Derivatives Service Bureau

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	• Remove “Classified as Confidential” in the Footer section. • Update Associated Documentation to include Best Practice Guidelines and FAQs. • Update Best Practice Guidelines to include the link to Best Practice Guidelines and FAQs.

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1 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.

1.1 Associated Documentation

Each UPI Product Definition template links to reference documents where values will be maintained for the sake of consistency and ease of access e.g., Enumerations, Data Dictionary, Validation and Normalizations, etc.

These documents are made available for references as follows:

- UPI Enumerations Document can be found in the Enumerations section on the DSB website.
- UPI Product Definition Data Dictionary can be found in the Other Documents section on the DSB website.
- UPI Product Definition Validations and Normalizations Document can be found in the Other Documents section on the DSB website.
- UPI Underlier Input Method can be found in the Other Documents section on the DSB website.
- Best Practice Guidelines and FAQs can be found in the Other Documents section on the DSB website.
- Links to the relevant JSON templates can be found in the GitHub Environment Section on the DSB website.

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**	**M**	Others	Others (miscellaneous)
Attr #2	**Option Style and Type**	**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
		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
		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
Attr #3	**Valuation Method or Trigger**	**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
Rates	CapFloor		CapFloor

3 Request Template

This section describes the input message received by UPI service.

Template name	Template details	Release
Request.Rates.Option.CapFloor.UPI.json	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Validation / Derivation
Header Section	Asset Class	Set	M	Rates	
	Instrument Type	Set	M	Option	
	Product	Set	M	CapFloor	
	Level	Set	M	UPI	
Attribute Section	Underlier ID	Enum	M	EUR-EURIBOR-Reuters	Floating Rate Index
	Underlier ID Source	String	M	FPML	[FPML]
	Underlying Instrument Index Term Value	Integer	M	12	-999 to 999 (excluding 0)
	Underlying Instrument Index Term Unit	Enum	M	MNTH	[DAYS, WEEK, MNTH, YEAR]
	Notional Currency	Enum	M	EUR	Enumerated List
	Option Type	Enum	M	CALL	[CALL; PUTO; OPTL]
	Delivery Type	Enum	M	CASH	[CASH; PHYS; OPTL]

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	
Select Underlier ID Source	User is able to select a Primary or Alternate Underlier from the available options. • FPML	
Input Underlier ID	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

This section describes the record returned by the UPI service.

Version	Template name	Template details	Release
V.1	**Rates.Option.CapFloor.UPI.V1.json**	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Derivation
Header Section	Asset Class	Set	M	Rates	
	Instrument Type	Set	M	Forward	
	Product	Set	M	CapFloor	
	Level	Set	M	UPI	
	Template Version	Integer	D	1	
Attribute Section	Underlying Instrument Index	Enum	M	EUR-EURIBOR-Reuters	Enumerated List
	Underlying Instrument Index Term Value	Integer	M	1	-999 to 999 (excluding 0)
	Underlying Instrument Index Term Unit	Enum	M	YEAR	[DAYS, WEEK, MNTH, YEAR]
	Notional Currency	Enum	M	EUR	Enumerated List
	Option Type	Enum	M	CALL	[CALL; PUTO; OPTL]
	Delivery Type	Enum	M	CASH	[CASH; PHYS; OPTL]
Identifier Section	UPI	String	D	QZD1V8PXF2RG	
	Status	String	D	New	[New; Updated; Deleted; Deprecated]
	Status Reason	String	D	<null>	
	Last Update Date Time	DtTm	D	2021-04-22T10:32:51	YYYY-MM-DDThh:mm:ss
Derived Section	Classification Type	String	D	HRMAMC	See Derivation Rules
	Short Name	String	D	NA/O Call Epn EUR	See Derivation Rules
	Underlier Name	String	D	EUR-EURIBOR-Reuters	See Derivation Rules
	Underlying Asset Type	String	D	Other	Fixed value
	Option Exercise Style	String	D	EURO	Fixed value
	Valuation Method or Trigger	String	D	Other	Fixed value
	CFI Option Style and Type	String	D	European-Call	See Derivation Rules
	CFI Delivery Type	String	D	[Cash, Physical, Elect at Exercise]	See Derivation Rules

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		
Structure	Instrument Type + Asset Class + Underlying Asset Type + Option Style/Type + Valuation Method or Trigger + Delivery Type		
Example	HRMAMC		
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	Other	Fixed Mapping	M
Option Style and Type	PUTO/EURO	Mapped to =>	D
	CALL/EURO	Mapped to =>	A
	OPTL/EURO	Mapped to =>	G
Valuation Method or Trigger	Other	Fixed Mapping	M
Delivery Type	CASH	Mapped to =>	C
	PHYS	Mapped to =>	P
	OPTL	Mapped to =>	E

4.2.2 Short Name

Attribute	Short Name		
Structure	"NA" + "/" + Instrument Type + Option Type + Option Exercise Style + Notional Currency		
Example	NA/O Call Epn EUR		
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
	Put	Mapped to =>	P
	Optl	Mapped to =>	Opt
Option Exercise Style	European	Fixed Abbreviation	Epn
Notional Currency	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 1 – 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

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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			

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