

DERIVATIVES SERVICE BUREAU (DSB) LTD

Rates : Option : Swaption

ISIN Product Definition

Version I

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I. 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.

I.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)	R	Rates	
Attr #1	Underlying Assets	A	Basis Swap (Float-Float)	An interest rate swap where the cash flows that are exchanged between each party are based on different floating rates or prices (i.e. one party pays an agreed floating rate multiplied by a notional amount, in exchange for receipt of periodic payments based on another agreed floating rate multiplied by the same notional amount, from the other party)
		C	Fixed-Floating	An interest rate swap in which one party (the fixed rate payer) agrees to make fixed payments (the fixed leg) on set dates for an agreed period to another party (the floating rate payer), based on a fixed interest rate multiplied by a notional amount, in exchange for receipt of periodic payments (the floating leg), from the floating rate payer, based on a floating rate index multiplied by the same notional amount (in most cases) upon which the fixed rate payments are based
		D	Fixed-Fixed	An interest rate swap in which both parties pay a fixed interest rate that they could not otherwise obtain outside of a swap arrangement; for example, if each counterparty uses a different native currency, but wants to borrow money in the other counterparty's native currency; Fixed-Fixed swaps generally take the form of either a zero coupon swap or a cross-currency swap
		G	Inflation Rate Index	An interest rate swap in which one party (the fixed rate payer) makes periodic payments to another party (the floating rate payer) based on a fixed rate of interest multiplied by a notional amount in exchange for receipt of periodic payments based on an inflation rate index multiplied by the same notional amount upon which the fixed rate payments are based
		H	Overnight Index Swap (OIS)	An interest rate swap in which one party (the fixed rate payer) makes periodic payments to another party (the floating rate payer) based on a fixed rate of interest multiplied by a notional amount in exchange for receipt of periodic payments based on an overnight rate index multiplied by the same notional amount upon which the fixed rate payments are based
		M	Zero Coupon	Zero Coupon
		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 settlement 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 barrier 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	DSB Product Definition Name
Interest Rate	Option	Swaption	Swaption

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 Rates spreadsheet that contains the layout of all templates. This can be found in the Rates 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.Rates.Option.Swaption.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 I.I](#)).
- For enumerations, please refer to the associated ISIN Product Definition Enumeration document for the impacted attributes (See [Section I.I](#)).

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 Rates spreadsheet that contains the layout of all templates. This can be found in the Rates 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
VI	Rates.Option.Swaption.InstRefDataReporting.VI.json	Initial version
VIMI	Rates.Option.Swaption.InstRefDataReporting.VIMI.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 + Option Type + Underlying Instrument ISIN + Notional Currency + Expiry Date		
Example	Rates Option Swaption Chooser EZ2R85LCI3L3 EUR 20230816		
Source	RTS23/Field2 - Instrument Full Name		
Source Attribute	Source Value	Derivation Method	Result
Asset Class	Rates	Fixed Value	Rates
Instrument Type	Option	Fixed Value	Option
Product	Swaption	Fixed Value	Swaption
Option Type	CALL	Mapped to =>	Call
	PUTO	Mapped to =>	Put
	OPTL	Mapped to =>	Chooser

Underlying Instrument ISIN	e.g., EZ2R85LC13L3	Copy value =>	e.g., EZ2R85LC13L3
Notional Currency	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
Expiry Date	Expiry Date	Date Format (YYYYMMDD)	20230816

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	HRCGVP		
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	Rates	Fixed Mapping	R
Underlying Asset Type	Basis Swap (Float-Float)	Mapped to =>	A
	Fixed-Floating	Mapped to =>	C
	Fixed-Fixed	Mapped to =>	D
	Inflation Rate Index	Mapped to =>	G
	Overnight Index Swap	Mapped to =>	H
	Zero Coupon	Mapped to =>	M
	Others	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
	Vanilla	Mapped to =>	V

Valuation Method or Trigger	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" + "/" + Instrument Type + Option Type + Option Exercise Style + Underlying Asset Type + Notional Currency + Expiry Date		
Example	NA/O Opt Epn Fxd Flt EUR 20230816		
Source	ISO 18774 (Financial Instrument Short Name) - First edition 2015-11		
Source Attribute	Source Value	Derivation Method	Result
Issuer Name	None	Fixed Value	NA/
Instrument Type	Option	Fixed Abbreviation	O
Option Type	CALL	Mapped to =>	Call
	PUTO	Mapped to =>	P
	OPTL	Mapped to =>	Opt
Option Exercise Style	EURO	Mapped to =>	Epn
	AMER	Mapped to =>	Amr
	BERM	Mapped to =>	Brm
Underlying Asset Type	Basis (Float-Float)	Mapped to =>	Flt Flt
	Fixed-Floating	Mapped to =>	Fxd Flt
	Fixed-Fixed	Mapped to =>	Fxd Fxd
	Inflation Rate Index	Mapped to =>	Infl Idx
	Overnight Index Swap	Mapped to =>	OIS
	Zero Coupon	Mapped to =>	Oth
	Others	Mapped to =>	Oth
Notional Currency	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
Expiry Date	Expiry Date	Date Format (YYYYMMDD)	20230816

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 short name abbreviation for option type – Put is “P” for rates option while in equity option, short name abbreviation for the option type – Put is “Put”.

6. Appendix I - OTC ISIN-UPI Mapping

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

ISIN Input Attributes	Mapping Logic	UPI Input Attributes	Example UPI Values	Comments
Asset Class	Direct Map	Asset Class	Rates	
Instrument Type	Direct Map	Instrument Type	Option	
Use Case	Direct Map	Product	Swaption	
Level	Set to "UPI"	Level	UPI	
Notional Currency	Direct Map	Notional Currency	EUR	
Expiry Date	No Mapping			
Underlying Asset Type	No Mapping			Underlying Asset Type attribute for the UPI is in the Derived section of the Record template.
Underlying Instrument ISIN	From Underlying Instrument ISIN/Parent/UPI	Underlier ID	QZ9TV7CL8TQT	
	Set to "UPI"	Underlier ID Source	UPI	
Option Type	Direct Map	Option Type	CALL	
Option Exercise Style	Direct Map	Option Exercise Style	AMER	
Valuation Method or Trigger	Direct Map	Valuation Method or Trigger	Vanilla	
Delivery Type	Direct Map	Delivery Type	PHYS	
Price Multiplier	No Mapping			