

## DERIVATIVES SERVICE BUREAU (DSB) LTD

Rates : Option : CapFloor

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
18 Aug 2022	Draft	1	Initial Version
23 Jan 2023	Draft	2	Insert Underlier Name attribute and Derivation rules
31 Aug 2023	Draft	3	<ul style="list-style-type: none"> <li>Remove “Classified as Confidential” in the Footer section.</li> <li>Update Associated Documentation to include Best Practice Guidelines and FAQs.</li> <li>Update Best Practice Guidelines to include the link to Best Practice Guidelines and FAQs.</li> </ul>

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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 UPI Service.

This document provides the user with the detailed description of the UPI 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>UPI Underlier Input Method</b>	Defines the structure for the input of the underlier following the rules that allow users to identify the Asset Class, Underlying Structure, Underlying Type, and Underlying ID Source.	
<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>R</b>	Rates	
<b>Attr #1</b>	<b>Underlying Assets</b>	<b>M</b>	Others	Others (miscellaneous)
<b>Attr #2</b>	<b>Option Style and Type</b>	<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>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>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>Attr #3</b>	<b>Valuation Method or Trigger</b>	<b>M</b>	Others	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
		<b>P</b>	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
		<b>E</b>	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
Rates	CapFloor		CapFloor

### 3. Request Template

The Request Template describes the input message received by the UPI 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.CapFloor.UPI.json	Initial version	Initial

#### 3.1 Underlier Input Method

For products that have a Single Underlier, users have an option to select a Primary or Alternate Underlier, if available.

Title	Description	
<b>Select Underlier ID Source</b>	User is able to select a Primary or Alternate Underlier from the available options. <ul style="list-style-type: none"><li>FPML</li></ul>	
<b>Input Underlier ID</b>	FPML	This is validated against Floating Rate Index Enumerated List.

#### 3.2 Validation Rules

For non-specific product validation rules, please refer to UPI Product Definition Validations and Normalizations Document can be found in the Other Documents section on the DSB website.

## 4. Record Template

The Record Template describes the record returned by the UPI 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	Release
V.1	Rates.Option.CapFloor.UPI.V1.json	Initial version	Initial

### 4.1 Normalization Rules

For non-specific product normalization rules, please refer to UPI Product Definition Validations and Normalizations Document can be found in the Other Documents section on the DSB website.

### 4.2 Derivation Rules

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



## 4.2.1 Classification Type

Attribute	Classification Type		
<b>Structure</b>	Instrument Type + Asset Class + Underlying Asset Type + Option Style/Type + Valuation Method or Trigger + Delivery Type		
<b>Example</b>	HRMAMC		
<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>	Non-listed and complex listed options	Fixed Mapping	H
<b>Asset Class</b>	Rates	Fixed Mapping	R
<b>Underlying Asset Type</b>	Other	Fixed Mapping	M
<b>Option Style and Type</b>	PUTO/EURO	Mapped to =>	D
	CALL/EURO	Mapped to =>	A
	OPTL/EURO	Mapped to =>	G
<b>Valuation Method or Trigger</b>	Other	Fixed Mapping	M
<b>Delivery Type</b>	CASH	Mapped to =>	C
	PHYS	Mapped to =>	P
	OPTL	Mapped to =>	E

## 4.2.2 Short Name

Attribute	Short Name		
<b>Structure</b>	"NA" + "/" + Instrument Type + Option Type + Option Exercise Style + Notional Currency		
<b>Example</b>	NA/O Call Epn EUR		
<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>Option Type</b>	Call	Mapped to =>	Call
	Put	Mapped to =>	P
	Optl	Mapped to =>	Opt
<b>Option Exercise Style</b>	European	Fixed Abbreviation	Epn
<b>Notional Currency</b>	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP

## 4.2.3 Underlier Name

Attribute	Underlier Name		
Underlying Asset	Underlier Name Source	Underlier Name Source Attribute	Underlier Name
Underlying Index	UPI record	Underlying Instrument Index	EUR-EURIBOR-Reuters

#### 4.2.4 CFI Option Style and Type

Attribute	CFI Option Style and Type		
Source Attribute	Source Value	Derivation Method	Result
Option Style and Type	PUTO/EURO	Mapped to =>	European-Put
	CALL/EURO	Mapped to =>	European-Call
	OPTL/EURO	Mapped to =>	European-Chooser

#### 4.2.5 CFI Delivery Type

Attribute	CFI Delivery Type		
Source Attribute	Source Value	Derivation Method	Result
Delivery Type	CASH	Mapped to =>	Cash
	PHYS	Mapped to =>	Physical
	OPTL	Mapped to =>	Elect at Exercise

## 5. Supplementary Information

### 5.1 Best Practice Guidelines

Please refer to Best Practice Guidelines and FAQs that can be found in the Other Documents section on the DSB website.

### 5.2 Additional Comments

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

## 6. Appendix I – ISO 4914 Equivalence

This section describes the attributes as per the ISO 4914 Unique Product Identifier (UPI).

ISO 4914 Reference Data Elements		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	M	Notional Currency	Notional Currency
Delivery Type	M	Delivery Type	Delivery Type
			CFI Delivery Type
Option Style	M	Not Required	Option Exercise Style
Option Type	M	Option Type	Option Type
Return, pricing method or payout trigger	M	Not Required	Valuation Method or Trigger
Underlier ID	C	Underlier ID	Underlying Instrument Index
Underlier ID source	C	Underlier ID Source	Not Required
Underlier Type	M	Not Required	Underlying Asset Type
Underlying rate index tenor period	C	Underlying Instrument Index Term Unit	Underlying Instrument Index Term Unit
Underlying rate index tenor period multiplier	C	Underlying Instrument Index Term Value	Underlying Instrument Index Term Value

## 7. Appendix 2 - 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	Example UPI Values	Comments
	Asset Class	Direct Map	Asset Class	Rates	
	Instrument Type	Direct Map	Instrument Type	Option	
	Use Case	Direct Map	Product	CapFloor	
	Level	Set to "UPI"	Level	UPI	
A	Term of Contract (By Effective Date)				
	Notional Currency	Direct Map	Notional Currency	EUR	
	Expiry Date	No Mapping			
	Effective Date	No Mapping			
	Expiry Date Adjusted	No Mapping			
	Tenor Calculator Method	No Mapping			
	Underlying Instrument Index	Map to	Underlier ID	EUR-EURIBOR-Reuters	
		Set to "FPML"	Underlier ID Source	FPML	
	Underlying Instrument Index Term Value	Direct Map	Underlying Instrument Index Term Value	12	
	Underlying Instrument Index Term Unit	Direct Map	Underlying Instrument Index Term Unit	MNTH	
Option Type	Direct Map	Option Type	CALL		
B	Term of Contract (By Tenor)				
	Notional Currency	Direct Map	Notional Currency	EUR	
	Expiry Date	No Mapping			
	Term of Contract Value	No Mapping			
	Term of Contract Unit	No Mapping			
Underlying Instrument Index	Map to	Underlier ID	EUR-EURIBOR-Reuters		
	Set to "FPML"	Underlier ID Source	FPML		
Underlying Instrument Index Term Value	Direct Map	Underlying Instrument Index Term Value	12		
Underlying Instrument Index Term Unit	Direct Map	Underlying Instrument Index Term Unit	MNTH		

	Option Type	Direct Map	Option Type	CALL	
	Delivery Type	Direct Map	Delivery Type	CASH	
	Price Multiplier	No Mapping			