

Derivatives Service Bureau
CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Initial Draft	M. Surop	18 Nov 2021	Initial Document
2	Draft	M.A. Gariplan	9 Feb 2023	Add new products in Change Impact

Title	Add hierarchy attributes to OTC ISIN Header			
Background	<p>In order to maintain the UPI/ISIN hierarchy in the DSB Product Definition, the current OTC ISIN Header in all product templates is required to be updated as follows:</p> <ul style="list-style-type: none"> • Add /ISIN/Parents/UPI attribute: This attribute is required to automatically create UPI records when ISIN record is being created. • Update OTC ISIN Status Enum elaborations: This allows to re-use generic description of enum elaboration between ISIN and UPI schemas. • OTC ISIN Record schema upgrade (Major-Minor V#M#): The TemplateVersion attribute data type will be changed from integer to string due to the changes in the ISIN component attribute e.g., Status, Parents/UPI. • Update OTC ISIN group/component label or title: Adding "Identifier" as title to the ISIN group/component and modifying the title from "Identification" to "ISIN" in the ISIN/ISIN attribute will align both ISIN and UPI records to be consistent when records are displayed in the GUI. 		DSB-ID	DSB-1574
			Type	Schema
			Owner	Marlowe Surop
			Version	2
			State	FINAL
Terms of Reference	Objective	<ul style="list-style-type: none"> • To maintain the UPI/ISIN hierarchy in all DSB Product Definition templates. 		
	Scope	<ul style="list-style-type: none"> • The changes cover the output (Record) templates for all Asset classes. 		
	Requirement	<ul style="list-style-type: none"> • There is a requirement to improve the current template/schema of OTC ISIN Header in order to maintain the UPI/ISIN hierarchy in the DSB Product Definitions. • The Product Definition will return an equivalent UPI based on the new requirements of the OTC ISIN. 		
	Dependencies	<ul style="list-style-type: none"> • The specification is dependent on PC approval for the use of the OTC ISIN Product Definitions as the basis for the UPI. • The specification is dependent on ISO 4914 (UPI) requirements to be able to create an equivalent UPI Parent for the created OTC ISIN. 		
	Assumptions	<ul style="list-style-type: none"> • The specification assumes that, unless states, all values and behaviours are based on DSB's current OTC Product Definition. • The specification will support the requirement of ISO 4914 (UPI) – including the attributes that are not currently supported in the current OTC ISIN. 		

Change Details

For each of the in-scope output (Record) templates, the following changes in the OTC ISIN Header are required:

a. Add /ISIN/Parents/UPI attribute

- At present, the OTC ISIN component attribute “Parent” is an Optional property. This component must be updated to “Parents” and must be a Required property.
- A new required attribute “UPI” must be added in the Parents component that will hold the UPI value.
- Once the /ISIN/Parents/UPI attribute is added as a Required property, this will automatically create UPI records when creating an ISIN record.

Please see illustration below of OTC ISIN Record schema highlighted the required changes:

```

},
"LastUpdateDateTime": {
  "title": "Last Update DateTime",
  "description": "Last Update DateTime",
  "type": "string"
},
"Parents": {
  "title": "Parents",
  "type": "object",
  "properties": {
    "UPI": {
      "title": "UPI",
      "description": "Unique Product Identifier as defined by ISO 4914",
      "type": "string"
    }
  },
  "required": [
    "UPI"
  ],
  "additionalProperties": false
}
},
"required": [
  "ISIN",
  "Status",
  "LastUpdateDateTime",
  "Parents"
],
"additionalProperties": false
},

```

b. Update OTC ISIN Status Enum elaborations

- Update all OTC ISIN schema status enumeration descriptions to a generic one to allow re-use between the ISIN and UPI schemas.
- A new enumeration “Deprecated” is to be added to accommodate OTC ISINs that are to be “Deprecated” during OTC ISIN pre-population/migration. *Note: These deprecated OTC ISIN records are those existing OTC ISINs where Parent UPI record cannot be created (orphaned OTC ISINs) during pre-population/migration.*

Please see illustration below of OTC ISIN Record schema highlighted the required changes:

```

},
"Status": {
  "title": "Status",
  "description": "Status of the Record",
  "type": "string",
  "enum": [
    "New",
    "Updated",
    "Expired",
    "Deleted",
    "Deprecated"
  ],
  "elaboration": {
    "New": "New record added to the database",
    "Updated": "One/several of the fields in the record is/are updated",
    "Expired": "Record that has already matured relative of the specified Expiry Date",
    "Deleted": "The identifier is deleted and no longer active",
    "Deprecated": "The record does not meet the requirements of the product template"
  }
}
},

```

c. OTC ISIN Record schema upgrade

- Due to the required changes in the OTC ISIN component attributes (as mentioned in items a & b), the existing OTC ISIN Record schemas are to be upgraded with a Minor version where:
 - V1 => V1M1
 - V2 => V2M1
 - V3 => V3M1
- Due to the required upgrade in the OTC ISIN Record schema, the TemplateVersion attribute data type is to be changed from integer to "string".

Please see illustration below of OTC ISIN Record schema highlighted the required changes:

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "title": "Commodities.Forward.Forward.InstRefDataReporting.V1M1",
  "LastModifyDateTime": "2021-09-22T02:13:18",
  "description": "Record template for Commodities.Forward.Forward",
  "copyright": "Copyright © 2020 The Derivatives Service Bureau (DSB) Limited. All Rights Reserved.",
  "type": "object",
  "properties": {
    "TemplateVersion": {
      "title": "Template Version",
      "description": "Template Version",
      "type": "string"
    }
  }
}
```

d. Update OTC ISIN group/component label or title

These updates are required to align both OTC ISIN and UPI records to be consistent when these are displayed in the GUI.

- Update the OTC ISIN group/component by adding "Identifier" as title.
- Modify the current OTC ISIN group/component title from "Identification" to "ISIN" for the /ISIN/ISIN attribute.

Please see illustration below of OTC ISIN Record schema highlighted the required changes:

```
  ],
  "additionalProperties": false
},
"ISIN": {
  "title": "Identifier",
  "type": "object",
  "properties": {
    "ISIN": {
      "title": "ISIN",
      "description": "International Securities Identification Number (ISO 6166)",
      "type": "string"
    },
    "Status": {
      "title": "Status",

```

Change Impact

The OTC ISIN schema of the following Record templates will be impacted by these changes:

Rates:

- Rates.Swap.Basis
- Rates.Swap.Basis_OIS
- Rates.Swap.Cross_Currency_Basis
- Rates.Swap.Cross_Currency_Fixed_Fixed
- Rates.Swap.Cross_Currency_Fixed_Float
- Rates.Swap.Cross_Currency_Fixed_Float_NDS
- Rates.Swap.Cross_Currency_Inflation_Swap
- Rates.Swap.Cross_Currency_Zero_Coupon
- Rates.Swap.Fixed_Fixed
- Rates.Swap.Fixed_Float
- Rates.Swap.Fixed_Float_OIS
- Rates.Swap.Fixed_Float_Zero_Coupon
- Rates.Swap.Inflation_Basis
- Rates.Swap.Inflation_Basis_Zero_Coupon

- Rates.Swap.Inflation_Basis_YoY
- Rates.Swap.Inflation_Fixed_Float_YoY
- Rates.Swap.Inflation_Fixed_Float_Zero_Coupon
- Rates.Swap.Inflation_Swap
- Rates.Option.CapFloor
- Rates.Option.Inflation_CapFloor
- Rates.Option.Debt_Option
- Rates.Option.Swaption
- Rates.Forward.FRA_Index
- Rates.Forward.FRA_Other
- Rates.Forward.Debt

Credit:

- Credit.Swap.ABS
- Credit.Swap.Corporate
- Credit.Swap.Loan
- Credit.Swap.Municipal
- Credit.Swap.Sovereign
- Credit.Swap.Index
- Credit.Swap.Index_Tranche
- Credit.Swap.Total_Return_Swap
- Credit.Option.Index_Swaption
- Credit.Option.Single_Name_Swaption
- Credit.Forward.Debt

Foreign_Exchange:

- Foreign_Exchange.Swap.FX_Swap
- Foreign_Exchange.Option.Barrier_Option
- Foreign_Exchange.Option.Digital_Option
- Foreign_Exchange.Option.Forward_Vol_Agreement
- Foreign_Exchange.Option.NDO
- Foreign_Exchange.Option.Target_Option
- Foreign_Exchange.Option.Vanilla_Option
- Foreign_Exchange.Forward.Contract_For_Difference
- Foreign_Exchange.Forward.Forward
- Foreign_Exchange.Forward.NDF
- Foreign_Exchange.Forward.Rolling_Spot
- Foreign_Exchange.Forward.Spreadbet
- Foreign_Exchange.Forward.Vol_Var
- Foreign_Exchange.Swap.NDS

Equities:

- Equity.Swap.Price_Return_Basic_Performance_Single_Name
- Equity.Swap.Price_Return_Basic_Performance_Single_Index
- Equity.Swap.Price_Return_Basic_Performance_Basket
- Equity.Swap.Parameter_Return_Dividend_Single_Name
- Equity.Swap.Parameter_Return_Dividend_Single_Index
- Equity.Swap.Parameter_Return_Dividend_Basket
- Equity.Swap.Parameter_Return_Variance_Single_Name
- Equity.Swap.Parameter_Return_Variance_Single_Index
- Equity.Swap.Parameter_Return_Variance_Basket
- Equity.Swap.Parameter_Return_Volatility_Single_Name
- Equity.Swap.Parameter_Return_Volatility_Single_Index
- Equity.Swap.Parameter_Return_Volatility_Basket
- Equity.Swap.Price_Return_Basic_Performance_Single_Name_CFD

	<ul style="list-style-type: none"> • Equity.Swap.Price_Return_Basic_Performance_Single_Index_CFD • Equity.Swap.Price_Return_Basic_Performance_Basket_CFD • Equity.Swap.Portfolio_Swap • Equity.Swap.Portfolio_Swap_Single_Name • Equity.Swap.Portfolio_Swap_Single_Index • Equity.Swap.Portfolio_Swap_Other • Equity.Option.Single_Name • Equity.Option.Single_Index • Equity.Option.Basket • Equity.Forward.Price_Return_Basic_Performance_Single_Name • Equity.Forward.Price_Return_Basic_Performance_Single_Name_CFD • Equity.Forward.Price_Return_Basic_Performance_Single_Index • Equity.Forward.Price_Return_Basic_Performance_Single_Index_CFD • Equity.Forward.Price_Return_Basic_Performance_Basket • Equity.Forward.Price_Return_Basic_Performance_Basket_CFD <p>Commodities:</p> <ul style="list-style-type: none"> • Commodities.Swap.Swap • Commodities.Swap.Basis_Swap • Commodities.Swap.Single_Index • Commodities.Option.Option • Commodities.Option.Swapion • Commodities.Option.Single_Index • Commodities.Forward.Forward • Commodities.Forward.Single_Index • Commodities.Swap.Multi_Exotic_Swap • Commodities.Option.Multi_Exotic_Option • Commodities.Forward.Multi_Exotic_Forward <p>Non-Standard:</p> <ul style="list-style-type: none"> • Rates.Swap.Non_Standard • Rates.Option.Non_Standard • Credit.Swap.Non_Standard • Credit.Option.Non_Standard • Credit.Forward.Non_Standard • Foreign_Exchange.Option.Non_Standard • Foreign_Exchange.Forward.Non_Standard • Equity.Swap.Non_Standard • Equity.Option.Non_Standard • Equity.Forward.Non_Standard • Commodities.Swap.Non_Standard • Commodities.Forward.Non_Standard • Commodities.Option.Non_Standard • Other.Swap.Non_Standard • Other.Option.Non_Standard • Other.Other.Non_Standard • Other.Forward.Non_Standard <p><i>Note: Impacts Normalised and Non-Normalised templates.</i></p>	
<p>User Impact?</p>	<p>Yes</p>	<p>Users will need to download the updated templates in order to access all updated OTC ISIN Record schemas.</p>
	<p>Versions</p>	<p>The version number of all in-scope Record templates will be impacted.</p>

Backward Compatibility	<p>The existing OTC ISIN will continue to exist in the DSB record but retrieving the record templates will be limited depending on the search or retrieve function used by users.</p> <ol style="list-style-type: none"> 1) Retrieve or Create ISIN record – User supplies request attributes to the system and the DSB returned the recorded version of the ISIN or generate a new ISIN if not yet created in the system. 2) Retrieve ISIN record by ISIN – User uses the search function by supplying the OTC ISIN and DSB returned the record attributes. 3) Search for ISIN record – User can search an ISIN based on the attributes of the templates. 4) Retrieve no create – User supplies the request attributes to the system and the DSB will return the record attributes (including the derived). <p>All existing OTC ISINs with upgraded template versions will be migrated. Hence, user should have no issues in retrieving previously created OTC ISINs.</p>
Documentation	<p>The following DSB documents are to be updated:</p> <ul style="list-style-type: none"> • DSB PROD Product Definitions here <ul style="list-style-type: none"> ➤ Table 3.5 – Implementation • DSB UAT Product Definitions here <ul style="list-style-type: none"> ➤ Table 3.5 – Implementation
Reference	<ul style="list-style-type: none"> • DSB OTC ISIN Product Definitions • DSB UPI Product Definitions