CHANGE REQUEST FORM

Version	State	Author	Date	Description
1	Draft	M.A. Gariplan	19 Oct. 22 2021	Initial Document

Title	ISIN : Rates : Option : Swaption Underlier Validation		
Background	In the current OTC ISIN product definition, only syntactic validation is applied to the Underlying Instrument ISIN attribute.	**JIRA**	**DSB-2065**
		Type	Validation
	In order to maintain UPI/ISIN hierarchy, the UPI product validations will be aligned to its equivalent ISIN product. Additional validations will be included in the Underlying Instrument ISIN attribute in which certain conditions will be implemented.	**Owner**	M.A. Gariplan
		Version	1
	OTC ISIN product:	**State**	Draft
	Rates Option Swaption		
	*This product is based on an underlying ISIN Swap and will derive data elements from the provided ISIN.		
Terms of Reference	**Scope** • This CRF covers the input (Request) template of the ISIN product.		
Requirements	• At the moment, only syntactic validation is performed on the Underlying Instrument ISIN field. • To maintain the UPI/ISIN hierarchy, there is a requirement to align the UPI product validations to its equivalent OTC ISIN product i.e., Underlying Instrument ISIN. • The input Underlying Instrument ISIN must have a prefix "EZ" with its structure based on ISO 6166. • The input Underlying Instrument ISIN must be a valid and existing ISIN in RDL. • The input Underlying Instrument ISIN mut be a valid Rates Swap product with status not "Deleted".		

Validation

1. **Underlying Instrument ISIN**

    a. The following validation will be applied to the Underlying Instrument ISIN and must be a valid ISIN RDL record.

    - ISIN   12 characters (Prefix "EZ", 9 Alphanumeric, 1 Numeric check character)

        ISIN structure based on ISO 6166 ISIN

    b. If input ISIN has more than 12 characters or does not have prefix "EZ", an error message will apply before it proceeds to create: "Value must match the pattern ^[EZ]{2}[A-Z0-9]{9}[0-9]$"

2. **Underlying Instrument ISIN in the record**

    a. If input ISIN does not exist, an error message will apply: "Error: ISIN/s not found".

3. **Input Underlying Instrument ISIN**

    a. The following validation will be applied to Underlying Instrument ISIN record returned from the ISIN RDL.

    - Asset Class   "Rates"
    - Instrument Type   "Swap"
    - Status   not = "Deleted"

	b. If the above validation rules are not satisfied, an error message will apply: "Error: Underlying Instrument ISIN must be a valid and existing Rates Swap".
Change Impact	This change impacts the following product: • Rates.Option.Swaption

Backward Compatibility	At present, only syntactic validation is applied to the input Underlying Instrument ISIN. Once the validation is implemented, additional conditions will be included in the existing validation for the attribute.
	
	The existing invalid OTC ISINs will remain in the DSB RDL but will be subject to the following functional restrictions:
	• Unable to create invalid ISINs by attribute
	• Unable to retrieve by attribute
	• Able to retrieve by ISIN
	• Able to search by supported attribute
	
	All functionalities are available for existing valid OTC ISINs.
	
	Details of these functions are provided below:
	
	• **Retrieve or Create ISIN Record** - Users submit request attributes to the system and DSB returns the recorded version of the ISIN or generate a new ISIN if not yet created in the system.
	  a. User will enter the request attributes, then the system validates the input data including the new validations for the Underlying Instrument ISIN.
	  b. If the request attribute is valid, the DSB will return a recorded version of an ISIN or generate a new ISIN if not existing.
	  c. If the request attribute is invalid, the DSB will return an error message and will not retrieve or create an ISIN record.
	  d. The DSB will not inform users whether an ISIN exists in the DSB record or not.
	
	• **Retrieve No Create** - Users can retrieve an ISIN, and attributes related to that ISIN (including the derived attributes) if it already exists. This does not create a record if no ISIN is found.
	  a. User will enter the request attributes, then the system validates the input data including the new validations for the Underlying Instrument ISIN.
	  b. If the request attribute is valid, the DSB will return a record template (attributes and derived) but will not generate an ISIN or will provide an ISIN record template if existing.
	  c. If the request attribute is invalid, the DSB will return an error message and will not retrieve an ISIN record.
	  d. If ISIN has not been created in the DSB yet, the system will provide an error message and will not generate an ISIN.
	
	• **Retrieve ISIN Record by ISIN** - Users utilize the search function by providing the OTC ISIN, and the DSB returns the record attributes.
	  a. If the user provides the OTC ISIN, the system will return the record template based on the appropriate version of the record template.
	
	• **Search for ISIN Record** - User can search for an existing OTC ISIN based on a number of criteria (i.e., ISIN attributes).
	  a. User needs to use the Lucene search string to search for an ISIN record.

Documentation	The following DSB documents are to be updated: • DSB UAT Product Definitions here • DSB PROD Product Definitions here

References	• [UPI Product Definition Validations and Normalizations](#) • [UPI Product Definition Rates Option Swaption](#)
Comments	• The purpose of this CRF is to keep in line with the UPI testing and conditions. • Users should be able to still create a UPI when these validations are implemented. • If users can create an ISIN, it should be possible to create its parent UPI. • Underlier ISIN must have its parent UPI.

GUI DEFINITION

The following diagram provides a definition of the input screen for the new validation.

1. ISIN   12 characters (Prefix "EZ", 9 Alphanumeric, 1 Numeric check character)

Request.Rates.Option.Swaption.InstRefDataReporting

Header

Asset Class	Rates
Instrument Type	Option
Product	Swaption
Level	InstRefDataReporting

Attributes ✏ **Properties**

Notional Currency	EUR
Expiry Date	YYYY-MM-DD 📅
Underlying Asset Type	Basis Swap (Float – Float)
Underlying Instrument ISIN	o

Value must match the pattern ^[EZ]{2}[A-Z0-9]{9}[0-9]$

Option Type	Call
Option Exercise Style	American
Valuation Method or Trigger	Vanilla
Delivery Type	Cash
Price Multiplier	1

2. If input ISIN does not exist, an error message will apply: "Error: ISIN/s not found".

Request.Rates.Option.Swaption.InstRefDataReporting

Header

Asset Class	Rates
Instrument Type	Option
Product	Swaption
Level	InstRefDataReporting

Attributes ✏ **Properties**

Notional Currency	EUR
Expiry Date	YYYY-MM-DD
Underlying Asset Type	Basis Swap (Float - Float)
Underlying Instrument ISIN	EZCN4P9F11X8
	Error: ISIN/s not found
Option Type	Call
Option Exercise Style	American
Valuation Method or Trigger	Vanilla
Delivery Type	Cash
Price Multiplier	1

3. Input Underlying Instrument ISIN must be a valid Rates Swap product with status not "Deleted".

Request.Rates.Option.Swaption.InstRefDataReporting

Header

Asset Class	Rates
Instrument Type	Option
Product	Swaption
Level	InstRefDataReporting

Attributes ✏ Properties

Notional Currency	EUR
Expiry Date	YYYY-MM-DD
Underlying Asset Type	Basis Swap (Float - Float)
Underlying Instrument ISIN	EZ9X3PHL3FM5

Error: Underlying Instrument ISIN must be a valid and existing Rates Swap

Option Type	Call
Option Exercise Style	American
Valuation Method or Trigger	Vanilla
Delivery Type	Cash
Price Multiplier	1