

Derivatives Service Bureau  
**CHANGE REQUEST FORM**

Title	EQUITY/XASST: Options: Add Strike Price Type to templates			
<b>Background</b>	At present, the DSB's Equity Option templates do not include a qualification for the Strike Price that would inform the user of the type of Strike Price that has been entered (as in Monetary Value, Percentage, Yield, or Basis Points). This information is included in the FIRDS Reference Data message (see <a href="#">here</a> , 2.3.4.2.31 Strike Price ) and is required for the ISIN record to be meaningful.		JIRA	<b>DSB-048</b>
			Type	Attribute
			Owner	Natalia Kozlovich
			Version	3
			State	Final
<b>Assumptions</b>	Strike Price Currency is not meaningful for a Strike Price expressed as a Percentage/ Yield / Basis Points.			
<b>Change Details</b>	<b>Template changes</b>			
	<p><b>For Equity Option Basket/Single Index/Single Name:</b></p> <p>(1) Add a new enumerated attribute "Strike Price Type", with the following values:</p> <ul style="list-style-type: none"> <li>• Monetary Value</li> <li>• Percentage</li> <li>• Yield</li> <li>• Basis Points</li> </ul> <p>Note that the order of the enumeration list on the GUI is as stated above, and the values should not be presented alphabetically:</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p><b>Strike Price Type</b> <span style="border: 1px solid #ccc; padding: 2px;">Monetary Value ▼</span></p> <div style="border: 1px solid #ccc; padding: 2px; margin-left: 20px;"> <p style="background-color: #007bff; color: white; padding: 2px;">Monetary Value</p> <p style="padding: 2px;">Percentage</p> <p style="padding: 2px;">Yield</p> <p style="padding: 2px;">Basis Points</p> </div> </div> <p>(2) For Strike Price Type = [Monetary Value, Percentage, Yield, Basis Points], introduce a validation as specified in 'Validation changes' section below.</p> <p>(3) Strike Price Currency must be derived when Strike Price Type is set to 'Monetary Value 'and must not be derived for an input when Strike Price Type is set to 'Percentage', 'Yield' OR 'Basis Points'.</p> <p>(4) Add Strike Price Type [Monetary Value, Percentage, Yield, Basis Points] on the record templates. Any Strike Price (including 0) must categorize under one of the above types.</p> <p><u>Input Attributes</u></p> <ol style="list-style-type: none"> <li>1. Strike Price Type (mandatory and one of: Monetary Value, Percentage, Yield, Basis Points)</li> <li>2. Strike Price (mandatory, decimal as per 'Validation changes' section below)</li> </ol> <p><u>Output Attributes</u></p>			

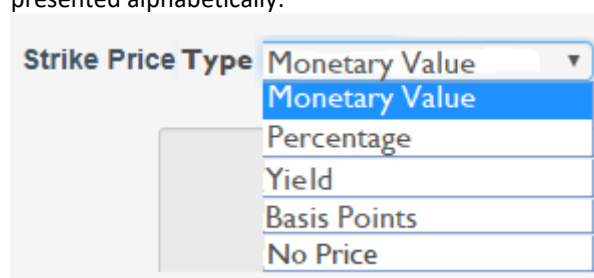
1. Strike Price Type (as input)
2. Strike Price (as input - rounded as per DSB-88)
3. Strike Price Currency (derived from Notional Currency if Strike Price Type= 'Monetary Value', otherwise – not part of the record)

**For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other:**

- (1) Rename the existing 'Strike Price' component to be 'Strike Price Type' and extend the enumeration list to contain the following values:

AS IS – One of	->	TO BE – One of
<ul style="list-style-type: none"> <li>• value</li> <li>• PNDG</li> </ul>		<ul style="list-style-type: none"> <li>• Monetary Value</li> <li>• Percentage</li> <li>• Yield</li> <li>• Basis Points</li> <li>• No Price</li> </ul>

Note that the order of the enumeration list on the GUI is as stated above, and the values should not be presented alphabetically:



- (2) For Strike Price Type = [Monetary Value, Percentage, Yield, Basis Points], introduce a validation as specified in 'Validation changes' section below.
- (3) For Strike Price Type = 'No Price', record 'PNDG' as Strike Price value.
- (4) Strike Price Currency must be available for an input when Strike Price Type is set to 'Monetary Value' OR 'PNDG' and must not be available for an input when Strike Price Type is set to 'Percentage', 'Yield' OR 'Basis Points'.
- (5) For **Equity Option Non-Standard**: If Strike Price Currency is not provided by the user and Strike Price Type is set to 'Monetary Value', derive 'Strike Price Currency' from 'Notional Currency'.
- (6) For **Cross-Asset Option** and **Cross-Asset Other**: 'Strike Price Currency' mandatory user input if Strike Price Type is set to 'Monetary Value'.
- (7) If Strike Price Currency is not provided by the user and Strike Price is set to 'PNDG', do not derive and do not add 'Strike Price Currency' on the record.
- (8) Add Strike Price Type [Monetary Value, Percentage, Yield, Basis Points, No Price] on the record templates. Any Strike Price (including 0 and PNDG) must categorize under one of the above types.

Input Attributes

1. Strike Price Type (mandatory and one of: Monetary Value, Percentage, Yield, Basis Points, No Price)
2. Strike Price (mandatory, decimal as per in 'Validation changes' section below or 'PNDG' if Strike Price Type = 'No Price')
3. Strike Price Currency (optional – available if Strike Price Type = 'Monetary Value' or 'PNDG', not available for 'Percentage', 'Yield', 'Basis Points')

Output Attributes

1. Strike Price Type (as input)
2. Strike Price (as input rounded as per DSB-88 or 'PNDG' if Strike Price Type = 'No Price')
3. Strike Price Currency (as input or derived from Notional Currency if Strike Price Type='Monetary Value', else not part of record)

**Validation changes overview**

	<p>For all affected templates, introduce the following validation of the Strike Price field value depending on the Strike Price Type:</p> <table border="1" data-bbox="312 280 1481 1093"> <thead> <tr> <th data-bbox="312 280 480 344"></th> <th data-bbox="480 280 802 344"><b>Strike Price Type (mandatory) – one of</b></th> <th data-bbox="802 280 1193 344"><b>Strike Price Validation – depending on Strike Price Type</b></th> <th data-bbox="1193 280 1481 344"><b>Strike Price Currency</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="312 344 480 701"><b>Strike Price (mandatory)</b></td> <td data-bbox="480 344 802 701">Monetary Value</td> <td data-bbox="802 344 1193 701">DECIMAL - 18,13 (positive/negative/zero allowed)</td> <td data-bbox="1193 344 1481 701">✓ *For Equity Option Basket/Single Index/Single Name/Equity Option Non-Standard – derived from Notional Currency *For Cross-Asset Option and Cross-Asset Other – mandatory user input</td> </tr> <tr> <td></td> <td data-bbox="480 701 802 766">Percentage</td> <td data-bbox="802 701 1193 766">DECIMAL - 11,10 (positive/negative/zero allowed)</td> <td data-bbox="1193 701 1481 766">✗ Not applicable</td> </tr> <tr> <td></td> <td data-bbox="480 766 802 831">Yield</td> <td data-bbox="802 766 1193 831">DECIMAL - 11,10 (positive/negative/zero allowed)</td> <td data-bbox="1193 766 1481 831">✗ Not applicable</td> </tr> <tr> <td></td> <td data-bbox="480 831 802 896">Basis Points</td> <td data-bbox="802 831 1193 896">DECIMAL - 18,17 (positive/negative/zero allowed)</td> <td data-bbox="1193 831 1481 896">✗ Not applicable</td> </tr> <tr> <td></td> <td data-bbox="480 896 802 1093">No price *For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other only</td> <td data-bbox="802 896 1193 1093">'PNDG'</td> <td data-bbox="1193 896 1481 1093">✓ *For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other – optional input</td> </tr> </tbody> </table> <p>According to <a href="#">ESMA FIRDS Reporting Instructions</a>, DECIMAL indicates a numerical field for both positive and negative values:</p> <ul style="list-style-type: none"> <li>- decimal separator is '.' (full stop);</li> <li>- negative numbers are prefixed with '-' (minus);</li> <li>- values are rounded and not truncated.</li> </ul> <p>The above validation changes must be incorporated into the requirements for DSB-88. DSB-48 and DSB-88 must be delivered at the same time.</p>		<b>Strike Price Type (mandatory) – one of</b>	<b>Strike Price Validation – depending on Strike Price Type</b>	<b>Strike Price Currency</b>	<b>Strike Price (mandatory)</b>	Monetary Value	DECIMAL - 18,13 (positive/negative/zero allowed)	✓ *For Equity Option Basket/Single Index/Single Name/Equity Option Non-Standard – derived from Notional Currency *For Cross-Asset Option and Cross-Asset Other – mandatory user input		Percentage	DECIMAL - 11,10 (positive/negative/zero allowed)	✗ Not applicable		Yield	DECIMAL - 11,10 (positive/negative/zero allowed)	✗ Not applicable		Basis Points	DECIMAL - 18,17 (positive/negative/zero allowed)	✗ Not applicable		No price *For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other only	'PNDG'	✓ *For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other – optional input
	<b>Strike Price Type (mandatory) – one of</b>	<b>Strike Price Validation – depending on Strike Price Type</b>	<b>Strike Price Currency</b>																						
<b>Strike Price (mandatory)</b>	Monetary Value	DECIMAL - 18,13 (positive/negative/zero allowed)	✓ *For Equity Option Basket/Single Index/Single Name/Equity Option Non-Standard – derived from Notional Currency *For Cross-Asset Option and Cross-Asset Other – mandatory user input																						
	Percentage	DECIMAL - 11,10 (positive/negative/zero allowed)	✗ Not applicable																						
	Yield	DECIMAL - 11,10 (positive/negative/zero allowed)	✗ Not applicable																						
	Basis Points	DECIMAL - 18,17 (positive/negative/zero allowed)	✗ Not applicable																						
	No price *For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other only	'PNDG'	✓ *For Equity Option Non-Standard, Cross-Asset Option and Cross-Asset Other – optional input																						
<b>Affected Templates</b>	<p>The change will impact the following products (request and record):</p> <ul style="list-style-type: none"> <li>• Equity.Option.Basket</li> <li>• Equity.Option.Single_Name</li> <li>• Equity.Option.Single_Index</li> <li>• Equity.Option.Non_Standard</li> <li>• Other.Option.Non_Standard</li> <li>• Other.Other.Non_Standard</li> </ul>																								
<b>Backward Compatibility</b>	<p>The DSB supports the following 4 functions:</p> <ol style="list-style-type: none"> <li>1. <b>Retrieve or Create ISIN Record</b> – the user supplies the required attributes and the DSB returns an ISIN (and derived attributes). <ol style="list-style-type: none"> <li>a. This uses the Request template and the system returns the versioned Record template.</li> <li>b. This will create the ISIN if there is no matching record but will return the ISIN and attributes related to that ISIN (including the derived attributes) if it already exists.</li> <li>c. The user is not informed of whether the ISIN was created or found.</li> </ol> </li> <li>2. <b>Retrieve ISIN Record by ISIN</b> – the user supplies an ISIN and the DSB returns the attributes related to that ISIN (including the derived attributes).</li> </ol>																								

a. This returned details are based on the versioned Record template.

3. **Search for ISIN Record** – the user can Search for an ISIN based on a number of criteria (ie: ISIN attributes)

a. This uses a Lucerne search string and returns the ISIN and the attributes related to that ISIN (including the derived attributes).

4. **Retrieve No Create** – related to (1), the user supplies the required attributes and the DSB returns an ISIN and attributes related to that ISIN (including the derived attributes) if it already exists.

a. This does not create a record if no ISIN is found.

The first 3 functions (Retrieve or Create ISIN Record/ Retrieve ISIN Record by ISIN/ Search for ISIN Record) will not be impacted by the changes described in this CRF.

The Retrieve (No Create) function will be impacted since a user holding the old attributes will not be able to use that attributes to find and existing ISIN record. For example: once Strike Price Type added to the Equity Option templates, the user will not be able to use a Retrieve No Create for the existing details since the DSB expect to see a Strike Price Type (it will be a mandatory attribute on the template) but the old ISIN record will not have one (and one cannot be deduced from the existing information). The PC have agreed that this is acceptable.

**Use Cases**

Valid request/records for all affected templates:

REQUEST			RECORD		
Strike Price Type	Strike Price sample values	Strike Price Currency	Strike Price Type	Strike Price	Strike Price Currency
Percentage	DECIMAL -11,10 9999999999 -9999999999 0 9.9999999999 (no rounding) -9.9999999999 (no rounding) 9999999999.9 (no rounding) -9999999999.9 (no rounding) 9.9999999999 (must be rounded) -9.9999999999 (must be rounded)	*	✓From request	✓From request	*
Yield	DECIMAL -11,10 9999999999 -9999999999 0 9.9999999999 (no rounding)	*	✓From request	✓From request	*

	-9.999999999 (no rounding) 999999999.9 (no rounding) -999999999.9 (no rounding) 9.999999999 (must be rounded) -9.999999999 (must be rounded)				
Basis Points	DECIMAL - 18,17 999999999999999999 -999999999999999999 0 9,999999999999999999 (no rounding) -9,999999999999999999 (no rounding) 9999999999999999.9 (no rounding) -9999999999999999.9 (no rounding) 9,999999999999999999 (must be rounded) -9,999999999999999999 (must be rounded)	*	✓ From request	✓ From request	*

Valid request/records for Equity Option Basket/Single Index/Single Name/Non-standard:

REQUEST			RECORD		
Strike Price Type	Strike Price sample values	Strike Price Currency sample values	Strike Price Type	Strike Price	Strike Price Currency
Monetary Value	DECIMAL - 18,13 999999999999999999 -999999999999999999 0 99999.99999999999999 (no rounding) -99999.99999999999999 (no rounding)	*	✓ From request	✓ From request	✓ Derived

999999999999.99999 (no rounding)				
-999999999999.99999 (no rounding)				
99999.999999999999999 (must be rounded)				
-99999.999999999999999 (must be rounded)				

Valid request/records for Cross-Asset Option and Cross-Asset Other:

REQUEST			RECORD		
Strike Price Type	Strike Price sample values	Strike Price Currency sample values	Strike Price Type	Strike Price	Strike Price Currency
Monetary Value	DECIMAL - 18,13  999999999999999999  -999999999999999999  0  99999.999999999999999 (no rounding)  -99999.999999999999999 (no rounding)  999999999999.99999 (no rounding)  -999999999999.99999 (no rounding)  99999.999999999999999 (must be rounded)  -99999.999999999999999 (must be rounded)	GBP	✓From request	✓From request	✓From request
No Price	PNDG	GBP	✓From request	✓From request	✓From request
No Price	PNDG	x	✓From request	✓From request	x

Invalid requests for all affected templates:

Strike Price Type	Strike Price sample values	Strike Price Currency
Percentage	Outside DECIMAL -11,10  999999999999  -999999999999	ISO CCY

		9999999999.9 -9999999999.9	
Yield	Outside DECIMAL -11,10	9999999999 -9999999999 9999999999.9 -9999999999.9	ISO CCY
Basis Points	Outside DECIMAL - 18,17	999999999999999999 -999999999999999999 9999999999999999.9 -9999999999999999.9	ISO CCY
Invalid requests for Equity Option Basket/Single Index/Single Name:			
	<b>Strike Price Type</b>	<b>Strike Price sample values</b>	<b>Strike Price Currency</b>
	Monetary Value	Outside DECIMAL - 18,13 999999999999999999 -999999999999999999 9999999999999999.9 -9999999999999999.9	ISO CCY
	No Price	PNDG	ISO CCY
<b>Documentation</b>	The following DSB documents are to be updated: <ul style="list-style-type: none"> <li>• DSB UAT Annex 4 Equity <a href="#">here</a></li> <li>• DSB UAT Annex 6 Non-Std <a href="#">here</a></li> <li>• DSB UAT Product Definitions <a href="#">here</a></li> <li>• DSB PROD Annex 4 Equity <a href="#">here</a></li> <li>• DSB PROD Annex 6 Non-Std <a href="#">here</a></li> <li>• DSB PROD Product Definitions <a href="#">here</a></li> <li>• Validations and normalisations for cross-asset non-standard products <a href="#">here</a></li> </ul>		

<b>References</b>	SWIFT My Standards <a href="#">here</a> RTS 23 Annex <a href="#">here</a> FIRDS Reference Data System Reporting Instructions <a href="#">here</a>
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## APPENDIX 1

The following diagram provides a definition of the Strike Price attribute content from <https://www2.swift.com/mystandards/>

Name	Min	Max	Restrictions
Financial Instrument Reporting Reference Data Report V01 (DRAFT13auth.017.001.01)			
> ● Report Header	1	1	
▼ ● Reference Data	1	*	
● Technical Record Identification	0	1	
> ● Financial Instrument General Attributes	1	1	
● Issuer	1	1	
> ● Trading Venue Related Attributes	1	*	
> ● Debt Instrument Attributes	0	1	
▼ ● Derivative Instrument Attributes	0	1	
● Expiry Date	0	1	
● Price Multiplier	0	1	
> ⚡ Underlying Instrument	0	1	
> ⚡ Option Type	0	1	
▼ ⚡ <b>Strike Price</b>	0	1	
▼ ⚡ Price	1	1	
> ● Monetary Value	1	1	
● Percentage	1	1	
● Yield	1	1	
● Basis Points	1	1	
▼ ● No Price	1	1	
▼ ⚡ Pending	1	1	
◆ Pending [PNDG]			
◆ Not Applicable [NOAP]			
> ⚡ Currency	0	1	

## APPENDIX 2

The following diagram provides a definition of the Strike Price attributes content from [RTS 23 Annex](#):

31	Strike price	<p>Predetermined price at which the holder will have to buy or sell the underlying instrument, or an indication that the price cannot be determined at the time of execution.</p> <p>Field applicable to options or warrants, where strike price can be determined at the time of execution.</p> <p>Where price is currently not available but pending, the value shall be 'PNDG'.</p> <p>Where strike price is not applicable the field shall not be populated.</p>	<p>{DECIMAL-18/13} in case the price is expressed as monetary value</p> <p>{DECIMAL-11/10} in case the price is expressed as percentage or yield</p> <p>{DECIMAL-18/17} in case the price is expressed as basis points</p> <p>'PNDG' in case the price is not available</p>
32	Strike price currency	Currency of the strike price	{CURRENCYCODE_3}

## APPENDIX 3 – GUI CHANGES

For standard Equity Options:

*request*

**Strike Price Type**

[Monetary Value, Percentage, Yield, Basis Points]

**Strike Price**

*record*

**Strike Price Type**

**Strike Price**

**Strike Price Currency**

For non-standard Equity Options:

*request*

**Strike Price Type**

[Monetary Value, Percentage, Yield, Basis Points, No Price]

**Strike Price**

**Strike Price Currency**

*record*

**Strike Price Type**

**Strike Price**

**Strike Price Currency**

## CHANGE HISTORY

Version	State	Author	Date	Description
1	Draft	Natalia Kozlovich	23 January 2020	Initial Document
2	Draft	Natalia Kozlovich	31 January 2020	Removed defaulting of Strike Price Currency for Strike Price = 'PNDG'
3	Final	Natalia Kozlovich	2 October 2020	Removed defaulting of Strike Price Currency for Monetary Value in Other.Option and Other.Other products