

## DERIVATIVES SERVICE BUREAU (DSB) LTD

### Foreign Exchange : Option : NDO

#### ISIN Product Definition

#### Version I

Date	Status	Version	Revision Details
18 Sep 2023	Draft	I	Initial Version

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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
<b>Enumerations Document</b>	Lists all fixed values used for a product	Enumerations section
<b>Product Definition Data Dictionary</b>	Defines attributes in the Request and Record templates; and from which they are referenced on	Other Documents section
<b>Product Definition Validations and Normalizations Document</b>	Specifies details on validation and normalization rules	
<b>Best Practice Guidelines and FAQs</b>	Lists answers to queries raised by users and provides guidance on the use of the templates	
<b>GitHub Environment Section</b>	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
	<b>Instrument (Category)</b>	<b>H</b>	Non-listed and Complex listed options	
	<b>Asset Class (Group)</b>	<b>F</b>	Foreign Exchange	
<b>Attr #1</b>	<b>Underlying Assets</b>	<b>T</b>	Spot	An option on an FX transaction in which two parties agree to buy one currency against selling another currency at an agreed price for settlement on the spot date
<b>Attr #2</b>	<b>Option style and type</b>	<b>A</b>	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>B</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
		<b>C</b>	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
		<b>D</b>	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
		<b>E</b>	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
		<b>F</b>	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
		<b>G</b>	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

		<b>H</b>	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
		<b>I</b>	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
<b>Attr #3</b>	<b>Valuation method or trigger</b>	<b>V</b>	Vanilla	an option for which all terms are standardized
		<b>A</b>	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
		<b>L</b>	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
		<b>P</b>	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
		<b>M</b>	Others	Miscellaneous
<b>Attr #4</b>	<b>Delivery Type</b>	<b>C</b>	Cash	the discharge of an obligation by payment or receipt of a net cash amount instead of payment or delivery by both parties

## 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
Foreign Exchange	NDO		NDO

### 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 Foreign Exchange spreadsheet that contains the layout of all templates. This can be found in the Foreign Exchange 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.Foreign_Exchange.Option.NDO.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 Foreign Exchange spreadsheet that contains the layout of all templates. This can be found in the Foreign Exchange 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	Foreign_Exchange.Option.NDO.InstRefDataReporting.VI.json	Initial version
VIMI	Foreign_Exchange.Option.NDO.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		
<b>Structure</b>	Asset Class + Instrument Type + Product + Notional Currency + Other Notional Currency + Expiry Date		
<b>Example</b>	Foreign_Exchange Option NDO EUR KRW 20230810		
<b>Source</b>	RTS23/Field2 - Instrument Full Name		
Source Attribute	Source Value	Derivation Method	Result
<b>Asset Class</b>	Foreign_Exchange	Fixed Value	Foreign_Exchange
<b>Instrument Type</b>	Option	Fixed Value	Option
<b>Product</b>	NDO	Fixed Value	NDO
<b>Notional Currency</b>	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
<b>Other Notional Currency</b>	Other Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP

<b>Expiry Date</b>	Expiry Date	Date Format (YYYYMMDD)	20230810
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## 4.2.2 Classification Type

Attribute	Classification Type		
<b>Structure</b>	Instrument Type + Asset Class + Underlying Asset Type + Option Type / Style + Valuation Method or Trigger + Delivery Type		
<b>Example</b>	HFTAVC		
<b>Source</b>	<a href="#">ISO 10962</a> (CFI) – Third edition 2015-07-15		
Source Attribute	Source Value	Derivation Method	Result
<b>Instrument Type</b>	Option	Fixed Mapping	H
<b>Asset Class</b>	Foreign Exchange	Fixed Mapping	F
<b>Underlying Assets</b>	Spot	Fixed Mapping	T
<b>Option Type / Style</b>	PUTO/AMER	Mapped to =>	E
	PUTO/BERM	Mapped to =>	F
	PUTO/EURO	Mapped to =>	D
	CALL/AMER	Mapped to =>	B
	CALL/BERM	Mapped to =>	C
	CALL/EURO	Mapped to =>	A
	OPTL/AMER	Mapped to =>	H
	OPTL/BERM	Mapped to =>	I
	OPTL/EURO	Mapped to =>	G
<b>Valuation Method or Trigger</b>	Vanilla	Mapped to =>	V
	Asian	Mapped to =>	A
	Lookback	Mapped to =>	L
	Other Path Dependent	Mapped to =>	P
	Other	Mapped to =>	M



<b>Delivery Type</b>	Cash	Fixed Mapping	C
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### 4.2.3 Short Name

Attribute	Short Name		
<b>Structure</b>	"NA" + "/" + Instrument Type + Product + Option Type + Notional Currency + Other Notional Currency + Expiry Date		
<b>Example</b>	NA/O NDO Call EUR KRW 20230810		
<b>Source</b>	<a href="#">ISO 18774</a> (Financial Instrument Short Name) - First edition 2015-11		
Source Attribute	Source Value	Derivation Method	Result
<b>Issuer Name</b>	None	Fixed Value	NA/
<b>Instrument Type</b>	Option	Fixed Abbreviation	O
<b>Product</b>	Non-Deliverable Option	Fixed Abbreviation	NDO
<b>Option Type</b>	PUTO	Mapped to =>	Put
	CALL	Mapped to =>	Call
	OPTL	Mapped to =>	O
<b>Notional Currency</b>	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
<b>Other Notional Currency</b>	Other Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
<b>Expiry Date</b>	Expiry Date	Date Format (YYYYMMDD)	20230810

### 4.2.4 FX Type

Attribute	FX Type		
Source Attribute	Criteria	FX Type	Result
Notional Currency / Other Notional Currency	All others	FX Cross Rates	<b>FXCR</b>
	Non-G8 currency pairs	FX Emerging Markets	<b>FXEM</b>
	G8 currency pairs	FX Majors	<b>FXMJ</b>

## 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 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.
- For NDO product, only “CASH” is supported as Delivery type. The value will differ in the request since DSB OTC ISIN added the delivery type in the request attributes but does not allow to choose “Physical” & “Elect at Exercise” as Delivery type.

## 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	Sample UPI Values	Comments
Asset Class	Direct Map	Asset Class	Foreign_Exchange	
Instrument Type	Direct Map	Instrument Type	Option	
Use Case	Direct Map	Product	NDO	
Level	Set to "UPI"	Level	UPI	
Notional Currency	Map To	Underlier ID	EUR	
	Set to "CCY"	Underlier ID Source	CCY	
Expiry Date	No Mapping			
Option Type	Direct Map	Option Type	CALL	
Option Exercise Style	Direct Map	Option Exercise Style	EURO	
Valuation Method or Trigger	Direct Map	Valuation Method or Trigger	Vanilla	
Other Notional Currency	Map To	Other Underlier ID	KRW	
	Set to "CCY"	Other Underlier ID Source	CCY	
Settlement Currency	Direct Map	Settlement Currency	EUR	
Delivery Type	No Mapping			Delivery Type attribute for the UPI is in the Derived section of the Record template.
Price Multiplier	No Mapping			