



# **ISIN Lookup Specification**

**Version 1.0**

# ISIN Lookup Specification

For any help or assistance regarding this document please contact:

Client Service Management

[support@traxmarkets.com](mailto:support@traxmarkets.com)

Telephone +44 (0)20 655 3440

©Xtrakter Ltd trading as Trax, 2019. All rights reserved, no part of this document may be copied, reproduced, transmitted or divulged in any form to any party without the prior written consent of Xtrakter Ltd.

Whilst every effort has been made to ensure that the contents contained herein are accurate and complete, Xtrakter Ltd does not accept liability for any errors or omissions. The development of products and methods is continuous and published information may not be up-to-date. Therefore, it is important to check the current status with Xtrakter Ltd.

# ISIN Lookup Specification

<b>1</b>	<b>OVERVIEW.....</b>	<b>4</b>
1.1	Introduction.....	4
1.2	Document Structure.....	4
<b>2</b>	<b>HIGH LEVEL FLOW .....</b>	<b>5</b>
2.1	ISIN Lookup Flow Diagram.....	5
<b>3</b>	<b>OTC ISIN LOOKUP .....</b>	<b>7</b>
3.1	Overview .....	7
3.2	Rates .....	8
3.2.1	Product Definition Mapping .....	8
3.2.2	Reference Data Mapping .....	9
3.3	Credit .....	11
3.3.1	Product Definition Mapping .....	11
3.3.2	Reference Data Mapping .....	12
3.4	Foreign Exchange .....	14
3.4.1	Product Definition Mapping .....	14
3.4.2	Reference Data Mapping .....	15
3.5	Equity .....	17
3.5.1	Product Definition Mapping .....	17
3.5.2	Reference Data Mapping .....	18
3.6	Commodities.....	20
3.6.1	Product Definition Mapping .....	20
3.6.2	Reference Data Mapping .....	21
3.7	Other (Non_Standard) .....	23
<b>4</b>	<b>ETD ISIN LOOKUP .....</b>	<b>24</b>
4.1	Exchange Product Code.....	24
4.1.1	Reference Data Mapping .....	24
4.2	Underlying ISIN .....	25
4.2.1	Reference Data Mapping .....	25

# ISIN Lookup Specification

## 1 OVERVIEW

### 1.1 Introduction

The ISIN Lookup service is a key part of Insight+ and allows clients to enrich their transaction reports with a product ISIN. Clients provide Trax with specific reference data attributes and Trax will utilise these to lookup the relevant ISIN code and enrich that to the transaction report before sending it the NCA. The two use cases for this are:

- Where the product is an Exchange Traded Derivative (ETD) and Trax uses the Exchange code and Exchange MIC to lookup the ISIN.
- Where the product is an OTC derivative Trax will attributes on the contract to reference the ANNA DSB and return the relevant ISIN code.

So that clients do not need to be ANNA power user Trax uses ANNA end of day data, therefore clients should send trades on T+1 to ensure the trade is enriched.

The purpose of this guide is to:

- Provide an overview of the core components of the ISIN Lookup service; and
- Describe the reference data required to lookup different categories of ISIN

Please refer to the Trax Technical Specifications for further information the specific formats and validation rules for the fields outlined in this guide.

This guide does not cover the Trax Insight GUI application which allows clients to view the status of their transaction reporting submissions and manage exceptions.

### 1.2 Document Structure

This document is structured as follows:

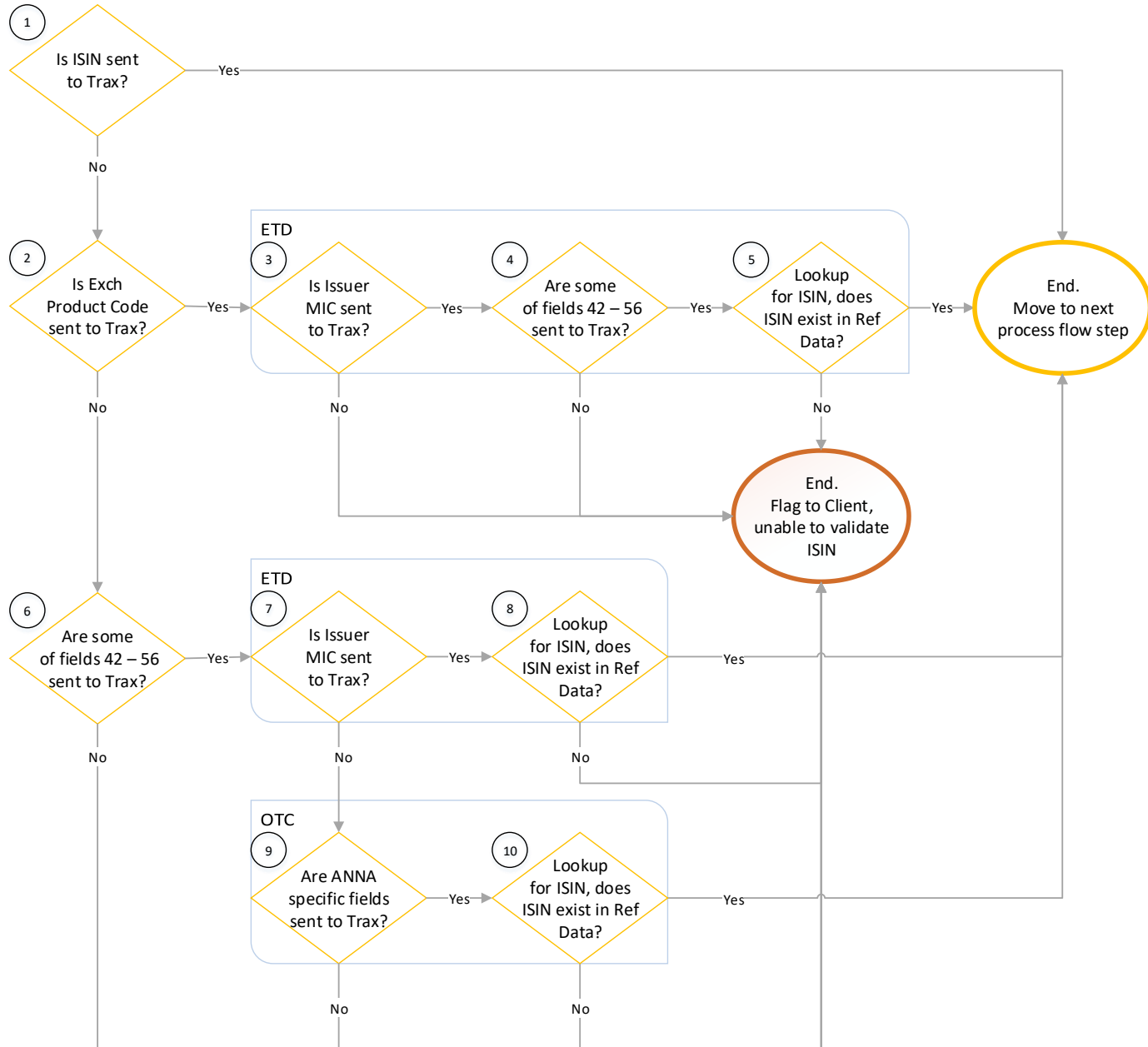
- Section 2 provides an overview of the service
- Section 3 provides an overview of the OTC ISIN Lookup
- Section 4 provides an overview of the ETD ISIN Lookup

# ISIN Lookup Specification

## 2 HIGH LEVEL FLOW

### 2.1 ISIN Lookup Flow Diagram

The purpose of this section is to highlight the high level validation and enrichment required for the ISIN Lookup.



The ISIN Lookup flow will work as follows:

1. The System will first check if an ISIN is available in the transaction message
  - If the ISIN is present in the transaction message, the ISIN lookup service ends here.
  - If the ISIN is not present in the transaction message, the ISIN lookup service moves onto the next step:
2. The System will check if an Exchange Product Code is available in the transaction message.

## ISIN Lookup Specification

3. If an Exchange Product Code is present, the System will check if the Issuer MIC is present
  - If the Issuer MIC is not available, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found/validated
  - If the Issuer MIC is available, the ISIN lookup service moves onto the next step:
4. The System will check if *some* of fields 42 - 56, are sent in the transaction message. (Fields 42 - 56 are outlined in section **6.2 RTS 22 – Fields 42 - 56**, of the **Annex**. Please note that not all of fields 42 – 56 need to be populated.)
  - If none of fields 42 - 56 are populated, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found – insufficient attributes provided.
  - If some of fields 42 - 56 are populated, the ISIN lookup service moves onto the next step:
5. Using the Exchange Product Code, Issuer MIC and Fields 42 - 56 provided, the ISIN lookup service lookups against Reference Data
  - If the attributes return an ISIN from Reference Data, the transaction is enriched with the ISIN and the ISIN lookup service ends here, indicating an ISIN has been found.
  - If the ISIN does not exist in reference data, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found – insufficient attributes provided.

Point 2 skips to Point 6 if a Product Exchange Code is not available in the transaction message:

6. If an Exchange Product Code is not present, the System will check if *some* of fields 42 - 56, are sent in the transaction message. (Fields 42 - 56 are outlined in section **6.2 RTS 22 – Fields 42 - 56**, of the **Annex**. Please note that not all of fields 42 – 56 need to be populated.)
  - If none of fields 42 - 56 are populated, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found – insufficient attributes provided.
  - If some of fields 42 - 56 are populated, the ISIN lookup service moves onto the next step:
7. The System will check if the Issuer MIC is available in the transaction message
8. If the Issuer MIC is present, the ISIN Lookup service will use the Issuer MIC, and Fields 42 - 56 provided, to lookup against Reference Data
  - If the attributes return an ISIN from Reference Data, the transaction is enriched with the ISIN and the ISIN lookup service ends here, indicating an ISIN has been found.
  - If the ISIN does not exist in reference data, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found – insufficient attributes provided.

Point 7 skips to Point 9 if the Issuer MIC is not available in the transaction message:

9. If an Issuer MIC is not present, the System will check if the ANNA Specific fields are sent in the transaction message. (ANNA Specific Fields are outlined in section **3 OTC ISIN LOOKUP**, under **Product Definition Mapping** for each Asset Class)
  - If the ANNA Specific Fields are not populated, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found – insufficient attributes provided.
  - If the ANNA Specific Fields are populated, the ISIN lookup service moves onto the next step:
10. Using the ANNA Specific Fields provided, the ISIN lookup service lookups against Reference Data
  - If the attributes return an ISIN from Reference Data, the transaction is enriched with the ISIN and the ISIN lookup service ends here, indicating an ISIN has been found.
  - If the ISIN does not exist in reference data, the ISIN lookup service will stop and flag to the client that the ISIN cannot be found – insufficient attributes provided.

# ISIN Lookup Specification

## 3 OTC ISIN LOOKUP

### 3.1 Overview

The tables in the sections below define:

- The fields you must include in your transaction submission to allow Trax to determine which product definition to use for a lookup operation (Product Definition Mapping); and
- The fields you must include in your transaction submission to allow Trax to look up a unique OTC ISIN (Reference Data Mapping) for that Product Definition.

Where a field you include in your transaction submission does not have a defined enumerated list in the relevant Trax technical specification, then the valid enumerations for that field are defined by the ANNA DSB. You should refer to the latest ANNA DSB JSON (see below) for a product to determine the full list of enumerations supported for each field for that product. The full list of enumerations is no longer included in this document as it can quickly become out of date as ANNA add new products to the DSB. This document will only be updated to add new Product Definitions and to define new Reference Data mapping information.

Asset Class	ANNA – DSB website link
Rates	<a href="https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Rates">https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Rates</a>
Credit	<a href="https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Credit">https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Credit</a>
Foreign Exchange	<a href="https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Foreign_Exchange">https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Foreign_Exchange</a>
Equity	<a href="https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Equity">https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Equity</a>
Commodities	<a href="https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Commodities">https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Commodities</a>
Non Standard	<a href="https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Non-standard">https://github.com/ANNA-DSB/Product-Definitions/tree/master/PROD/JSON/Non-standard</a>

Standard Market Indexes are available at the following ANNA – DSB website link:

<https://www.anna-dsb.com/download/dsb-prod-product-definitions-annex-7-indices>

# ISIN Lookup Specification

## 3.2 Rates

### 3.2.1 Product Definition Mapping

The following table is based on the Rates products identified as part of the ISDA 2.0 taxonomy. When no Derivative ISIN or Exchange Product Code and Issuer MIC are provided the system will assume that the product is OTC. Therefore, when the Asset Class is defined as “Rates” the following attributes become mandatory: Asset Class, Instrument Type. These attributes will be used to map to the DSB Product Definition Name to provide a unique mapping which identifies the attributes required to determine the OTC ISIN.

The Non-Standard Boolean is added for Exotic Products that do not fall under the traditional DSB Product Definition Name, along with the Asset Class and Instrument Type this provides a unique mapping which identifies the attributes required to determine the OTC ISIN. The Non-Standard Boolean should be set to true if an Exotic Product ISIN is being looked up, else it should be left blank or set to false.

	Mandatory Product Definition Fields					Exotic Product	Derived from Mandatory Product Definition Fields
#	Asset Class	Instrument Type	Base Product	Sub-Product	Transaction Type	Non-Standard Boolean	DSB Product Definition Name
1	Rates	Swap	IR Swap	Basis		-	Basis
2	Rates	Swap	IR Swap	Basis	OIS	-	Basis_OIS
3	Rates	Option	CapFloor			-	CapFloor
4	Rates	Swap	Cross Currency	Basis		-	Cross_Currency_Basis
5	Rates	Swap	Cross Currency	Fixed Fixed		-	Cross_Currency_Fixed_Fixed
6	Rates	Swap	Cross Currency	Fixed Float		-	Cross_Currency_Fixed_Float
7	Rates	Swap	Cross Currency	Fixed Float	NDS	-	Cross_Currency_Fixed_Float_NDS
8	Rates	Swap	Cross Currency	Fixed Float	Zero Coupon	-	Cross_Currency_Zero_Coupon
9	Rates	Swap	Cross Currency	Inflation		-	Cross_Currency_Inflation_Swap
10	Rates	Swap	IR Swap	Fixed Fixed		-	Fixed_Fixed
11	Rates	Swap	IR Swap	Fixed Float		-	Fixed_Float
12	Rates	Swap	IR Swap	Fixed Float	OIS	-	Fixed_Float_OIS
13	Rates	Swap	IR Swap	Fixed Float	Zero Coupon	-	Fixed_Float_Zero_Coupon
14	Rates	Forward	FRA	Fixed Float		-	FRA_Index
15	Rates	Forward	FRA			-	FRA_Other
16	Rates	Swap	Inflation Swap	Basis	Zero Coupon	-	Inflation_Basis_Zero_Coupon



## ISIN Lookup Specification

Mandatory Product Definition Fields						Exotic Product	Derived from Mandatory Product Definition Fields
#	Asset Class	Instrument Type	Base Product	Sub-Product	Transaction Type	Non-Standard Boolean	DSB Product Definition Name
17	Rates	Swap	Inflation Swap	Fixed Float	Year on Year	-	Inflation_Fixed_Float_YoY
18	Rates	Swap	Inflation			-	Inflation_Swap
19	Rates	Option	Option	Swaption		-	Swaption
20	Rates	Option	Option	Debt Option		-	Debt_Option
21	Rates	Swap	-	-	-	True	Non_Standard
22	Rates	Option	-	-	-	True	Non_Standard

### 3.2.2 Reference Data Mapping

The following table outlines the attributes required by ANNA DSB to determine the Rates OTC ISIN based on the DSB Product Definition Name defined above.

Reference Data Fields				DSB Product Definition Number (as defined in the table above)																					
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
K4	K4	Asset Class	Asset Class	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
K3	K3	Instrument Type	Instrument Type	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
N/A	N/A		DSB Product Name – see 3.2.1 above	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
N/A	N/A		Level (Hardcoded)	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
K8	K8	Notional Currency 1	Notional Currency	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
K27	K32	Expiry Date	Expiry Date	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
K15	K15	ANNA Underlying Index Code	Reference Rate	x	x		x		x	x	x	x		x	X	x	x		x	x	x			x	x
			Underlying Instrument Index			x																			
K17	K18	Underlying Index Term	Reference Rate Term	x	x		x		x	x	x	x		x	X	x	x		x	x	x			x	x
			Underlying Instrument Index Term			x																			
K20	K21	ANNA Underlying Index Code Other Leg	Other Reference Rate	x	x		x												x					x	
K22	K24	Underlying Index Term Other Leg	Other Reference Rate Term	x	x		x												x					x	
N2	N2	Notional Schedule	Notional Schedule	x	x		x	x	x	x	x	x	x	x	X	x			x	x	x			x	
K23	K25	Option Type	Option Type			x																x	x		x

# ISIN Lookup Specification

Reference Data Fields				DSB Product Definition Number (as defined in the table above)																					
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
N1	N1	Rates Notional Currency 2	Other Notional Currency				x	x	x	x	x	x												x	
K11	K11	Underlying Asset Type	Underlying Asset Type															x				x			x
K13	K13	Underlying Instrument Code	Underlying Instrument ISIN															x				x	x		
K25	K30	Option Exercise Style	Option Exercise Style																			x	x		x
K29	K34	Valuation Method or Trigger	Valuation Method or Trigger																			x	x		x
K28	K33	Delivery Type	Delivery Type	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
K10	K10	Price Multiplier	Price Multiplier	x	x	x	x	x	x	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x
K34	K39	Single or Multi Currency	Single or Multi Currency																					x	
N3	N3	Term of Contract <sup>1</sup>	Term of Contract	x	x	x	x	x	x	x	x	x	x	x	X	x	x		x	x	x			x	x

Key	Definition
	Product Definition
	Defaulted Input: 1
	Defaulted Input: P - PHYS
	Defaulted Input: C - CASH
	Optional Field

<sup>1</sup> Term of Contract should be submitted for contracts created on or after 22 September 2019.

# ISIN Lookup Specification

## 3.3 Credit

### 3.3.1 Product Definition Mapping

The following table is based on the Credit products identified as part of the ISDA 2.0 taxonomy. When no Derivative ISIN or Exchange Product Code and Issuer MIC are provided the system will assume that the product is OTC. Therefore, when the Asset Class is defined as “Credit” the following attributes become mandatory: Asset Class, Instrument Type. These attributes will be used to map to the DSB Product Definition Name to provide a unique mapping which identifies the attributes required to determine the OTC ISIN.

The Non-Standard Boolean is added for Exotic Products that do not fall under the traditional DSB Product Definition Name, along with the Asset Class and Instrument Type this provides a unique mapping which identifies the attributes required to determine the OTC ISIN. The Non-Standard Boolean should be set to true if an Exotic Product ISIN is being looked up, else it should be left blank or set to false.

	Mandatory Product Definition Fields					Exotic Product	Derived from Mandatory Product Definition Fields
#	Asset Class	Instrument Type	Base Product	Sub-Product	Underlying Asset Type	Non-Standard Boolean	DSB Product Definition Name
1	Credit	Swap	Single Name	Corporate		-	Corporate
2	Credit	Swap	Single Name	Muni		-	Municipal
3	Credit	Swap	Single Name	Sovereign		-	Sovereign
4	Credit	Swap	Single Name	ABS		-	ABS
5	Credit	Swap	Single Name	Loans		-	Loan
6	Credit	Swap	Index Tranche			-	Index_Tranche
7	Credit	Swap	Index			-	Index
8	Credit	Swap	Total Return Swap			-	Total_Return_Swap
9	Credit	Option	Swaptions		'CDS on Index' or 'CDS on Index Tranche'	-	Index_Swaption
10	Credit	Option	Swaptions			-	Single_Name_Swaption
11	Credit	Swap	-	-	-	True	Non_Standard
12	Credit	Option	-	-	-	True	Non_Standard

# ISIN Lookup Specification

## 3.3.2 Reference Data Mapping

The following table outlines the attributes required by ANNA DSB to determine the Credit OTC ISIN based on the DSB Product Definition Name defined above.

Reference Data Fields				DSB Product Definition Number (as defined in the table above)											
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12
K4	K4	Asset Class	Asset Class	x	x	x	x	x	X	x	x	x	x	x	x
K3	K3	Instrument Type	Instrument Type	x	x	x	x	x	X	x	x	x	x	x	x
N/A	N/A		DSB Product Name – see 3.3.1 above	x	x	x	x	x	X	x	x	x	x	x	x
N/A	N/A		Level (Hardcoded)	x	x	x	x	x	X	x	x	x	x	x	x
K8	K8	Notional Currency 1	Notional Currency	x	x	x	x	x	X	x	x	x	x	x	x
K27	K32	Expiry Date	Expiry Date	x	x	x	x	x	X	x	x	x	x	x	x
K13	K13	Underlying Instrument Code	Underlying Instrument ISIN	x	x	x	x	x			x	x	x	x	x
K12	K12	Underlying Instrument LEI	Underlying Instrument LEI <sup>2</sup>	x	x	x	x	x			x			x	x
R1	R1	Seniority	Debt Seniority	x	x	x	x	x	X	x	x			x	x
R2	R2	Underlying Index Series	Underlying Credit Index Series						X	x	x				
R3	R3	Underlying Index Version	Underlying Credit Index Version						X	x	x				
K15	K15	ANNA Underlying Index Code	Underlying Instrument Index						X	x	x				
K16	K16	ANNA Underlying Instrument Index Prop	Underlying Instrument Index Prop						X	x	x				
K17	K18	Underlying Index Term	Underlying Instrument Index Term						X	x	x				
K23	K25	Option Type	Option Type									x	x		x
K25	K30	Option Exercise Style	Option Exercise Style									x	x		x
K29	K34	Valuation Method or Trigger	Valuation Method or Trigger									x	x		x
K28	K33	Delivery Type	Delivery Type	x	x	x	x	x	X	x	x	x	x	x	x
K10	K10	Price Multiplier	Price Multiplier	x	x	x	x	x	x	x	x	x	x	x	x
K32	K37	Underlying Issuer Type	Underlying Issuer Type				x	x	x	x				x	

<sup>2</sup> If Underlying Instrument ISIN is not provided.

## ISIN Lookup Specification

Reference Data Fields				DSB Product Definition Number (as defined in the table above)											
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12
K11	K11	Underlying Asset Type	Underlying asset Type									x			x
K30	K35	Return or Pay Out Trigger	Return or Pay Out Trigger											x	

Key	Definition
	Product Definition
	Defaulted Input: 1
	Defaulted Input: P - PHYS
	Defaulted Input: C - CASH
	Defaulted Input: A - OPTL
	Defaulted Input: C - Corporate
	Defaulted Input: n/a
	Defaulted Input: Senior Debt – for Single Name; n/a – for Index
	Optional Field

# ISIN Lookup Specification

## 3.4 Foreign Exchange

### 3.4.1 Product Definition Mapping

The following table is based on the Foreign Exchange products identified as part of the ISDA 2.0 taxonomy. When no Derivative ISIN or Exchange Product Code and Issuer MIC are provided the system will assume that the product is OTC. Therefore, when the Asset Class is defined as “Foreign Exchange” the following attributes become mandatory: Asset Class, Instrument Type. These attributes will be used to map to the DSB Product Definition Name to provide a unique mapping which identifies the attributes required to determine the OTC ISIN.

The Non-Standard Boolean is added for Exotic Products that do not fall under the traditional DSB Product Definition Name, along with the Asset Class and Instrument Type this provides a unique mapping which identifies the attributes required to determine the OTC ISIN. The Non-Standard Boolean should be set to true if an Exotic Product ISIN is being looked up, else it should be left blank or set to false.

#	Mandatory Product Definition Fields				Exotic Product	Derived from Mandatory Product Definition Fields
	Asset Class	Instrument Type	Base Product	Sub-Product	Non-Standard Boolean	DSB Product Definition Name
1	Foreign_Exchange	Forward	Non Deliverable Forward	NDF	-	NDF
2	Foreign_Exchange	Option	Non Deliverable Option	NDO	-	NDO
3	Foreign_Exchange	Forward	Forward	Forward	-	Forward
4	Foreign_Exchange	Option	Vanilla Option	Vanilla Option	-	Vanilla_Option
5	Foreign_Exchange	Option	Simple Exotic	Barrier	-	Barrier_Option
6	Foreign_Exchange	Option	Simple Exotic	Digital	-	Digital_Option
7	Foreign_Exchange	Forward	Simple Exotic	Vol/Var	-	Vol_Var
8	Foreign_Exchange	Option	Exotic	Target	-	Target_Option
9	Foreign_Exchange	Option	Exotic	Forward Vol Agreement	-	Forward_Vol_Agreement
10	Foreign_Exchange	Forward	Continuous FX	Rolling Spot	-	Rolling_Spot
11	Foreign_Exchange	Forward	Continuous FX	Contract for Difference	-	Contract_for_Difference
12	Foreign_Exchange	Forward	Continuous FX	Spread-bet	-	Spread-bet
13	Foreign_Exchange	Swap	Swap		-	FX_Swap
14	Foreign_Exchange	Forward	-	-	True	Non_Standard
15	Foreign_Exchange	Option	-	-	True	Non_Standard

# ISIN Lookup Specification

## 3.4.2 Reference Data Mapping

The following table outlines the attributes required by ANNA DSB to determine the Foreign Exchange OTC ISIN based on the DSB Product Definition Name defined above.

Reference Data Fields				DSB Product Definition Number (as defined in the table above)														
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
K4	K4	Asset Class	Asset Class	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K3	K3	Instrument Type	Instrument Type	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
N/A	N/A		DSB Product Name – see 3.4.1 above	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
N/A	N/A		Level (Hardcoded)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K8	K8	Notional Currency 1	Notional Currency	x	x	x	x	x	x	x	x	x	x	x	x		x	x
K27	K32	Expiry Date	Expiry Date	x	x	x	x	x	x	x	x	x					x	x
P1	P1	FX Notional Currency 2	Other Notional Currency	x	x	x	x	x	x	x	x	x	x	x	x		x	x
P2	P2	<a href="#">Settlement Currency</a>	Settlement Currency	x	x			x	x	x			x	x	x		x	x
K23	K25	Option Type	Option Type		x		x	x	x		x	x						x
K25	K30	Option Exercise Style	Option Exercise Style		x		x	x	x		x	x						x
K29	K34	<a href="#">Valuation Method or Trigger</a>	Valuation Method or Trigger		x				x									x
K28	K33	Delivery Type	Delivery Type	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K10	K10	Price Multiplier	Price Multiplier	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K11	K11	<a href="#">Underlying Asset Type</a>	Underlying Asset Type														x	x
K30	K35	<a href="#">Return or Pay Out Trigger</a>	Return or Pay Out Trigger														x	
K33	K38	<a href="#">Place of Settlement</a>	Place of Settlement														x	x
K13	K13	Underlying Instrument Code	Instrument ISIN – Near Leg													x		
K18	K19	Underlying Instrument Code Other Leg	Instrument ISIN – Far Leg													x		

Key	Definition
	Product Definition
	Defaulted Input: 1
	Defaulted Input: P - PHYS
	Defaulted Input: C - CASH

## ISIN Lookup Specification

Key	Definition
	Put Currency
	Call Currency
	Optional Field



# ISIN Lookup Specification

## 3.5 Equity

### 3.5.1 Product Definition Mapping

The following table is based on the Equity products identified as part of the ISDA 2.0 taxonomy. When no Derivative ISIN or Exchange Product Code and Issuer MIC are provided the system will assume that the product is OTC. Therefore, when the Asset Class is defined as “Equity” the following attributes become mandatory: Asset Class, Instrument Type. These attributes will be used to map to the DSB Product Definition Name to provide a unique mapping which identifies the attributes required to determine the OTC ISIN.

The Non-Standard Boolean is added for Exotic Products that do not fall under the traditional DSB Product Definition Name, along with the Asset Class and Instrument Type this provides a unique mapping which identifies the attributes required to determine the OTC ISIN. The Non-Standard Boolean should be set to true if an Exotic Product ISIN is being looked up, else it should be left blank or set to false.

	Mandatory Product Definition Fields					Exotic Product	Derived from Mandatory Product Definition Fields
#	Asset Class	Instrument Type	Base Product	Sub-Product	Transaction Type	Non-Standard Boolean	DSB Product Definition Name
1	Equity	Swap	Swap	Price_Return_Basic_Performance	Single_Name	-	Price_Return_Basic_Performance_Single_Name
2	Equity	Swap	Swap	Price_Return_Basic_Performance	Single_Index	-	Price_Return_Basic_Performance_Single_Index
3	Equity	Swap	Swap	Price_Return_Basic_Performance	Basket	-	Price_Return_Basic_Performance_Basket
4	Equity	Swap	Swap	Parameter_Return_Dividend	Single_Name	-	Parameter_Return_Dividend_Single_Name
5	Equity	Swap	Swap	Parameter_Return_Dividend	Single_Index	-	Parameter_Return_Dividend_Single_Index
6	Equity	Swap	Swap	Parameter_Return_Dividend	Basket	-	Parameter_Return_Dividend_Basket
7	Equity	Swap	Swap	Parameter_Return_Variance	Single_Name	-	Parameter_Return_Variance_Single_Name
8	Equity	Swap	Swap	Parameter_Return_Variance	Single_Index	-	Parameter_Return_Variance_Single_Index
9	Equity	Swap	Swap	Parameter_Return_Variance	Basket	-	Parameter_Return_Variance_Basket
10	Equity	Swap	Swap	Parameter_Return_Volatility	Single_Name	-	Parameter_Return_Volatility_Single_Name
11	Equity	Swap	Swap	Parameter_Return_Volatility	Single_Index	-	Parameter_Return_Volatility_Single_Index
12	Equity	Swap	Swap	Parameter_Return_Volatility	Basket	-	Parameter_Return_Volatility_Basket
13	Equity	Swap	Contract for Difference (Swap)	Price_Return_Basic_Performance	Single_Name	-	Price_Return_Basic_Performance_Single_Name_CFD
14	Equity	Swap	Contract for Difference (Swap)	Price_Return_Basic_Performance	Single_Index	-	Price_Return_Basic_Performance_Single_Index_CFD
15	Equity	Swap	Contract for Difference (Swap)	Price_Return_Basic_Performance	Basket	-	Price_Return_Basic_Performance_Basket_CFD

## ISIN Lookup Specification

	Mandatory Product Definition Fields					Exotic Product	Derived from Mandatory Product Definition Fields
#	Asset Class	Instrument Type	Base Product	Sub-Product	Transaction Type	Non-Standard Boolean	DSB Product Definition Name
16	Equity	Swap	Portfolio Swap	Price_Return_Basic_Performance	Single_Name/ Single_Index/ Basket	-	Portfolio_Swap
17	Equity	Forward	Contract for Difference (Forward)	Price_Return_Basic_Performance	Single_Name	-	Price_Return_Basic_Performance_Single_Name_CFD
18	Equity	Forward	Contract for Difference (Forward)	Price_Return_Basic_Performance	Single_Index	-	Price_Return_Basic_Performance_Single_Index_CFD
19	Equity	Forward	Contract for Difference (Forward)	Price_Return_Basic_Performance	Basket	-	Price_Return_Basic_Performance_Basket_CFD
20	Equity	Option	Option		Single_Name	-	Single_Name
21	Equity	Option	Option		Single_Index	-	Single_Index
22	Equity	Option	Option		Basket	-	Basket
23	Equity	Forward	Forward	Price_Return_Basic_Performance	Single_Name	-	Price_Return_Basic_Performance_Single_Name
24	Equity	Forward	Forward	Price_Return_Basic_Performance	Single_Index	-	Price_Return_Basic_Performance_Single_Index
25	Equity	Forward	Forward	Price_Return_Basic_Performance	Basket	-	Price_Return_Basic_Performance_Basket
26	Equity	Swap	-	-	-	True	Non_Standard
27	Equity	Option	-	-	-	True	Non_Standard
28	Equity	Forward	-	-	-	True	Non_Standard

### 3.5.2 Reference Data Mapping

The following table outlines the attributes required by ANNA DSB to determine the Equity OTC ISIN based on the DSB Product Definition Name defined above.

Reference Data Fields				DSB Product Definition Number (as defined in the table above)																											
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
K4	K4	Asset Class	Asset Class	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K3	K3	Instrument Type	Instrument Type	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
N/A	N/A		DSB Product Name – see 3.5.1 above	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
N/A	N/A		Level (Hardcoded)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

# ISIN Lookup Specification

Reference Data Fields				DSB Product Definition Number (as defined in the table above)																											
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
K8	K8	Notional Currency 1	Notional Currency	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K27	K32	Expiry Date	Expiry Date	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K13	K13	Underlying Instrument Code	Underlying Instrument ISIN(s)	x		x	x		x	x		x	x		x	x		x	x	x		x	x		x	x		x	x	x	x
K15	K15	ANNA Underlying Index Code	Underlying Instrument Index		x	x		x	x		x	x		x	x		x	x	x		x	x		x	x		x	x	x	x	x
K16	K16	ANNA Underlying Instrument Index Prop	Underlying Instrument Index Prop		x	x		x	x		x	x		x	x		x	x	x		x	x		x	x		x	x	x	x	x
K30	K35	Return or Pay Out Trigger	Return or Pay Out Trigger	x	x	x													x							x	x	x	x		x
K23	K25	Option Type	Option Type																					x	x	x					x
K25	K30	Option Exercise Style	Option Exercise Style																					x	x	x					x
K24	K28	Strike Price	Strike Price																					x	x	x					x
K29	K34	Valuation Method or Trigger	Valuation Method or Trigger																					x	x	x					x
K28	K33	Delivery Type	Delivery Type	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K10	K10	Price Multiplier	Price Multiplier	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
K11	K11	Underlying Asset Type	Underlying Asset Type																										x	x	x
K24	K29	Strike Price Currency	Strike Price Currency																											x	

Key	Definition
	Product Definition
	Defaulted Input: 1
	Defaulted Input: P - PHYS
	Defaulted Input: C - CASH
	Defaulted Input: F - Forward price of underlying instrument
	Optional Field

# ISIN Lookup Specification

## 3.6 Commodities

### 3.6.1 Product Definition Mapping

The following table is based on the Commodity products identified as part of the ISDA 2.0 taxonomy. When no Derivative ISIN or Exchange Product Code and Issuer MIC are provided the system will assume that the product is OTC. Therefore, when the Asset Class is defined as “Commodity” the following attributes become mandatory: Asset Class, Instrument Type. These attributes will be used to map to the DSB Product Definition Name to provide a unique mapping which identifies the attributes required to determine the OTC ISIN.

#	Mandatory Product Definition Fields				Derived from Mandatory Product Definition Fields
	Asset Class	Instrument Type	Other Commodity Base Product*	Reference Rate** (ANNA Underlying Index Code)	DSB Product Definition Name
1	Commodities	Swap		<Single Reference Rate populated>	Swap
2	Commodities	Swap	<Populated>	<Single Reference Rate populated>	Basis_Swap
3	Commodities	Swap		<Multiple Reference Rates populated>	Multi_Exotic_Swap
4	Commodities	Option		<Single Reference Rate populated>	Option
5	Commodities	Option		<Multiple Reference Rates populated>	Multi_Exotic_Option
6	Commodities	Option		<No Reference Rate>	Swaption
7	Commodities	Forward		<Single Reference Rate populated>	Forward
8	Commodities	Forward		<Multiple Reference Rates populated>	Multi_Exotic_Forward

Product Definition Field	Description
<b>Other Commodity Base Product*</b>	For a Commodity Swap when the attribute Other Commodity Base Product is populated then the DSB Product Definition Name would be “Basis_Swap”
<b>Reference Rate**</b> (ANNA Underlying Index Code)	If the instrument is not defined as a “Basis_Swap” then the combination of Asset Class + Instrument Type along with whether the instrument contains no Reference Rate (ANNA Underlying Index Code), a single Reference Rate or more than one Reference Rate determines if the DSB Product Definition Name should be defined as “Multi_Exotic” or not. For example if a Commodity Forward had only one Reference Rate then the DSB Product Definition Name would be “Forward” whereas if a Commodity Forward had more than one Reference Rate then the DSB Product Definition Name would be “Multi_Exotic_Forward”

# ISIN Lookup Specification

## 3.6.2 Reference Data Mapping

The following table outlines the attributes required by ANNA DSB to determine the Commodities OTC ISIN based on the DSB Product Definition Name defined above.

Reference Data Fields				DSB Product Definition Number (as defined in the table above)							
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8
K4	K4	Asset Class	Asset Class	x	x	x	x	x	x	x	x
K3	K3	Instrument Type	Instrument Type	x	x	x	x	x	x	x	x
N/A	N/A	DSB Product Definition Name	DSB Product Name – see 3.6.1 above	x	x	x	x	x	x	x	x
N/A	N/A	Level	Level (Hardcoded)	x	x	x	x	x	x	x	x
K8	K8	Notional Currency 1	Notional Currency	x	x	x	x	x	x	x	x
K27	K32	Expiry Date	Expiry Date	x	x	x	x	x	x	x	x
K28	K33	Delivery Type	Delivery Type	x	x	x	x	x	x	x	x
M1	M1	Commodity Base Product	Base Product	x	x		x			x	
M2	M2	Commodity Sub Product	Sub Product	x	x		x			x	
M3	M3	Commodity Further Sub Product	Additional Sub Product	x	x		x			x	
M4	M4	Commodity Transaction Type	Transaction Type	x	x	x	x	x		x	x
M5	M5	Final Price Type	Final Price Type	x	x	x	x	x		x	x
K15	K15	ANNA Underlying Index Code	Reference Rate	x	x	x	x	x		x	x
M6	M6	Other Commodity Base Product	Other Base Product		x						
M7	M7	Other Commodity Sub Product	Other Sub Product		x						
M8	M8	Other Commodity Further Sub Product	Other Additional Sub Product		x						
K20	K21	ANNA Underlying Index Code Other Leg	Other Reference Rate		x						
			Underlying Instrument Index			x		x			X
K21	K22	ANNA Underlying Instrument Index Prop Other Leg	Underlying Instrument Index Prop			x		x			X
K30	K35	Return or Pay Out Trigger	Return or Pay Out Trigger	x	x	x				x	X
K23	K25	Option Type	Option Type				x	x	x		
K25	K30	Option Exercise Style	Option Exercise Style				x	x	x		
K29	K34	Valuation Method or Trigger	Valuation Method or Trigger				x	x	x		

## ISIN Lookup Specification

Reference Data Fields				DSB Product Definition Number (as defined in the table above)							
XML	CSV	TRAX Attribute	ANNA Attribute	1	2	3	4	5	6	7	8
K13	K13	Underlying Instrument Code	Underlying Instrument ISIN						x		
K11	K11	Underlying Asset Type	Underlying Asset Type						x		
K10	K10	Price Multiplier	Price Multiplier	x	x	x	x	x	x	x	X

Key	Definition
	Product Definition
	Defaulted Input: 1
	Optional Field

# ISIN Lookup Specification

## 3.7 Other (Non\_Standard)

The 'Other' Asset Class is for any derivatives that do not fall under any of the 5 described earlier (Rates, Credit, Foreign Exchange, Equity, Commodities).

Clients should note that at the time of writing, the ISIN Lookup Service will not support the lookup of such products. Trax will look to support the lookup of such products during 2020 if there is sufficient client demand.

# ISIN Lookup Specification

## 4 ETD ISIN LOOKUP

If the ISIN is not provided to the system, the anchor to determine that the product is an Exchange Traded Derivative is the Issuer MIC. Therefore, the system always expects the Issuer MIC to be populated if the product is deemed to be an ETD and no Product ISIN is provided.

### 4.1 Exchange Product Code

The following section is based on the system being sent an Exchange Product Code (also known as an Aii Exchange Product Code)

#### 4.1.1 Reference Data Mapping

The following table outlines the attributes required by the system to determine the Listed Derivative ISIN based on the Exchange Product Code and Issuer MIC being provided.

Reference Data Fields			Derivative Type (Instrument Type)	
XML	CSV	TRAX Attribute	Option	Future
K3	K3	Instrument Type	x	x
H2	H2	Exchange Product Code	x	x
H3	H3	Issuer MIC	x	x
K27	K32	Expiry Date	x	x
K23	K25	Option Type	x	
K24	K28	Strike Price	x	

Key	Definition
	Product Definition



# ISIN Lookup Specification

## 4.2 Underlying ISIN

The following section is based on the system being sent an Underlying ISIN

### 4.2.1 Reference Data Mapping

The following table outlines the attributes required by the system to determine the Listed Derivative (ETD) ISIN based on the Underlying ISIN and Issuer MIC being provided.

Reference Data Fields			Derivative Type (Instrument Type)	
XML	CSV	TRAX Attribute	Option	Future
K3	K3	Instrument Type	x	x
K13	K13	Underlying Instrument Code	x	x
H3	H3	Issuer MIC	x	x
K27	K32	Expiry Date	x	x
K23	K25	Option Type	x	
K24	K28	Strike Price	x	

Key	Definition
	Product Definition

# ISIN Lookup Specification

## COPYRIGHT NOTICE

©Xtrakter Ltd trading as Trax, 2019.

All Rights reserved. No part of this document may be copied, reproduced, transmitted or divulged in any form to any other party without the prior written consent of Xtrakter Ltd.