Derivatives Service Bureau

Rates : Swap : Cross_Currency_Fixed_Float_NDS

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
11 Aug 2022	Draft	1	Initial Version
19 Jan 2023	Draft	2	• Update example values in the Request and Record templates layout • 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.

Table of Contents

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)	**S**	Swap	
	Asset Class (Group)	**R**	Rates	
Attr #1	**Underlying Assets**	**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
Attr #2	**Notional Schedule**	**C**	Constant	The notional amount is constant through the life of the contract
		I	Accreting	The notional amount increases through the life of the contract
		D	Amortizing	The notional amount decreases through the life of the contract
		Y	Custom	Customized notional step schedule
Attr #3	**Single or Multi Currency**	**C**	Cross Currency	Cross Currency (multi currency)
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

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
Rates	Cross Currency	Fixed Float	NDS*	Cross_Currency_Fixed_Float_NDS

*This transaction type does not appear in ISDA 2.0 taxonomy (Interest Rate Full). To be able to report an NDS, this transaction type is added in the taxonomy.

3 REQUEST TEMPLATE

This section describes the input message received by UPI service.

Template name	Template details	Release
Request.Rates.Swap.Cross_Currency_Fixed_Float_NDS.UPI.json	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Validation / Derivation
Header Section	Asset Class	Set	M	Rates	
	Instrument Type	Set	M	Swap	
	Product	Set	M	Cross_Currency_Fixed_Float_NDS	
	Level	Set	M	UPI	
Attribute Section	Notional Currency	Enum	M	KRW	ISO 4217 Currency Code
	Other Notional Currency	Enum	M	USD	ISO 4217 Currency Code
	Underlier ID	Enum	M	KRW-CD-KSDA-Bloomberg	Floating Rate Index
	Underlier ID source	String	M	FPML	[FPML]
	Reference Rate Term Value	Integer	M	12	-999 to 999 (excluding 0)
	Reference Rate Term Unit	Enum	M	MNTH	[DAYS; WEEK; MNTH; YEAR]
	Notional Schedule	Enum	M	Constant	[Constant; Accreting; Amortizing; Custom]
	Delivery Type	Enum	M	CASH	[CASH; PHYS]

3.1 Underlier Input Method

For products that have a Single Underlier, user has 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.Swap.Cross_Currency_Fixed_Float_NDS.UPI.V1.json**	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Derivation
Header Section	Asset Class	Set	M	Rates	
	Instrument Type	Set	M	Swap	
	Product	Set	M	Cross_Currency_Fixed_Float_NDS	
	Level	Set	M	UPI	
	Template Version	Integer	D	1	
Attribute Section	Notional Currency	Enum	M	KRW	Enumerated List
	Other Notional Currency	Enum	M	USD	Enumerated List
	Reference Rate	Enum	M	KRW-CD-KSDA-Bloomberg	Enumerated List
	Reference Rate Term Value	Integer	M	1	-999 to 999 (excluding 0)
	Reference Rate Term Unit	Enum	M	YEAR	[DAYS; WEEK; MNTH; YEAR]
	Notional Schedule	Enum	M	Constant	[Constant; Accreting; Amortizing; Custom]
	Delivery Type	Enum	M	CASH	[CASH, PHYS]
Identifier Section	UPI	String	D	QZT5HBBVHW02	
	Status	String	D	New	[New; Updated; Deleted; Deprecated]
	Status Reason	String	D	<null>	
	Last Update Date Time	DtTm	D	2021-03-16T03:46:32	YYYY-MM-DDThh:mm:ss
Derived Section	Classification Type	String	D	SRCCCC	See Derivation Rules
	Short Name	String	D	NA/Swap Fxd Flt Cs KRW USD	See Derivation Rules
	Underlier Name	String	D	KRW-CD-KSDA-Bloomberg	See Derivation Rules
	Underlying Asset Type	String	D	Fixed - Floating	Fixed value
	Single or Multi Currency	String	D	Cross Currency	Fixed value
	CFI Delivery Type	String	D	[Cash; Physical]	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 + Notional Schedule + Single or Multi Currency + Delivery Type		
Example	SRCCCC		
Source	ISO 10962 (CFI) – Third edition 2015-07-15		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Instrument Type	Swap	Fixed Mapping	S
Asset Class	Rates	Fixed Mapping	R
Underlying Asset Type	Fixed - Floating	Fixed Mapping	C
Notional Schedule	Constant	Mapped to =>	C
	Accreting	Mapped to =>	I
	Amortizing	Mapped to =>	D
	Custom	Mapped to =>	Y
Single or Multi Currency	Cross Currency	Fixed Mapping	C
Delivery Type	CASH	Mapped to =>	C
	PHYS	Mapped to =>	P

4.2.2 Short Name

Attribute	Short Name		
Structure	“NA” + "/" + Instrument Type + Underlying Asset Type + Delivery Type + Notional Currency + Other Notional Currency		
Example	NA/Swap Fxd Flt KRW USD		
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	Swap	Fixed Abbreviation	Swap
Underlying Asset Type	Fixed - Floating	Fixed Abbreviation	Fxd Flt
Delivery Type	Cash	Fixed Abbreviation	Cs
	Physical	No output value	-
Notional Currency	Notional Currency	Mapped Enumeration	e.g., USD, EUR, GBP
Other Notional Currency	Other 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**
Reference Rate	UPI record	Reference Rate	KRW-CD-KSDA-Bloomberg

4.2.4 CFI Delivery Type

Attribute	CFI Delivery Type		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Delivery Type	CASH	Mapped to =>	Cash
	PHYS	Mapped to =>	Physical

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

- Existing OTC ISIN product definition methodology of the Short Name abbreviation (Issuer of TV + "/" + Instrument Type) for Equity Asset Class has "NA/Swaps" whereas Rates has "NA/Swap".
- Existing OTC ISIN product definition methodology in Short Name includes the Delivery Type abbreviation if "CASH" is used, e.g. "NA/Swap Fxd Flt Cs KRW USD" whereas no Delivery Type abbreviation for "PHYS", e.g. "NA/Swap Fxd Flt KRW USD".
- Existing OTC ISIN product definition does not support the validation of the Notional Currency / Other Notional Currency if it is a Non-Deliverable Currency or not.

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
		Other Notional Currency	Other Notional Currency
Delivery type	M	Delivery Type	Delivery Type
			CFI Delivery Type
Notional schedule	M	Notional Schedule	Notional Schedule
Single or multiple currency	M	Not Required	Single or Multi Currency
Underlier ID	C	Underlier ID	Reference Rate
Underlier ID source	C	Underlier ID Source	Not Required
Underlier type	M	Not Required	Underlying Asset Type
Underlying rate index tenor period	C	Reference Rate Term Unit	Reference Rate Term Unit
Underlying rate index tenor period multiplier	C	Reference Rate Term Value	Reference Rate Term Value

7 APPENDIX 2 - OTC ISIN-UPI MAPPING

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

oneOf	ISIN Input Attributes	Mapping Logic	UPI Input Attributes	Sample UPI Values	Comments
	Asset Class	Direct Map	Asset Class	Rates	
	Instrument Type	Direct Map	Instrument Type	Swap	
	Use Case	Direct Map	Product	Cross_Currency_Fixed_Float_NDS	
	Level	Set to "UPI"	Level	UPI	
A	Term of Contract (By Effective Date)				
	Notional Currency	Direct Map	Notional Currency	KRW	
	Expiry Date	No Mapping			
	Effective Date	No Mapping			
	Expiry Date Adjusted	No Mapping			
	Tenor Calculator Method	No Mapping			
	Reference Rate	Map To	Underlier ID	KRW-CD-KSDA-Bloomberg	
		Set to "FPML"	Underlier ID Source	FPML	
	Reference Rate Term Value	Direct Map	Reference Rate Term Value	12	
	Reference Rate Term Unit	Direct Map	Reference Rate Term Unit	MNTH	
	Other Notional Currency	Direct Map	Other Notional Currency	USD	
	Notional Schedule	Direct Map	Notional Schedule	Constant	
B	Term of Contract (By Tenor)				
	Notional Currency	Direct Map	Notional Currency	KRW	
	Expiry Date	No Mapping			
	Term of Contract Value	No Mapping			
	Term of Contract Unit	No Mapping			
	Reference Rate	Map To	Underlier ID	KRW-CD-KSDA-Bloomberg	
		Set to "FPML"	Underlier ID Source	FPML	
	Reference Rate Term Value	Direct Map	Reference Rate Term Value	12	
	Reference Rate Term Unit	Direct Map	Reference Rate Term Unit	MNTH	
	Other Notional Currency	Direct Map	Other Notional Currency	USD	
	Notional Schedule	Direct Map	Notional Schedule	Constant	
	Delivery Type	Direct Map	Delivery Type	CASH	
	Price Multiplier	No Mapping			