Derivatives Service Bureau

Equity : Swap : Portfolio_Swap_Single_Index

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
15 Aug 2022	Draft	1	Initial Version
01 Feb 2023	Draft	2	• Update example values in the Request and Record templates layout • Insert Underlier Name attribute and Derivation rules
04 Sep 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)	**S**	Swap	
	Asset Class (Group)	**E**	Equity	
Attr #1	**Underlying Assets**	**I**	Index	An equity index swap in which cash flows are exchanged based on the percentage change in one or more stock indices for a specific period with previously agreed re-set dates; the swap is cash settled and based on notional principal amounts
Attr #2	**Return or payout trigger**	**P**	Price	Price return equity swap, similar to a total return swap, except that dividends are not passed through to the buyer
		D	Dividend	A fixed-term contract between two parties where one party will make an interest rate payment for each interval and the other party will pay the total dividends received as pay-out by a selected underlying asset
		V	Variance	A forward swap that uses the variance (being the volatility squared) of an underlying's price movement over a period as the basis for the payoff calculation
		L	Volatility	The variability of movements in a security or underlying instrument's price; it is a measure of the amount by which an asset's price is expected to fluctuate over a given period of time; it is normally measured by the annual standard deviation of daily price changes
		T	Total Return	Total return
		C	Contract for Difference	Contract for difference
		M	Other	Miscellaneous
Attr #3	**Not applicable/ undefined**	**X**	Not applicable/ undefined	Not applicable/undefined
Attr #4	**Delivery Type**	**C**	Cash	Cash
		P	Physical	Physical
		E	Elect at Settlement	Elect at 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
Equity	Portfolio Swap	Price Return Basic Performance*	Single Index	Portfolio_Swap_Single_Index

**There is no exact match in the ISDA Taxonomy 2.0 for this product template. The current taxonomy 2.0 only provides for Sub-Product value [Price Return Basic Performance]. This product template is a catch all for products that fall outside of these specified transaction types.*

3 REQUEST TEMPLATE

This section describes the input message received by UPI service.

Template name	Template details	Release
Request.Equity.Swap.Portfolio_Swap_Single_Index.UPI.json	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Validation
Header Section	Asset Class	Set	M	Equity	
	Instrument Type	Set	M	Swap	
	Product	Set	M	Portfolio_Swap_Single_Index	
	Level	Set	M	UPI	
Attribute Section	**Underlier Type (oneOf)**	Object	M	Equity Index Identifier	
	Underlier ID Source	String	(M)	ISIN	[ISIN]
	Underlier ID	String	(M)	GB0001383545	Syntactic Validation
	Underlier Type (oneOf)	Object	M	Equity Index Name	
	Underlier ID Source	String	(M)	EQIDX	[EQIDX]
	Underlier ID	Enum	(M)	MSCI EM USD	Enumerated List
	Underlier Type (oneOf)	Object	M	Proprietary Index	
	Underlier ID Source	String	(M)	PROP	[PROP]
	Underlier ID	String	(M)	34810-JPCFNAMR	See Validation Rules
	Return or Payout Trigger	Enum	M	Price	[Price, Dividend, Variance, etc.]
	Delivery Type	Enum	M	CASH	[CASH, PHYS, OPTL]

3.1 Underlier Input Method

In order to support products that are based on more than one type of underlier, the Underlier Type selection allows users to choose the type of underlier for the product.

Title	Description
Select Underlier Type	User is able to select a single required Underlier Type from the available options. • Equity Index Identifier • Equity Index Name • Proprietary Index
Select Underlier ID Source	User is able to select a single required Underlier ID Source from the available options based on the selected Underlier Type. • Equity Index Identifier [ISIN] • Equity Index Name [EQIDX] • Proprietary Index [PROP]
Input Underlier ID	User enters a valid Underlier ID based on the selected Underlier ID Source.

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	**Equity.Swap.Portfolio_Swap_Single_Index.UPI.V1.json**	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Derivation
Header Section	Asset Class	Set	M	Equity	
	Instrument Type	Set	M	Swap	
	Product	Set	M	Portfolio_Swap_Single_Index	
	Level	Set	M	UPI	
	Template Version	Integer	D	1	
Attribute Section	Underlying Instrument ISIN	String	C	GB0001383545	See Validation Rules
	Underlying Instrument Index	String	C	MSCI EM USD	Enumerated List
	Underlying Instrument Index Prop	String	C	34810-JPCFNAMR	See Validation Rules
	Return or Payout Trigger	Enum	M	Price	[Price, Dividend, Variance, etc.]
	Delivery Type	Enum	M	CASH	[CASH, PHYS, OPTL]
Identifier Section	UPI	String	D	QZGD9LJR2782	
	Status	String	D	New	[New; Updated; Deleted; Deprecated]
	Status Reason	String	D	<null>	
	Last Update Date Time	DtTm	D	2021-02-23T00:00:13	YYYY-MM-DDThh:mm:ss
Derived Section	Classification Type	String	D	SEIPXC	See Derivation Rules
	Short Name	String	D	NA/Swaps Idx Pr	See Derivation Rules
	Underlier Name	String	D	MSCI EM USD	See Derivation Rules
	Underlying Asset type	String	D	Index	Fixed value
	CFI Delivery Type	String	D	[Cash, Physical, Elect at Settlement]	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 + Return or Payout Trigger + NA + Delivery Type		
Example	SEIPXC		
Source	ISO 10962 (CFI) – Third edition 2015-07-15		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Instrument Type	Swap	Fixed Mapping	S
Asset Class	Equity	Fixed Mapping	E
Underlying Asset Type	Index	Fixed Mapping	I
Return or Payout Trigger	Price	Mapped to =>	P
	Dividend	Mapped to =>	D
	Variance	Mapped to =>	V
	Volatility	Mapped to =>	L
	Total Return	Mapped to =>	T
	Contract for Difference	Mapped to =>	C
	Other	Mapped to =>	M
Not applicable/undefined	Not applicable/undefined	Fixed Mapping	X
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 + Underlying Asset Type + Return or Payout Trigger		
Example	NA/Swaps Idx Pr		
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	Swaps
Underlying Asset Type	Index	Fixed Abbreviation	Idx
Return or Payout Trigger	Price	Mapped to =>	Pr
	Dividend	Mapped to =>	Div
	Variance	Mapped to =>	Var
	Volatility	Mapped to =>	Vol
	Total Return	Mapped to =>	Tot Rtn
	Contract for Difference	Mapped to =>	CFD
	Other	Mapped to =>	Oth

4.2.3 Underlier Name

Based on the Underlier Type selected, the following Underlier Name derivation rules will apply:

Attribute	Underlier Name			
Underlying Asset	**Underlier Name Source**	**Underlier Name Source Attribute**		**Underlier Name**
Underlying ID with Underlying ID Source [ISIN]	Index Name to Index ISIN Mapping File	Equivalent Underlying Equity Index Name that exists in the mapping file		FTSE 100 INDEX
	ISIN Reference Data	longName of Underlying Instrument ISIN	ISIN is found in ISIN Reference Data.	VODAFONE GROUP PLC
			ISIN is found in ISIN Reference Data, but its description is missing.	No name available
			ISIN is not found in ISIN Reference Data.	No name obtainable
Underlying ID with Underlying ID Source [EQIDX]	UPI record	Underlying Instrument Index		MSCI EM USD
Underlying ID with Underlying ID Source [PROP]	UPI record	Underlying Instrument Index Prop		34810-JPCFNAMR

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
	OPTL	Mapped to =>	Elect at Settlement

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 Instrument Type within the Equity Asset Class is “Swaps” whereas Rates Asset Class uses “Swap”.

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
Delivery Type	M	Delivery Type	Delivery Type
			CFI Delivery Type
Return, pricing method or payout trigger	M	Return or Payout Trigger	Return or Payout Trigger
Underlier ID	C	Underlier ID	Underlying Instrument ISIN
			Underlying Instrument Index
			Underlying Instrument Index Prop
Underlier ID source	C	Underlier ID Source	Not Required
Underlier type	M	Not Required	Underlying Asset Type

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 Value	Comments
	Asset Class	Direct Map	Asset Class	Equity	
	Instrument Type	Direct Map	Instrument Type	Swap	
	Use Case	Direct Map	Product	Portfolio_Swap_Single_Index	
	Level	Set to "UPI"	Level	UPI	
	Notional Currency	No Mapping			
	Expiry Date	No Mapping			
A	Underlying Instrument ISIN	Set to "Equity Index Identifier"	Underlier Type	Equity Index Identifier	"One Of" Underlier Type
		Map to	Underlier ID	GB0001383545	
		Set to "ISIN"	Underlier ID Source	ISIN	
B	Underlying Instrument Index	Set to "Equity Index Name"	Underlier Type	Equity Index Name	"One Of" Underlier Type
		Map to	Underlier ID	MSCI EM USD	
		Set to "EQIDX"	Underlier ID Source	EQIDX	
C	Underlying Instrument Index Prop	Set to "Proprietary Index"	Underlier Type	Proprietary Index	"One Of" Underlier Type
		Map to	Underlier ID	34810-JPCFNAMR	
		Set to "PROP"	Underlier ID Source	PROP	
	Return or Payout Trigger	Direct Map	Return or Payout Trigger	Price	
	Delivery Type	Direct Map	Delivery Type	CASH	
	Price Multiplier	No Mapping			