Derivatives Service Bureau

Foreign_Exchange : Forward : Non_Standard

UPI Product Definition

Version 3

Date	Status	Version	Revision Details
8 Aug 2022	Draft	1	Initial Version
26 Jan 2023	Draft	2	• Update example values in the Request and Record templates layout • Insert Underlier Name attribute and Derivation rules
06 Sep 2023	Draft	3	• 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)	**J**	Forward	
	Asset Class (Group)	**F**	Foreign Exchange	
Attr #1	**Underlying Assets**	**T**	Spot	An option on an FX transaction in which two parties agree to buy one currency against selling another currency at an agreed price for settlement on the spot date
		R	Forward	Forward
		O	Options	Options
		F	Futures	Contracts, listed on an exchange or regulated market, which obligate the buyer to receive and the seller to deliver in the future, the assets specified at an agreed price. This includes forwards on regulated markets.
Attr #2	**Not applicable/undefined**	**X**	Not applicable/undefined	Not applicable/undefined
Attr #3	**Return or Payout Trigger**	**C**	Contract for difference	A cash settled total return swap or forward where the parties agree to exchange on the maturity of the contract the difference between the opening price and closing price of the underlying
		S	Spread-bet	The payout is determined by the movement in the reference price of the underlying instrument to its price at expiry (or the price when the holder wishes to close out) multiplied by an agreed amount per point movement
		F	Forward price of underlying instrument	Forward price of underlying instrument
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	DSB Product Definition Name
Foreign Exchange	Exotic	Various entries	Non_Standard_Forward

3   REQUEST TEMPLATE

This section describes the input message received by UPI service.

Template name	Template details	Release
Request.Foreign_Exchange.Forward.Non_Standard.UPI.json	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Validation / Derivation
Header Section	Asset Class	Set	M	Foreign_Exchange	
	Instrument Type	Set	M	Forward	
	Product	Set	M	Non_Standard	
	Level	Set	M	UPI	
Attribute Section	Underlier ID	Enum	M	CNY	Enumerated List
	Underlier ID Source	String	M	CCY	[CCY]
	Other Underlier ID	Enum	M	CNY	Enumerated List
	Other Underlier ID Source	String	M	CCY	[CCY]
	Settlement Currency	Enum	C	CNY	Enumerated List
	Place of Settlement	Enum	C	Hong Kong	Enumerated List
	Underlying Asset Type	Enum	M	Spot	[Spot, Forward, Options, Futures]
	Return or Payout Trigger	Enum	M	Forward price of underlying instrument	[Spreadbets, Contract for Difference (CFD), Forward price of underlying instrument]
	Delivery Type	Enum	M	PHYS	[CASH, PHYS]

3.1   Underlier Input Method

For products that has 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 single required Underlier Source	
	• Currency Pair [CCY]	
Input Underlier ID	CCY	This is validated against ISO Currency Code 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.

3.2.1   Notional Currency and Other Notional Currency

- Currency for both legs cannot be identical.
- If the following attributes have the same currency, an error message will apply "Error: Notional Currency and Other Notional Currency cannot be identical".
- If the Notional and Other Notional Currency are both CNY and has no Place of Settlement attribute, an error message will apply "Error: Notional Currency and Other Notional Currency cannot be identical".
- If the Notional and Other Notional Currency are both CNY and has Place of Settlement of "Hong Kong", the combination string is acceptable.
- If the Notional and Other Notional Currency is both CNY and Place of Settlement is not "Hong Kong", an error message will apply "Error: Place of Settlement must be Hong Kong for CNY/CNY request".

4 RECORD TEMPLATE

This section describes the record returned by the UPI service.

Version	Template name	Template details	Release
V.1	**Foreign_Exchange.Forward.Non_Standard.UPI.V1.json**	Initial version	Initial

Section	Attribute	Format	Cat	Example Value	Derivation
Header Section	Asset Class	Set	M	Foreign_Exchange	
	Instrument Type	Set	M	Forward	
	Product	Set	M	Non_Standard	
	Level	Set	M	UPI	
	Template Version	Integer	D	1	
Attribute Section	Notional Currency	Enum	M	CNY	Enumerated List
	Other Notional Currency	Enum	M	CNY	Enumerated List
	Settlement Currency	Enum	C	CNY	Enumerated List
	Place of Settlement	Enum	C	Hong Kong	Enumerated List
	Underlying Asset Type	Enum	M	Spot	[Spot, Forward, Options, Futures]
	Return or Payout Trigger	Enum	M	Forward price of underlying instrument	[Spreadbets; Contract for Difference (CFD); Forward price of underlying instrument]
	Delivery Type	Enum	M	PHYS	[CASH, PHYS]
Identifier Section	UPI	String	D	QZBT41DIN7C1	
	Status	String	D	New	[New; Updated; Deleted; Deprecated]
	Status Reason	String	D	<null>	
	Last Update Date Time	DtTm	D	2020-11-30T00:00:13	YYYY-MM-DDThh:mm:ss
Derived Section	Classification Type	String	D	JFTXFP	See Derivation Rules
	Short Name	String	D	NA/FX Fwd Nstd CNY CNY	See Derivation Rules
	Underlier Name	String	D	CNY CNY	See Derivation Rules
	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 + NA + Return or Payout Trigger + Delivery Type		
Example	JFTXFP		
Source	ISO 10962 (CFI) – Third edition 2015-07-15		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Instrument Type	Forward	Fixed Mapping	J
Asset Class	Foreign Exchange	Fixed Mapping	F
Underlying Asset Type	Spot	Mapped to =>	T
	Forward	Mapped to =>	R
	Options	Mapped to =>	O
	Futures	Mapped to =>	F
Not Applicable / Undefined	Not applicable / undefined	Fixed Mapping	X
Return or Payout Trigger	Spreadbets	Mapped to =>	S
	Contract for Difference (CFD)	Mapped to =>	C
	Forward price of underlying instrument	Mapped to =>	F
Delivery Type	CASH	Mapped to =>	C
	PHYS	Mapped to =>	P

4.2.2   Short Name

Attribute	Short Name		
Structure	"NA" + "/" + Asset Class + Instrument Type + Product Type + Notional Currency + Other Notional Currency		
Example	NA/FX Fwd Nstd CNY CNY		
Source	ISO 18774 (Financial Instrument Short Name) - First edition 2015-11		
Source Attribute	**Source Value**	**Derivation Method**	**Result**
Issuer Name	None	Fixed Value	NA/
Asset Class	Foreign Exchange	Fixed Abbreviation	FX
Instrument Type	Forward	Fixed Abbreviation	Fwd
Product Type	Non-Standard	Fixed Abbreviation	Nstd
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**
Currency Pair	UPI record	Notional Currency / Other Notional Currency	CNY CNY

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

The DSB supports the creation of UPIs for several types of FX Forwards:

Non-Standard Forward:
- Where the FX Forward does not adhere to the standard instrument structure or
- Where the FX Forward is based on an Offshore variation of a non-deliverable currency (such as the Chinese Yuan/Renminbi). In this situation the Offshore variation of the currency requires a Place of Settlement to provide a complete definition since the currency is not included in the ISO 4217 currency list.

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 Settlement Currency for the UPI will follow the behavior / definition of the equivalent OTC ISIN templates – including the attribute where the OTC ISIN has one and excluding it where OTC ISIN excludes it.

- The attribute Place of Settlement is applicable to NDS and Non-Standard products.

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
Settlement Currency	C	Settlement Currency	Settlement Currency
Underlier ID	C	Underlier ID	Notional Currency
	C	Other Underlier ID	Other Notional Currency
Underlier ID source	C	Underlier ID Source	Not Required
Underlier type	M	Underlying Asset Type	Underlying Asset Type

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	Sample UPI Values	Comments
Asset Class	Direct Map	Asset Class	Foreign_Exchange	
Instrument Type	Direct Map	Instrument Type	Forward	
Use Case	Direct Map	Product	Non_Standard	
Level	Set to "UPI"	Level	UPI	
Notional Currency	Map To	Underlier ID	CNY	
	Set to "CCY"	Underlier ID Source	CCY	
Other Notional Currency	Map To	Other Underlier ID	CNY	
	Set to "CCY"	Other Underlier ID Source	CCY	
Expiry Date	No Mapping			
Price Multiplier	No Mapping			
Underlying Asset Type	Direct Map	Underlying Asset Type	Spot	
Return or Payout Trigger	Direct Map	Return or Payout Trigger	Forward price of underlying instrument	
Delivery Type	Direct Map	Delivery Type	PHYS	
Settlement Currency	Direct Map	Settlement Currency	CNY	
Place of Settlement	Direct Map	Place of Settlement	Hong Kong	