Derivatives Service Bureau
CHANGE REQUEST FORM

Title	Remove "n/a" value in the attribute Debt Seniority enumerated list		
Background	At present, the enumerated list of the attribute "Debt Seniority" has five (5) enumerated values, i.e., including "n/a".	**DSB-ID**	**DSB-1649**
	These enumerated values are seen in the following CREDIT and OTHER Asset Class product templates:	**Type**	Enumeration
		Owner	Marlowe Surop
	• Credit.Swap.Total_Return_Swap • Credit.Swap.Non_Standard • Other.Swap.Non_Standard • Credit.Option.Non_Standard • Other.Option.Non_Standard • Other.Other.Non_Standard	**Version**	2
		State	Draft
	Also, the "n/a" enumerated value appears in Credit.Swap.Index and Credit.Swap.Index_Tranche.		
	To improve user experience, the DSB proposes to remove "n/a" value in the enumerated list regardless of the underlying instrument selected [ISIN, LEI, Index, Index Prop].		
	This enhancement will impact templates for CREDIT and OTHER Asset Class that include Debt Seniority as an attribute which are mentioned above.		
	Note: This should be read in conjunction with DSB-1440/1441/1442.		
Terms of Reference	**Objective**	• To ensure that the DSB Product Definitions continues to align with the golden source of Debt Seniority following ISO 20022 Financial Instrument Reporting Reference Data Report V01 which can be found here.
	Scope	• In-scope: All Credit and Non-Standard templates that include Debt Seniority as an attribute. • Out of scope: Asset Classes templates that do not include Debt Seniority as an attribute.
	Requirement	• There is a requirement to improve the data quality and consistency of OTC ISINs utilizing the appropriate enumerated values of attribute Debt Seniority depending on the underlying instrument selected.
Technical Considerations	For this specific change requirement, there are no expected technical consideration and such requirement can be executed without any further issues since this is in conjunction with DSB-1440/1441/1442.		

Change Details	At the moment, all the impacted product templates have five (5) enumerated values, i.e., including "n/a". This "n/a" value is to be removed. Based on ISO 20022 Financial Instrument Reporting Reference Data Report V01 which can be found here, the enumerated values of the attribute "Debt Seniority" to be supported are *[SNDB, MZZD, SBOD, JUND]*.
	
	Once change is implemented, each of the in-scope product template should have the following logic:
	
	1. At the front-end, GUI user can select the underlying instruments depending on the product type:
	
	    a. If Underlying Instrument selected is an ISIN or LEI; Debt Seniority attribute is present in the REQUEST and RECORD templates with enumerated values *[SNDB, MZZD, SBOD, JUND]*.
	
	    b. If Underlying Instrument selected is an Index or Index Prop; Debt Seniority attribute will be removed in the REQUEST and RECORD templates.
	
	2. For all in-scope product templates, the outline of the schema is illustrated below:
	
	    a. If Underlying Instrument selected is an ISIN or LEI, the enumerated values in both REQUEST and RECORD schemas must only be limited to [SNDB, MZZD, SBOD, JUND].
	
	    b. If Underlying Instrument selected is an Index or Index Prop, the attribute Debt Seniority must be removed in both REQUEST and RECORD schemas.

```
},
"DebtSeniority": {
  "title": "Debt Seniority",
  "description": "Indicates the seniority of the debt, or debt basket or index underlying a derivative",
  "type": "string",
  "enum": [
    "SNDB",
    "MZZD",
    "SBOD",
    "JUND"
  ],
  "elaboration": {
    "SNDB": "Senior Debt",
    "MZZD": "Mezzanine",
    "SBOD": "Subordinated Debt",
    "JUND": "Junior Debt"
  },
  "options": {
    "enum_titles": [
      "Senior Debt",
      "Mezzanine",
      "Subordinated Debt",
      "Junior Debt"
    ]
  }
}
```

Validation	The following validation will apply based on the selected value of Underlying Instruments: • If Underlying Instrument selected is an ISIN or LEI, the attribute is present in the REQUEST and RECORD templates with enumerated values *[SNDB, MZZD, SBOD, JUND]*. • If Underlying Instrument selected is an Index or Index Prop, the attribute is removed in the REQUEST and RECORD templates.
Normalisation	Not Required.
Derivation	Not Required.
Impacted Products	The following product templates having an attribute "Debt Seniority" with multiple selection of Underlying Instruments will be impacted: • Credit.Swap.Index • Credit.Swap.Index_Tranche • Credit.Swap.Total_Return_Swap • Credit.Swap.Non_Standard • Other.Swap.Non_Standard • Credit.Option.Non_Standard • Other.Option.Non_Standard • Other.Other.Non_Standard *Note: Impacts Normalised and Non-Normalised templates.*

User Impact?	**Yes**	Users will need to download the updated Request and Record templates to access the enhanced enumerated values of the attribute "Debt Seniority".
	Versions	The version number of all in-scope templates will be incremented.

Use Cases	For each of the in-scope templates:
	• Valid Request:
	  1. Select the attribute "Debt Seniority" to all in-scope product templates and ensure that enumerated values are filtered for each product type, i.e., enumerated values of Debt Seniority *[SNDB, MZZD, SBOD, JUND]* will be made available if underlying instrument selected is an ISIN or LEI.
	  2. The attribute "Debt Seniority" is removed if underlying instrument selected is an Index or Index Prop.
	  3. Select multiple underlying instruments for all in-scope Non_Standard templates.

Backward Compatibility	As per extract from 01st October 2017 up to 31st December 2021, the following are the total create OTC ISINs for all in-scope product templates that has an attribute "Debt Seniority" with "n/a" value on the REQUEST message and no enumerated value (" ") in the RECORD message *(please see Appendix 1):*
	
	  1. Credit.Swap.Index: 41,833 records: 38,099 new/updated (91%); 3,734 expired (9%)
	  2. Credit.Swap.Index_Tranche: 3,516 records: 3,424 new/updated (97%); 92 expired (3%)
	  3. Other.Swap.Non_Standard: 236 records: 234 new/updated (1%); 2 expired (0.01%)
	
	The existing OTC ISINs will continue to exist in the DSB record but retrieving the record templates will be limited depending on the search or retrieve functions used by users.
	
	The following functions are supported by the DSB and should be taken into consideration once this change is being implemented in the DSB system.
	
	• **Retrieve or Create ISIN Record** – Users supplies request attributes to the system and DSB returned the recorded version of the ISIN or generate a new ISIN if not yet created in the system.

a. User will submit the request attributes, then the system validates the input data including the attribute "Debt Seniority".

b. If the request attribute "Debt Seniority" contains enumerated values *[SNDB, MZZD, SBOD, JUND]* exists, the DSB will return a recorded version of an ISIN or generate a new ISIN if not exist.

c. If the request attribute "Debt Seniority" is "n/a", the DSB will not return an ISIN record, even if the ISIN has an existing record in the DSB.

d. The DSB will not inform users whether an ISIN exists in the DSB record or not.

- **Retrieve No Create –** User supplies the request attributes and the DSB will return the record attributes (including the derived values):

  a. User will submit the request attribute, then the system validates the input data including the attribute "Debt Seniority".

  b. If the request attribute "Debt Seniority" contains enumerated values *[SNDB, MZZD, SBOD, JUND]* exists, the DSB will return a record template (attributes and derived) but will not generate an ISIN in the record or will provide an ISIN record template if exist.

  c. If the request attribute "Debt Seniority" is "n/a", the DSB will not return an ISIN record, even if the ISIN has an existing record in the DSB.

  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 –** User uses the search function by supplying the OTC ISIN, and the DSB returns the record attributes.

  a. If user supplies the OTC ISIN, even if the attribute "Debt Seniority" has no value (" "), the system will return the record template based on the appropriate version of the record template.

- **Search for ISIN Record –** User can search an ISIN based on the attributes of the templates.

  a. User needs to use the Lucene search string to search for an ISIN record.

  b. If the search string includes the attribute "Debt Seniority" that has no enumerated value (" "), the DSB will return the recorded ISIN.

Note: To implement this change, it is not necessary to update nor to run a batch job for the existing OTC ISINs that will continue to exist and will remain in place.

Comments	- Best Practice Guidance is required to be published in ANNA-DSB website to ensure that the users enter the identifier for a Security in the Underlying Instrument ISIN field whereas Indices are entered in the Underlying Instrument Index field. - The DSB only performs a syntactic validation on the Underlying Instrument ISIN to ensure that correct underlier is submitted for the correct template. Thus, the system cannot distinguish if the user input value is an Underlying Instrument ISIN of an Index for a certain Asset Class.
Documentation	The following DSB documents are to be updated: - DSB PROD Product Definitions – Annex 2 Credit here - DSB UAT Product Definitions – Annex 2 Credit here
Reference	- ISO 20022 FinancialInstrumentReportingReferenceDataReportV01 - DSB OTC ISIN Product Definitions - ANNA DSB FAQ

Appendix 1

The table below shows the actual number of OTC ISINs created for the period 01st October 2017 up to 31st December 2021 for all in-scope product templates:

- 1st table: Actual numbers of OTC ISINs created (New/Expired) for all impacted product templates.
- 2nd table: Actual numbers of OTC ISINs created that has an attribute "Debt Seniority" with " " value.
- 3rd table: Actual numbers of OTC ISINs created that has an attribute "Debt Seniority" with enumerated values.
- 4th table: Actual numbers of OTC ISINs created without an attribute "Debt Seniority".

Product Template	OTC ISIN			Debt Seniority with " " Value					Debt Seniority with Enum Value					Without Debt Seniority Attribute				
	Total Create	New	Expired	Total Create	New		Expired		Total Create	New		Expired		Total Create	New		Expired	
Credit.Swap.Index	41,833	38,099	3,734	41,833	38,099	91%	3,734	9%	-	-	-	-	-	-	-	-	-	-
Credit.Swap.Index_Tranche	3,516	3,424	92	3,516	3,424	97%	92	3%	-	-	-	-	-	-	-	-	-	-
Credit.Swap.Total_Return_Swap	37,551	36,989	562	-	-	-	-	-	35,775	35,266	94%	509	1%	1,776	1,723	5%	53	0%
Credit.Swap.Non_Standard	4,202	4,092	110	-	-	-	-	-	3,736	3,628	86%	108	3%	466	464	11%	2	0%
Credit.Option.Non_Standard	49	46	3	-	-	-	-	-	41	40	82%	1	2%	8	6	12%	2	4%
Other.Option.Non_Standard	3,198	3,112	86	-	-	-	-	-	-	-	-	-	-	3,198	3,112	97%	86	3%
Other.Other.Non_Standard	44,032	42,418	1,614	-	-	-	-	-	-	-	-	-	-	44,032	42,418	96%	1,614	4%
Other.Swap.Non_Standard	22,363	21,249	1,114	236	234	1%	2	-	11	11	0%	-	-	22,116	21,004	94%	1,112	5%

For total OTC ISINs created that has an attribute "Debt Seniority" with " " value, top legal entities are as follows:

1. **Credit.Swap.Index**
   - Institution A: 10,741 records (26%)
   - Institution B: 9,787 records (23%)
   - Institution C: 4,615 records (11%)
   - Institution D: 2,829 records (7%)
   - Institution E: 1,194 records (3%)
   - Institution F: 1,114 records (3%)
   - Institution G: 1,091 records (3%)
   - Institution H: 1,090 records (3%)
   - Institution I: 1,076 records (3%)

2. **Credit.Swap.Index_Tranche**
   - Institution B: 1,276 records (36%)
   - Institution A: 1,145 records (33%)
   - Institution J: 349 records (10%)
   - Institution F: 309 records (9%)
   - Institution K: 168 records (5%)

3. **Other.Swap.Non_Standard**
   - Institution J: 236 records (100%)

For OTC ISIN created that has an attribute "Debt Seniority" with enumerated value, top legal entities are as follows:

1. **Credit.Swap.Total_Return_Swap**
   - Institution B: 8,869 records (25%)
   - Institution L: 6,157 records (17%)
   - Institution F: 4,589 records (13%)
   - Institution D: 4,429 records (12%)
   - Institution M: 4,392 records (12%)
   - Institution N: 2,684 records (8%)

2. **Credit.Swap.Non_Standard**
   - Institution J: 1,879 records (50%)
   - Institution E: 1,741 records (47%)
   - Institution O: 71 records (2%)
   - Institution P: 20 records (1%)

3. **Credit.Option.Non_Standard**
   - Institution Q: 25 records (61%)
   - Institution O: 16 records (39%)

4. **Other.Swap.Non_Standard**
   - Institution M: 7 records (64%)
   - Institution J: 4 records (36%)

For OTC ISIN created without the attribute "Debt Seniority", top legal entities are as follows:

1. **Credit.Swap.Total_Return_Swap**
   - Institution B: 629 records (35%)
   - Institution K: 239 records (13%)
   - Institution E: 188 records (11%)
   - Institution R: 104 records (6%)
   - Institution G: 95 records (5%)
   - Institution I: 93 records (5%)
   - Institution H: 91 records (5%)

2. **Credit.Swap.Non_Standard**
   - Institution J: 264 records (57%)
   - Institution S: 173 records (37%)
   - Institution F: 22 records (5%)
   - Institution O: 4 records (1%)

3. **Credit.Option.Non_Standard**
   - Institution J: 4 records (50%)
   - Institution O: 4 records (50%)

4. **Other.Option.Non_Standard**
   - Institution J: 3,136 records (98%)
   - Institution M: 41 records (1%)
   - Institution F: 21 records (1%)

5. **Other.Other.Non_Standard**
   - Institution N: 38,899 records (88%)
   - Institution F: 2,910 records (7%)
   - Institution M: 2,223 records (5%)

6. **Other.Swap.Non_Standard**
   - Institution J: 21,412 records (97%)
   - Institution Q: 534 records (2%)
   - Institution F: 170 records (1%)

Appendix 2

The table below shows the total created OTC ISINs based on the underlying instruments for the period 01st October 2017 up to 31st December 2021.

Product Template	OTC ISIN			Underlying Instrument					
	Total Create	New	Expired	ISIN	LEI	Index	Index Prop	Reference Rate	Commodities Reference Rate
Credit.Swap.Index	41,833	38,099	3,734	-	-	41,833	-	-	-
Credit.Swap.Index_Tranche	3,516	3,424	92	-	-	3,516	-	-	-
Credit.Swap.Total_Return_Swap	37,551	36,989	562	35,226	549	1,776	-	-	-
Credit.Swap.Non_Standard	4,202	4,092	110	3,169	625	446	24	-	-
Credit.Option.Non_Standard	49	46	3	43	2	8	-	-	-
Other.Option.Non_Standard	3,198	3,112	86	3,136	-	-	-	2,562	41
Other.Other.Non_Standard	44,032	42,418	1,614	42,434	29	-	7	1,051	511
Other.Swap.Non_Standard	22,363	21,249	1,114	8,229	59	815	5,892	14,920	128