

DERIVATIVES SERVICE BUREAU (DSB) LTD

Equity : Swap : Portfolio_Swap

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
16 Aug 2022	Draft	1	Initial Version
30 Jan 2023	Draft	2	Insert Underlier Name attribute and Derivation rules
04 Sep 2023	Draft	3	<ul style="list-style-type: none"> 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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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
Enumerations Document	Lists all fixed values used for a product	Enumerations section
Product Definition Data Dictionary	Defines attributes in the Request and Record templates; and from which they are referenced on	Other Documents section
Product Definition Validations and Normalizations Document	Specifies details on validation and normalization rules	
UPI Underlier Input Method	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.	
Best Practice Guidelines and FAQs	Lists answers to queries raised by users and provides guidance on the use of the templates	
GitHub Environment Section	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
	Instrument (Category)	S	Swap	
	Asset Class (Group)	E	Equity	
Attr #1	Underlying Assets	B	Basket	A bespoke, synthetic portfolio of underlying assets whose components have been agreed for a specific over-the-counter (OTC) derivative by the parties to the transaction
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	Others	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
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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*	Basket*	Portfolio_Swap

*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] and Transaction Type values [Single Name, Single Index, Basket]. This product template is a catch all for products that fall outside of these specified transaction types.

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 Equity spreadsheet that contains the layout of all templates. This can be found in the Equity 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.Equity.Swap.Portfolio_Swap.UPI.json	Initial version	Initial

3.1 Underlier Input Method

This product is assumed to be a "Basket" in all cases, hence in accordance with ISO 4914 (UPI), there is no need to define individual constituents within this template (see *Appendix I - ISO 4914 Equivalence*) and so Underlier Input Method does not apply for this product.

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 Equity spreadsheet that contains the layout of all templates. This can be found in the Equity 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	Equity.Swap.Portfolio_Swap.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		
Structure	Instrument Type + Asset Class + Underlying Asset Type + Return or Payout Trigger + NA + Delivery Type		
Example	SEBTXC		
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	Basket	Fixed Mapping	B
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 (CFD)	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 Bskt Tot Rtn		
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	Basket	Fixed Abbreviation	Bskt
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 (CFD)	Mapped to =>	CFD
	Other	Mapped to =>	Oth

4.2.3 Underlier Name

Attribute	Underlier Name		
Underlying Asset	Underlier Name Source	Underlier Name Source Attribute	Underlier Name
Basket	Constant	N/A	Basket

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 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
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	Not Required	
Underlier ID source*	C	Not Required	
Underlier type	M	Not Required	Underlying Asset Type

*Underlier ID/source are not required for a custom basket defined in the ISO 4914 (UPI) specification.

7. Appendix 2 - OTC ISIN-UPI Mapping

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

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	
Level	Set to "UPI"	Level	UPI	
Notional Currency	No Mapping			
Expiry Date	No Mapping			
Underlying Instrument ISIN	No Mapping			
Underlying Instrument Index	No Mapping			
Underlying Instrument Index Prop	No Mapping			
Return or Payout Trigger	Direct Map	Return or Payout Trigger	Total Return	
Price Multiplier	No Mapping			
Delivery Type	Direct Map	Delivery Type	CASH	