call until an agreed future date, prior to expiration
		I	Bermudan-Chooser	An option on a contract which allows its holder (buyer) to exercise the right to buy (call) or sell (put) specified assets (interest rates product) at a fixed price on a number of specific dates within the exercise period of the contract; the buyer does not have to decide whether the contract will be a put or a call until an agreed future date, prior to expiration
Attr #3	**Valuation method or trigger**	**V**	Vanilla	An option for which all terms are standardized
		A	Asian	An option where either the strike price or the settle-ment price is the average level of an underlying instrument over a predetermined period; the averaging can be either a geometric or arithmetic average
		D	Digital (Binary)	An option that has a pre-determined pay-out if the option is in-the-money and the payoff condition is satisfied; also referred to as a "binary option" or an "all-or-nothing option"
		B	Barrier	An option whose final exercise depends upon the path taken by the price of an underlying instrument; for a "knock-out" barrier option, the option is cancelled if the underlying price crosses a predetermined barrier level; for a "knock-in" barrier option, the option becomes available-for-exercise if the underlying price crosses a predetermined barrier level

		G	Digital barrier	A digital option embedded with a barrier option; there are different variations of this type of option; as an example, a down-and-out digital call option will pay a fixed payoff, or the underlying, at any time before maturity that the underlying price is equal to or greater than the bar-rier level; it will pay zero if the underlying price is less than the barrier level
		L	Lookback	An option that minimizes the uncertainties related to the timing of market entry; there are two types of look-back options: fixed and floating; the fixed option strike is determined at purchase, and the floating option strike is determined at maturity
		P	Other path dependent	An option on a contract whose payoff is directly related to the price pattern the underlying asset follows during the life of the contract
		M	Others	Others (miscellaneous)
Attr #4	**Delivery Type**	**C**	Cash	The discharge of an obligation by payment or receipt of a net cash amount instead of payment or delivery by both parties
		P	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
		E	Elect at exercise	The method of delivery of the underlying instrument when the option is exercised shall be determined at the time of exercise

2.2 ISDA Taxonomy

The table below is based on the products identified as part of the ISDA 2.0 taxonomy.

Asset Class	Base Product	Sub-Product	Transaction Type	DSB Product Definition Name
Credit	Exotic	Various entries	Various entries	Non_Standard_Option

3. Request Template

The Request Template describes the input message received by the OTC ISIN service.

Users can find the detailed description of this template in the Credit spreadsheet that contains the layout of all templates. This can be found in the Credit section of the Product Definitions page on the ANNA DSB website.

Change details of the template can be found on the appropriate Github page.

Template name	Template details	Release
Request.Credit.Option.Non_Standard.InstRefDataReporting.json	Initial version	Initial

3.1 Validation Rules

- For non-specific product validation rules, please refer to ISIN Product Definition Validations and Normalizations Document (See Section 1.1).
- For enumerations, please refer to the associated ISIN Product Definition Enumeration document for the impacted attributes (See Section 1.1).

3.1.1 Underlying Instrument Index Term Value / Underlying Instrument Index Term Unit

a. If Underlying Instrument Index is selected, the following validation will apply:

- Underlying Instrument Index Term Value and Underlying Instrument Index Term Unit must be present in the REQUEST and RECORD messages.
- Underlying Instrument Index Term Unit: *[DAYS; WEEK; MNTH; YEAR]*.
- Underlying Instrument Index Term Value: Input text must be an integer from -999 to 999 (but not 0).

Attribute	Validation Type	Validation	Error Message
Underlying Instrument Index Term Value	Integer validation	Input text must be an integer from -999 to 999 (but not 0).	Value must be at most 999.
			Value must be at least -999.
			Value must not validate against the provided schema. Value can't be 0.

b. If Underlying Instrument Index Prop is selected, the following validation will apply:

- Underlying Instrument Index Term Value and Underlying Instrument Index Term Unit must be present in the REQUEST and RECORD messages.
- Underlying Instrument Index Term Unit: [DAYS; WEEK; MNTH; YEAR].
- Underlying Instrument Index Term Value: Input text must be an integer from -999 to 999 (including 0).

Attribute	Validation Type	Validation	Error Message
Underlying Instrument Index Term Value	Integer validation	Input text must be an integer from -999 to 999 (including 0).	Value must be at most 999.
			Value must be at least -999.

c. If Underlying Instrument ISIN/LEI is selected, Underlying Instrument Index Term Value/Unit attributes will not be present in the REQUEST and RECORD messages.

3.1.2 Underlying Credit Index Series / Underlying Credit Index Version

a. If Underlying Instrument Index is selected, the following validations will apply:

- Underlying Credit Index Series and Underlying Credit Index Version attributes must be present in the REQUEST and RECORD messages.
- The input text by the user must be a positive integer from 1 to 999.
- If the input text contains character, remove the character, and retain the integer if exists.

Attribute	Validation Type	Validation	Error Message
Underlying Credit Index Series / Underlying Credit Index Version	Integer validation	Input text has a prefix of negative (-).	Value must be at least 1.
		Input text contains negative (-) after the integer.	Value must be of type integer. Value must be at most 999. Value must be at least 1.

b. If Underlying Instrument Index Prop is selected, the following validations will apply:

- The input text by the user must be a positive integer from 0 to 999.
- If the input text contains character, remove the character, and retain the integer if exists.

Attribute	Validation Type	Validation	Error Message
Underlying Credit Index Series / Underlying Credit Index Version	Integer validation	Input text has a prefix of negative (-).	Value must be at least 0.
		Input text contains negative (-) after the integer.	Value must be of type integer. Value must be at most 999. Value must be at least 0.

c. If Underlying Instrument ISIN/LEI is selected, Underlying Credit Index Series/Version attributes will not be present in the REQUEST and RECORD messages.

4. Record Template

The Record Template describes the record returned by the OTC ISIN service.

Users can find the detailed description of this template in the Credit spreadsheet that contains the layout of all templates. This can be found in the Credit section of the Product Definitions page on the ANNA DSB website.

Change details of the template can be found on the appropriate Github page.

Version	Template name	Template details
V1	**Credit.Option.Non_Standard.InstRefDataReporting.V1.json**	Initial version
V1M1	**Credit.Option.Non_Standard.InstRefDataReporting.V1M1.json**	Added Parent UPI
V2	**Credit.Option.Non_Standard.InstRefDataReporting.V2.json**	Updated Debt Seniority attribute
V2M1	**Credit.Option.Non_Standard.InstRefDataReporting.V2M1.json**	Added Parent UPI

4.1 Normalization Rules

For non-specific product normalization rules, please refer to the Product Definition Validations and Normalizations (See Section 1.1).

4.2 Derivation Rules

This section describes the derivations of product attributes highlighted in the Record Template.

4.2.1 Full Name

Attribute	Full Name			
Structure	Asset Class + Instrument Type + Product + Underlying Asset Type + Underlying Input + Notional Currency + Expiry Date			
Example	Credit Option Non_Standard CDS on Single Name US69183QAA40 LKR 20230805			
Source	RTS23/Field2 - Instrument Full Name			
Source Attribute	**Source Value**		**Derivation Method**	**Result**
Asset Class	Credit		Fixed Value	Credit
Instrument Type	Option		Fixed Abbreviation	Option
Product	Non_Standard		Fixed Abbreviation	Non_Standard

Underlying Asset Type	CDS on Single Name		Mapped to =>	CDS on Single Name
	CDS on Index Tranche		Mapped to =>	CDS on Index Tranche
	CDS on Index		Mapped to =>	CDS on Index
	Swaps		Mapped to =>	Swaps
	Other		Mapped to =>	Other
Underlying Input	Underlying Instrument ISIN	e.g., US69183QAA40	Extracted value =>	e.g., US69183QAA40
		Multiple Input ISIN	Mapped to =>	Multiple ISINs
	Underlying Instrument LEI	e.g., INR2EJN1ERAN0W5ZP974	Extracted value =>	e.g., INR2EJN1ERAN0W5ZP974
		Multiple Input LEI	Mapped to =>	Multiple LEIs
	Underlying Instrument Index	e.g., ITRAXX EUROPE	Extracted value =>	e.g., ITRAXX EUROPE
		Multiple Input Index	Mapped to =>	Multiple Indices
	Underlying Instrument Index Prop	e.g., 11339-MLSREISU	Extracted value =>	e.g., MLSREISU
		Multiple Input Index Prop	Mapped to =>	Multiple Indices
	Underlying Instrument Index/Index Prop	e.g., ITRAXX EUROPE, 11339-MLSREISU	Mapped to =>	Multiple Indices
Notional Currency	Notional Currency		Mapped Enumeration	e.g., USD, EUR, GBP
Expiry Date	Expiry Date		Date Format (YYYYMMDD)	20230805

4.2.2 Classification Type

Attribute	Classification Type		
Structure	Instrument Type + Asset Class + Underlying Asset Type + Option Type/Style + Valuation Method or Trigger + Delivery Type		
Example	HCUBVP		
Source	ISO 10962 (CFI) – Third edition 2015-07-15		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Instrument Type	Non-listed and complex listed options	Fixed Mapping	H
Asset Class	Credit	Fixed Mapping	C
Underlying Asset Type	CDS on Single Name	Mapped to =>	U
	CDS on Index Tranche	Mapped to =>	V
	CDS on Index	Mapped to =>	I
	Swaps	Mapped to =>	W
	Other	Mapped to =>	M
Option Style and Type	PUTO/EURO	Mapped to =>	D
	CALL/EURO	Mapped to =>	A
	OPTL/EURO	Mapped to =>	G
	PUTO/AMER	Mapped to =>	E
	PUTO/BERM	Mapped to =>	F
	CALL/AMER	Mapped to =>	B
	CALL/BERM	Mapped to =>	C
	OPTL/AMER	Mapped to =>	H
	OPTL/BERM	Mapped to =>	I
Valuation Method or Trigger	Vanilla	Mapped to =>	V
	Asian	Mapped to =>	A
	Digital (Binary)	Mapped to =>	D

	Barrier	Mapped to =>	B
	Digital Barrier	Mapped to =>	G
	Lookback	Mapped to =>	L
	Other Path Dependent	Mapped to =>	P
	Other	Mapped to =>	M
Delivery Type	CASH	Mapped to =>	C
	PHYS	Mapped to =>	P
	OPTL	Mapped to =>	E

4.2.3 Short Name

Attribute	Short Name		
Structure	"NA" + "/" + Product Type + Valuation Method or Trigger + Debt Seniority* + Notional Currency + Expiry Date		
Example	NA/CDS Nstd Van Sr LKR 20230805		
Source	ISO 18774 (Financial Instrument Short Name) - First edition 2015-11		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Issuer Name	None	Fixed Value	NA/
Product Type	CDS Non_Standard	Fixed Abbreviation	CDS Nstd
Valuation Method or Trigger	Vanilla	Mapped to =>	Van
	Asian	Mapped to =>	ASIN
	Digital (Binary)	Mapped to =>	Dig
	Barrier	Mapped to =>	Bar
	Digital Barrier	Mapped to =>	DigBar
	Lookback	Mapped to =>	Lkbck
	Other Path Dependent	Mapped to =>	OthDep
	Other	Mapped to =>	Oth
Debt Seniority*	SNDB	Mapped to =>	Sr
	MZZD	Mapped to =>	Mz
	SBOD	Mapped to =>	Sub
	JUND	Mapped to =>	Jr
Notional Currency	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
Expiry Date	Expiry Date	Date Format (YYYYMMDD)	20230805

** Debt Seniority only applies if Underlying Instrument ISIN/LEI is selected.*

4.2.4 ISO Underlying Instrument Index

Attribute	ISO Underlying Instrument Index		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Underlying Instrument Index	e.g., ITRAXX EUROPE	Extracted value =>	e.g., ITRAXX EUROPE
	Multiple Input Index	Mapped to =>	Multiple Indices
Underlying Instrument Index Prop	e.g., 11339-MLSREISU	Extracted value =>	e.g., MLSREISU
	Multiple Input Index Prop	Mapped to =>	Multiple Indices

5. Supplementary Information

5.1 Best Practice Guidelines

Please refer to Best Practice Guidelines and FAQs (See Section 1.1).

5.2 Additional Comments

The Contract Specification attribute only applies to Credit.Swap.Corporate; Credit.Swap.Municipal; Credit.Swap.Sovereign and Credit.Swap.Non_Standard. It does not apply to Credit.Swap.Loan; Credit.Swap.ABS; Credit.Swap.Index; Credit.Swap.Index_Tranche and Credit.Swap.Total_Return_Swap.

6. Appendix 1 - OTC ISIN-UPI Mapping

This section describes the mapping between the ISIN and UPI input attributes.

One Of	ISIN Input Attributes		Mapping Logic	UPI Input Attributes	Sample UPI Value	Comments
	Asset Class		Direct Map	Asset Class	Credit	
	Instrument Type		Direct Map	Instrument Type	Option	
	Use Case		Direct Map	Product	Non_Standard	
	Level		Set to "UPI"	Level	UPI	
	Notional Currency		No Mapping			
	Expiry Date		No Mapping			
	Price Multiplier		No Mapping			
A	Underlying Instrument ISIN	If Underlying Asset Type = "CDS on Single Name" or "Swaps" or "Other"	Set to "Fixed Income Security"	Underlier Type	Fixed Income Security	"One Of" Underlier Type
			Map to	Underlier ID	US92857WBQ24	
			Set to "ISIN, FIGI, CUSIP, SEDOL"	Underlier ID Source	ISIN	
			Set to "UPI"	Underlier Type	UPI	
			From Underlying Instrument ISIN/Parent/UPI	Underlier ID	QZQBT22R6XX4	
			Set to "UPI"	Underlier ID Source	UPI	
		If Underlying Instrument > 1	Map to	Underlying Structure	Basket	
	Debt Seniority		Direct Map	Debt Seniority	SNDB	
B	Underlying Instrument LEI	If Underlying Asset Type = "CDS on Single Name" or "Other"	Set to "Legal Entity"	Underlier Type	Legal Entity	"One Of" Underlier Type
			Map to	Underlier ID	INR2EJN1ERAN0W5ZP974	
			Set to "LEI"	Underlier ID Source	LEI	
		If Underlying Instrument > 1	Map to	Underlying Structure	Basket	
	Debt Seniority		Direct Map	Debt Seniority	SNDB	

C	Underlying Instrument Index	If Underlying Asset Type = "CDS on Index" or "CDS on Index Tranche" or "Other"	Set to "Credit Index"	Underlier Type	Credit Index	"One Of" Underlier Type
			Map to	Underlier ID	ITRAXX EUROPE	
			Set to "CRIDX"	Underlier ID Source	CRIDX	
		If Underlying Instrument > 1	Map to	Underlying Structure	Basket	
	Underlying Instrument Index Term Value	If Underlying Instrument = 1	Direct Map	Underlying Instrument Index Term Value	21	
		If Underlying Instrument > 1	No Mapping			
	Underlying Instrument Index Term Unit	If Underlying Instrument = 1	Direct Map	Underlying Instrument Index Term Unit	DAYS	
		If Underlying Instrument > 1	No Mapping			
	Underlying Credit Index Series	If Underlying Instrument = 1	Direct Map	Underlying Credit Index Series	2	
		If Underlying Instrument > 1	No Mapping			
	Underlying Credit Index Version	If Underlying Instrument = 1	Direct Map	Underlying Credit Index Version	4	
		If Underlying Instrument > 1	No Mapping			
D	Underlying Instrument Index Prop	If Underlying Asset Type = "CDS on Index" or "CDS on Index Tranche" or "Other"	Set to "Proprietary Index"	Underlier Type	Proprietary Index	"One Of" Underlier Type
			Map to	Underlier ID	11339-MLSREISU	
			Set to "PROP"	Underlier ID Source	PROP	
		If Underlying Instrument > 1	Map to	Underlying Structure	Basket	
	Underlying Instrument Index Term Value	If Underlying Instrument = 1	Direct Map	Underlying Instrument Index Term Value	21	
		If Underlying Instrument > 1	No Mapping			
	Underlying Instrument Index Term Unit	If Underlying Instrument = 1	Direct Map	Underlying Instrument Index Term Unit	DAYS	
		If Underlying Instrument > 1	No Mapping			

	Underlying Credit Index Series	If Underlying Instrument = 1	Direct Map	Underlying Credit Index Series	2	
		If Underlying Instrument > 1	No Mapping			
	Underlying Credit Index Version	If Underlying Instrument = 1	Direct Map	Underlying Credit Index Version	4	
		If Underlying Instrument > 1	No Mapping			
	Underlying Asset Type		Direct Map	Underlying Asset Type	Other	
	Option Type		Direct Map	Option Type	OPTL	
	Option Exercise Style		Direct Map	Option Exercise Style	BERM	
	Valuation Method or Trigger		Direct Map	Valuation Method or Trigger	Asian	
	Delivery Type		Direct Map	Delivery Type	PHYS	