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ESMA FINANCIAL INSTRUMENTS REFERENCE DATA SYSTEM (FIRDS) USER GUIDANCE 2020

UK FINANCE USER GUIDANCE PREFACE



FIRDS - UK Finance Industry Guidance - Summary Overview

In collaboration with member firms, UK Finance has drafted this non-binding user guidance to support member firms and industry stakeholders in their use of ESMA FIRDS (Financial Instruments Reference Data System). FIRDS is the reference data architecture developed by European Securities and Markets Authority (ESMA) and National Competent Authorities (NCAs) to provide publication of, and access to, reference data required under the enhanced scope of MiFID II.

A key objective of this guidance is to promote a consistent industry approach and address key areas where member firms are experiencing challenges. Key focal areas of this guidance include: optimising FIRDS searches within the user interface; data publication and system updates; mitigating data quality challenges; and performing multi-way reconciliations to ascertain the best available ISIN data set.

This guidance is aimed at UK Finance member firms, applicable UK/European regulatory bodies, non-UK Finance member firms, other industry groups and fellow trade associations who may wish to make their members aware of this guidance.

Please note that the contents of this document are output from the relevant UK Finance Working Groups and represent the views of those members. This document is strictly for guidance only and has not been approved by a regulatory body. It does not represent formal or legal regulatory advice, and whilst anyone is welcome to use this document, it is entirely at their own risk. All hyperlink references in this guidance were last accessed on 20 May 2020.

UK Finance, in collaboration with its members, would like to emphasise that these guidelines are not binding, and do not give rise to any enforceable obligations or duties.

Please note: This user guide is developed based on the current version of ESMA FIRDS and does not include UK FIRDS. Post- Brexit negotiation outcomes, UK Finance and its members will review and assess any impact or updates to this guidance as required.

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GLOSSARY OF TERMS



Term	Description
ANNA DSB	The ANNA Derivatives Service Bureau (DSB) is a fully automated generator of International Securities Identification Numbers (ISINs) for Over the Counter (OTC) derivatives. The DSB is the first numbering agency designed to operate on a global basis and to meet the requirements of the derivatives markets.
CFI Code	Classification of Financial Instruments Code.
Delta File	Contains all reference data records for which a change has occurred (addition, modification, deletion) since the generation of the last set of FIRDS files by ESMA.
ESMA	European Securities and Markets Authority.
FIRDS	Financial Instrument Reference Data System.
Full File	Contains the full reference data received by ESMA before the applicable cut-off time, for all instruments that are still active and that have been admitted to trading on RM. This includes where a request for admission to trading has been made, or traded on a MTF, OTF, or SI.
ISIN	International Securities Identification Number.
MTF	Multilateral Trading Facility.
MIC Code	The Market Identifier Code is a unique identification code used to identify securities trading exchanges, regulated and non-regulated trading markets. The MIC is a four alphanumeric character code, and is defined in ISO 10383.
NCA	National Competent Authority.
NCA Delegating Data Collection	A National Competent Authority who has signed a Delegation Agreement with ESMA in order to delegate the task of collecting data directly from Trading Venues and Systematic Internalisers for the purpose of reference data provision and transparency calculations.
Non-delegating NCA	A National Competent Authority who has not signed a Delegation Agreement with ESMA on the Instruments Reference Data Project.
OTF	Organised Trading Facility.
QA	Quality Assurance.
Reference Data	Data relating to financial instruments and institutions used for transaction reporting. Reference data is used by ESMA in the overall calibration of MiFID thresholds across financial instruments. Furthermore, it is required to be supplied in a standardised format prescribed by ESMA to help it identify any inaccuracies or incompleteness in the data supplied.
RM	Regulated market.
SI	Systematic Internaliser.
ToTV	Traded on a Trading Venue.
uToTV	Underlying Traded on a Trading Venue.



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OVERVIEW AND INDUSTRY USE CASES



Financial Instruments Reference Data System (FIRDS) is the reference data architecture developed by European Securities and Markets Authority (ESMA) and National Competent Authorities (NCAs) to provide publication of, and access to, reference data required under the enhanced scope of MiFID II.

Whist reporting requirements for Trading Venues (TVs) and Systematic Internalisers (SIs) is provided for context, the scope of this user guide is aimed at the applied use for investment firms as it relates to transaction reporting (MiFID II RTS 22).

Please note that the submission of data requirements under RTS 23 is not covered as part of this user guide.

Industry Interaction with FIRDS

Investment Firms

FIRDS is one of many sources of reference data investment firms use to determine reporting eligibility for transactions executed in financial instruments. Others include commercial arrangements with third-party suppliers.

FIRDS has a number of use cases for firms (see on the right) to determine and validate their state of transaction reporting, eligibility for a given ISIN, exception management, reconciliations and testing/QA.

NCAs/TVs/SIs

MiFIR requirements oblige TVs and SIs to submit identifying reference data for the relevant financial instruments to their National Competent Authorities (NCAs), who are then required to transmit it to ESMA for subsequent publication on its web interface.

NCAs are able to delegate the task of collecting instrument reference data from TVs and SIs to ESMA directly.

ESMA is responsible for maintaining the ESMA network and the FIRDS system.

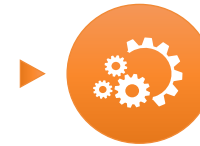
Industry Use cases



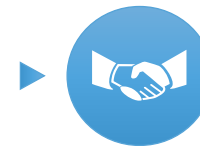
Reporting eligibility checks: User accesses the FIRDS web interface and searches for an ISIN to determine whether an instrument has met ToTV or uToTV reporting conditions. This can be filtered by multiple criteria, including the publishing venue via its MIC code.



Exception management: User receives an exception based on an ISIN not being ToTV within their NCA's records. User searches on FIRDS web interface using the 'Instrument Identification Code' to determine whether the ISIN has been published late or whether additional checks are required.



Reconciliations: User performs a multi-way reconciliation in order to get an advanced level of assurance over ToTV or uToTV determination. This is performed using data extracted from FIRDS, the firm's own internal data and commercial data providers.



Testing/QA: User downloads a full data extract from the FIRDS web interface to perform technical testing / quality assurance activities. This is performed to enable completeness and accuracy testing of transaction reporting.



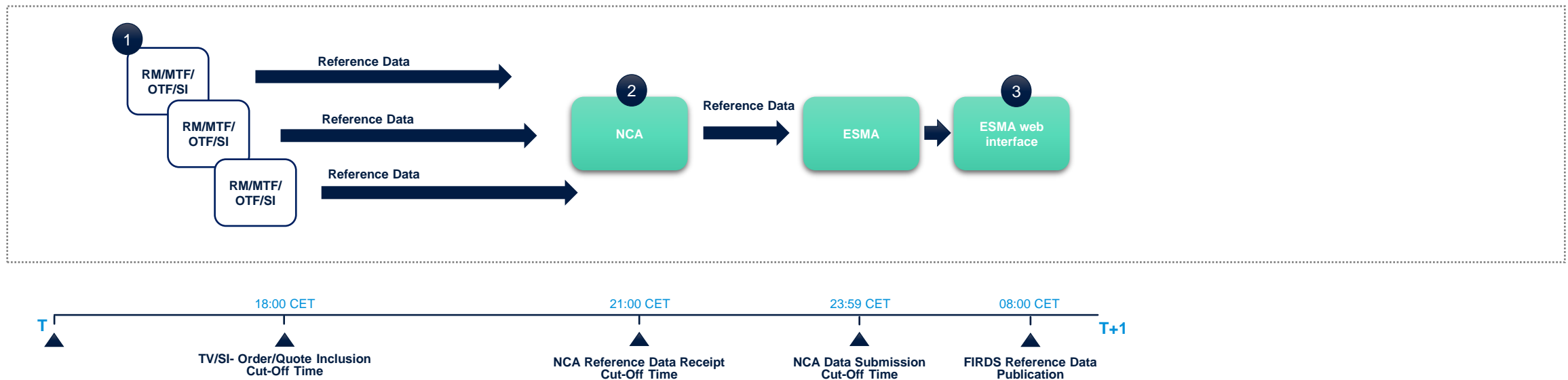
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DATA WORKFLOW



FIRDS DATA WORKFLOW: REPORTING TO ESMA VIA AN NCA

Reference data workflow into FIRDS under the scenario where the TVs/SIs provide reference data via NCAs.

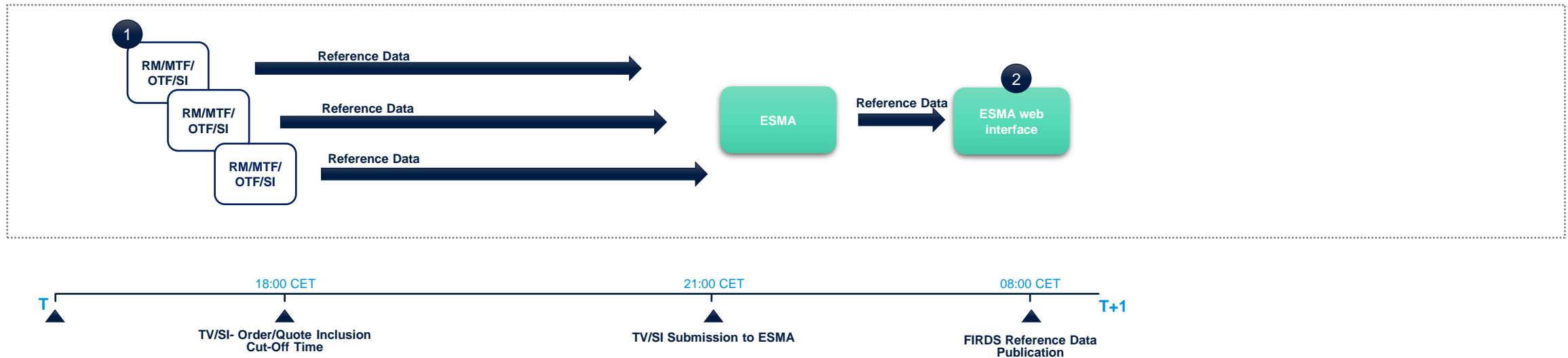


Instrument Reference Data Workflow

1. TVs and SIs provide reference data to their respective NCA.
2. NCAs provide reference data to ESMA (NCAs will validate the quality of the data received, unless delegated to ESMA – if delegated, NCAs will act as a pass-through for ESMA to perform these validation checks).
3. ESMA publishes the reference data information received from NCAs on its web interface for public access.

FIRDS DATA WORKFLOW: DIRECT REPORTING TO ESMA

Reference data workflow into FIRDS under the scenario where TVs/SIs provide reference data.



Instrument Reference Data Workflow

1. TVs and SIs provide reference data to ESMA.
2. ESMA publishes the reference data information received from TVs and SIs on its web interface for public access.



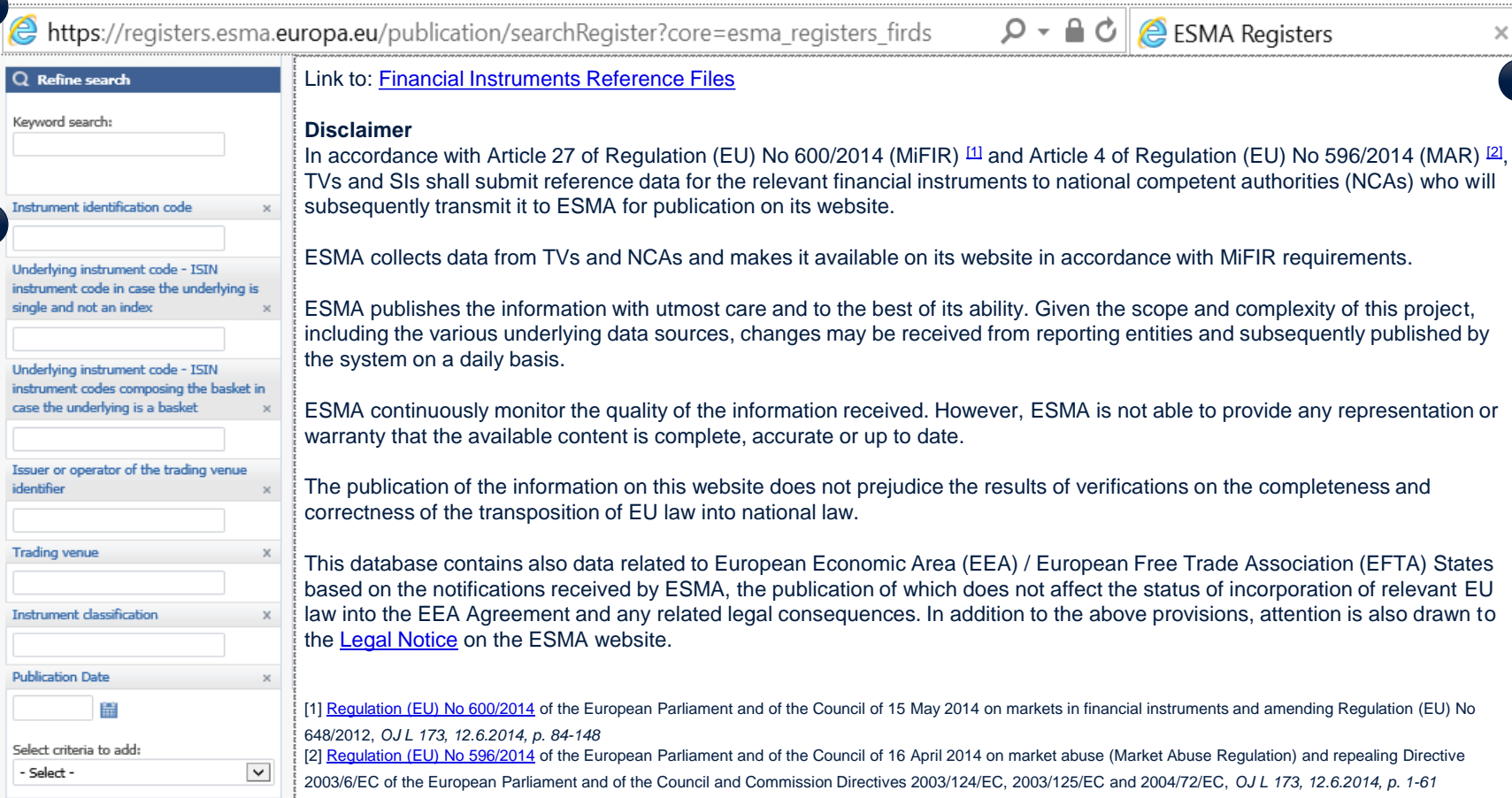
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ACCESSIBILITY AND USER GUIDANCE



FIRDS ACCESSIBILITY: WEB INTERFACE

This section provides an overview of how to access and navigate FIRDS web interface. Access to FIRDS is available through the following link:
https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_firds



1 https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_firds ESMA Registers

2

3

Refine search

Keyword search:

Instrument identification code

Underlying instrument code - ISIN instrument code in case the underlying is single and not an index

Underlying instrument code - ISIN instrument codes composing the basket in case the underlying is a basket

Issuer or operator of the trading venue identifier

Trading venue

Instrument classification

Publication Date

Select criteria to add:
- Select -

Link to: [Financial Instruments Reference Files](#)

Disclaimer
In accordance with Article 27 of Regulation (EU) No 600/2014 (MiFIR) ^[1] and Article 4 of Regulation (EU) No 596/2014 (MAR) ^[2], TVs and SIs shall submit reference data for the relevant financial instruments to national competent authorities (NCAs) who will subsequently transmit it to ESMA for publication on its website.

ESMA collects data from TVAs and NCAs and makes it available on its website in accordance with MiFIR requirements.

ESMA publishes the information with utmost care and to the best of its ability. Given the scope and complexity of this project, including the various underlying data sources, changes may be received from reporting entities and subsequently published by the system on a daily basis.

ESMA continuously monitor the quality of the information received. However, ESMA is not able to provide any representation or warranty that the available content is complete, accurate or up to date.

The publication of the information on this website does not prejudice the results of verifications on the completeness and correctness of the transposition of EU law into national law.

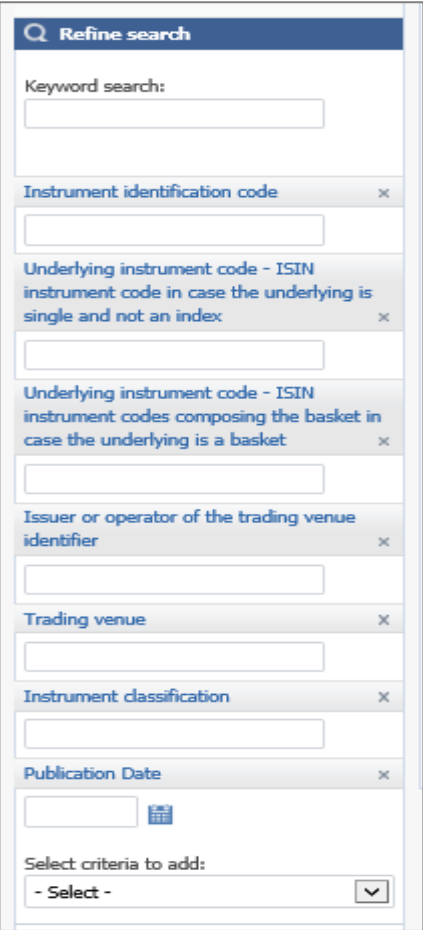
This database contains also data related to European Economic Area (EEA) / European Free Trade Association (EFTA) States based on the notifications received by ESMA, the publication of which does not affect the status of incorporation of relevant EU law into the EEA Agreement and any related legal consequences. In addition to the above provisions, attention is also drawn to the [Legal Notice](#) on the ESMA website.

[1] [Regulation \(EU\) No 600/2014](#) of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012, *OJ L 173, 12.6.2014, p. 84-148*
[2] [Regulation \(EU\) No 596/2014](#) of the European Parliament and of the Council of 16 April 2014 on market abuse (Market Abuse Regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC, *OJ L 173, 12.6.2014, p. 1-61*

1. User enters URL into search bar of internet browser.
2. User is directed to FIRDS web interface, which displays an ESMA disclaimer, outlining provisions for how FIRDS is used by ESMA, the completeness of data within FIRDS and general notice for firms intending to use FIRDS for instrument reference data.
3. User is able to select a series of search options to derive instrument reference data. This is addressed further on the following slide.

FIRDS ACCESSIBILITY: WEB INTERFACE (SEARCH OPTIONS)

The FIRDS web interface provides a range of search criteria, providing the user with options to execute a tailored query of published reference data. This slide provides an illustration of search criteria and guidance in relation to field definitions.



The screenshot shows a 'Refine search' panel with the following fields and callouts:

- 1: Keyword search
- 2: Instrument identification code
- 3: Underlying instrument code - ISIN instrument code in case the underlying is single and not an index
- 4: Underlying instrument code - ISIN instrument codes composing the basket in case the underlying is a basket
- 5: Issuer or operator of the trading venue identifier
- 6: Trading venue
- 7: Instrument classification
- 8: Publication Date

At the bottom, there is a 'Select criteria to add:' dropdown menu with '- Select -' and a plus icon.



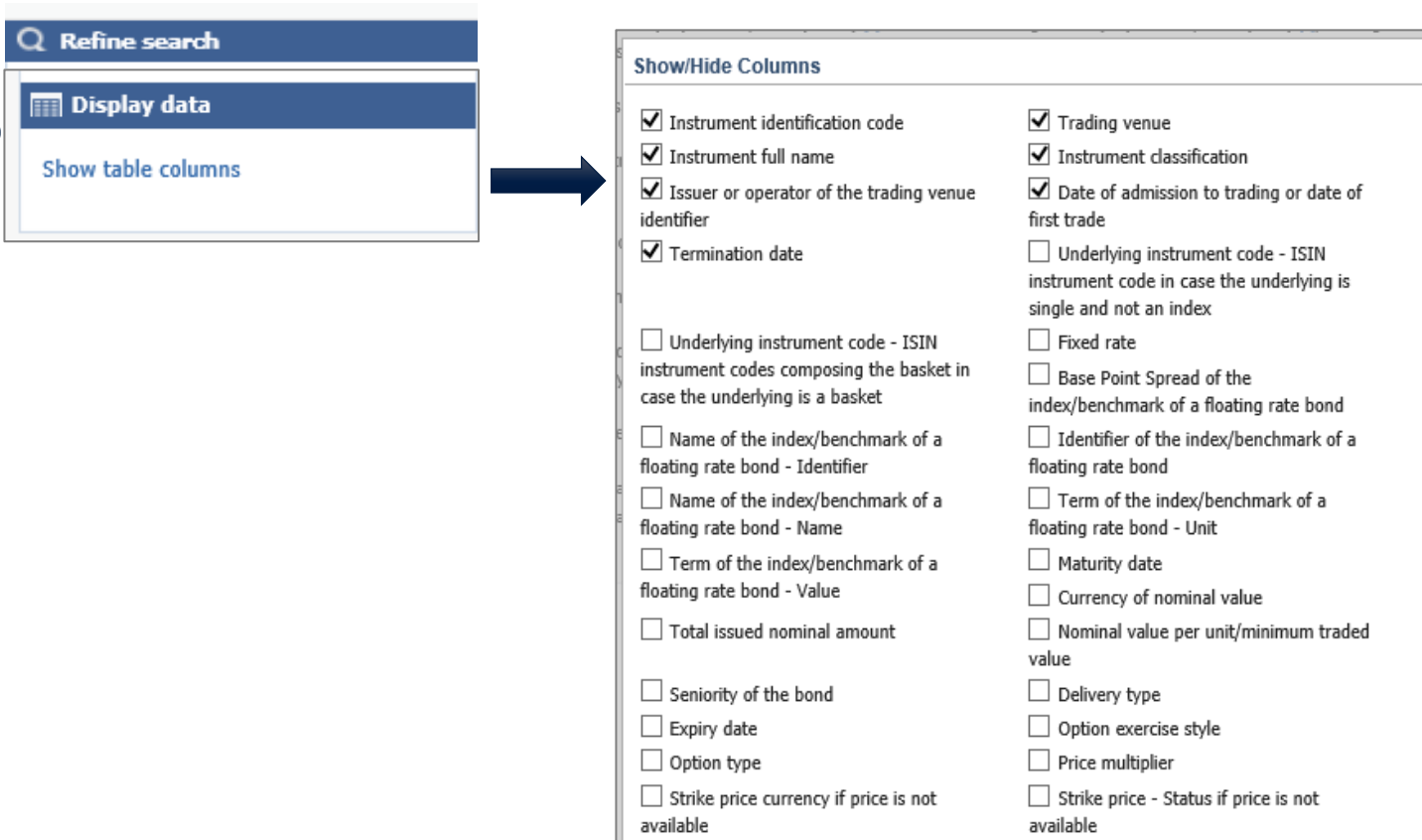
Please access following link for the latest available set of ISO 10383 codes for exchanges and market identification (MIC)
<https://www.iso20022.org/10383/iso-10383-market-identifier-codes>

Search Parameter	Description
1 Keyword search	Enables a search across all parameters listed below (2-7). In addition, users are able to enter 'keywords' they want results returned, e.g. an Asset Class name. Users should be aware this search method: 1) also includes derivative instruments for which the ISIN searched is an underlier; and 2) may also include expired ISINs.
2 Instrument identification code	Enables a search based on the financial instrument. This search requires an instrument ISIN and is most recommended when trying more narrow results.
3 Underlying instrument code ISIN Instrument code in case the underlying is not an index	Enables a search based on the underlying instrument as opposed to the primary instrument identifier. This requires the underlying instrument ISIN.
4 Underlying instrument code ISIN Instrument codes composing the basket in case the underlying is a basket	Enables a search based on the underlying instrument in the basket as opposed to the primary instrument identifier. This requires the underlying instrument ISIN.
5 Issuer or operator of the Trading Venue identifier	Enables a search on the issuer or operator of the TV. This requires the TV's or SI's head office LEI.
6 Trading Venue	Enables a search based on the TV or SI. This requires a four character Market Identifier Code (MIC). Users should discern between which MIC code they are applying a search on, i.e. operating MIC vs a market segment MIC. Each market segment MIC has a parent MIC which is called the "operating MIC". The use of market segment MICs provides more accuracy in the instrument for a given market segment the TV operates in.
7 Instrument classification	Enables a search based on the instrument classification. This requires the six character Classification of Financial Instrument (CFI) Code.
8 Publication date	Enables a search based on the publication date, i.e. the date the instrument reference data was published. This requires a date entry.

FIRDS ACCESSIBILITY: WEB INTERFACE (ADDITIONAL RESULTS DISPLAY)

Search results returned can be customised by adding additional columns of data for a single search return. This slide provides an illustration of the configuration process.

1



Refine search

Display data

Show table columns

Show/Hide Columns

- Instrument identification code
- Instrument full name
- Issuer or operator of the trading venue identifier
- Termination date
- Underlying instrument code - ISIN instrument codes composing the basket in case the underlying is a basket
- Name of the index/benchmark of a floating rate bond - Identifier
- Name of the index/benchmark of a floating rate bond - Name
- Term of the index/benchmark of a floating rate bond - Value
- Total issued nominal amount
- Seniority of the bond
- Expiry date
- Option type
- Strike price currency if price is not available
- Trading venue
- Instrument classification
- Date of admission to trading or date of first trade
- Underlying instrument code - ISIN instrument code in case the underlying is single and not an index
- Fixed rate
- Base Point Spread of the index/benchmark of a floating rate bond
- Identifier of the index/benchmark of a floating rate bond
- Term of the index/benchmark of a floating rate bond - Unit
- Maturity date
- Currency of nominal value
- Nominal value per unit/minimum traded value
- Delivery type
- Option exercise style
- Price multiplier
- Strike price - Status if price is not available

1. User selects the 'Show Table Columns' to add additional data fields to the displayed search results.
2. The interface presents the user with additional data points to configure, up to a maximum of 10.
3. Upon performing a search, the user will see the additional data fields in the search results.

Users should be aware that not all additional fields are mandatory requirements for TVs and SIs to provide, therefore data may not be available for all additional fields selected.

PERFORMING AN ISIN SEARCH: USER GUIDE RECOMMENDATION (1 OF 2)

The schematic below illustrates how a user may perform an ISIN eligibility check using the 'Keyword Search'. The user may get different results depending on how the ISIN search is performed. The below example considers a search on ISIN DE0005152466 (search performed 6th October 2019).

Search 1 – Keyword Search

Basic information - Register

Selected Register:
Financial Instruments Reference Data System

Refine search

Keyword search:
DE0005152466

1

Instrument identification code

Items : 1-10 / 67

2

Instrument identification code	Trading venue	Instrument full name
DE0005152466	BAAD	DWS SDG GLOBAL EQUITIES INHABER-ANTEILE LD

Search Steps:

1. Enter the instrument ISIN into the 'Keyword Search' field.
2. Navigate to the 'Search' button to execute the search.
3. For more information on the instrument the user clicks on the 'More Info' button.

3

Instrument identification code	DE0005152466
Instrument full name	DWS SDG GLOBAL EQUITIES INHABER-ANTEILE LD
Instrument classification	CIOIEU
Commodities or emission allowance derivative indicator	No
Issuer or operator of the trading venue identifier	549300K0BHJ9BX9J8J87
Trading venue	BAAD
Financial instrument short name	DWS SDG G.E./ CL LD
Request for admission to trading by issuer	No
Date of admission to trading or date of first trade	2007-12-13 00:00:00.0
Notional currency 1	EUR
Strike price - Sign	No
Upcoming RCA	DE

Searching under the Keyword Search field yields **67** search results. This is due to the keyword search including derivative instruments referencing the ISIN as an underlier, invalid or expired results. User proceeds with determining whether the ISIN is published as a listed instrument.

PERFORMING AN ISIN SEARCH: USER GUIDE RECOMMENDATION (2 OF 2)

The schematic below illustrates how a user may perform an ISIN eligibility check using the 'Instrument Identification Code'. The user may get different results depending on how the ISIN search is performed. The below example considers a search on ISIN DE0005152466 (search performed 6th October 2019).

Search 2 - Instrument Identification Code Search

Basic information - Register

Selected Register:
Financial Instruments Reference Data System

Refine search

Keyword search:

1 **Instrument identification code** x

DE0005152466

Items : 1-10 / 12

Instrument identification code	Trading venue	Instrument full name
2 DE0005152466	DUSD	DWS SDG Global Equities Inhaber-Anteile LD

3

Instrument identification code	DE0005152466
Instrument full name	DWS SDG Global Equities Inhaber-Anteile LD
Instrument classification	CIOIEU
Commodities or emission allowance derivative indicator	No
Issuer or operator of the trading venue identifier	549300K0BHJ9BX9J8J87
Trading venue	DUSD
Financial instrument short name	DWS SDG G.E./ CL LD
Request for admission to trading by issuer	No
Date of admission to trading or date of first trade	2012-02-16 00:00:00.0
Notional currency 1	EUR
Strike price - Sign	No
Upcoming RCA	DE

Search Steps:

1. Enter the instrument ISIN into the 'Instrument Identification Code' search field.
2. Navigate to the 'Search' button to execute the search.
3. For more information on the instrument the user clicks on the 'More Info' button.

Searching under the Instrument Identification Code field yields only **12** search results (**55 less** for the user to consider when compared to the Keyword Search).

User proceeds with determining whether the ISIN is published as a listed instrument.

Recommendation

Searching via the 'Instrument Identification Code' is recommended for most use cases as this method returns **more specific results by not including derivative instruments referencing the ISIN as an underlier, invalid or expired results**

FIRDS INDUSTRY CHALLENGES

The industry observes a number of challenges in the use of FIRDS which may compromise the completeness, accuracy and timeliness of transaction reporting, potentially impacting the ability of regulators to assess market integrity and abuse. Outlined below is a summary of some key industry challenges.



Web Interface Navigation and Search Results

- Apparent lack of formal guidance on how to conduct an effective search within the FIRDS web interface across the eight search fields.
- Inconsistent results returned from the user interface for a given ISIN or set of ISINs, as compared to data held on the 'Full File' or 'Delta File'.
- For back-reporting purposes, firms are unable to determine expired/terminated/de-listed ISINs from search results.
- Searches performed in the 'Keyword Search' field produce inconsistent results when compared to searching on the 'Instrument Identification Code' field. 'Keyword Search' returns includes expired results and derivative instruments referencing the ISIN as an underlier.
- Search discrepancies are also observed depending on the time of day the search is performed. This may be as a result of publication timings, but this is not clear when querying the web interface.
- From the FIRDS web interface, it is not clear for firms which type of entity has submitted reference data, e.g. SI vs TV.
- Challenges for firms in correctly identifying and distinguishing segment MICs vs operating MICs.



Data Publication and System Updates

- Delays in reference data publications create challenges for firms who need to make a determination on an instrument's eligibility and can create exceptions in reported transactions.
- Publication of instrument reference data onto FIRDS (i.e. 'Published From' or valid as of) is after the instrument maturity causing issues in eligibility determination and reconciliation processes.
- Observed lack of transparency and notification of:
 - Known issues
 - Scheduled fix release dates and times
 - Completed releases



Data Quality Observations

- Apparent lack of data quality assurance on submissions made by TVs into FIRDS.
- Test ISINs occasionally observed within FIRDS data extracts without clear identification of their test status, impacting the integrity of published referenced data.
- In some instances firms observe that the first published CFI code is treated as the golden record (as opposed to the latest version submitted).
- Incomplete modelling and reporting of CFI codes, e.g. only the first two characters being populated out of the six required.
- Apparent lack of clarity on how to structure, report and escalate missing reference data issues to the regulator.
- Transactions reported on expired ISINs may pass submission validations, however the ISIN may not appear on a FIRDS eligibility search via the "Instrument Identification Code" field.



Golden Source Status

- It is widely held that FIRDS should not be considered the golden source for instrument reference data. Among other reasons, this is in part due to ESMA not owning or producing the data submitted by TVs and SIs.
- Dependency on external sources to verify whether instruments are reportable, based primarily on whether the instrument is traded or tradeable on an EU venue.
- T+1 reporting timeframes demand efficient and reliable eligibility assessment processes to be integrated into operational workflows.
- Golden source challenges have proven costly and time consuming for firms, disproportionately impacting smaller organisations who may not have resources to explore and procure alternative solutions.
- In the absence of a golden source, NCAs who use FIRDS may still reject reference data that has been validated by other sources until FIRDS is updated.

FIRDS INDUSTRY CHALLENGES: USER GUIDANCE

In collaboration with UK Finance members, the below user guidance has been identified to address current challenges experienced when using FIRDS. In addition, an outline of proposed strategic enhancements for ESMA to consider is included.



Optimise searches and understand user interface search limitations

- Perform searches that will yield more specific results. For example when conducting ISIN reporting eligibility checks, use the 'Instrument Identification Code' field and not the 'Keyword Search' field.
- Use the 'Keyword Search' field with caution due to searches returning inconsistent results, including derivative instruments referencing the ISIN as an underlier and invalid or outdated results.
- When searching reportable instruments for a certain TV, search the TV's MIC in the 'Trading Venue' search field and not the 'Keyword search' field.
- When selecting additional columns to display in the search results, be aware that not all data attributes are mandatory for TVs and SIs to submit and therefore may not be populated.



Data Publication and System Updates user guidance

- Perform a check to confirm reporting eligibility for ISINs, which have been previously deemed as non-reportable against FIRDS.
- Firms should be aware of the 1-day data publication lag inherent within FIRDS and apply appropriate risk mitigation to address reporting requirements.
- When conducting a 'Full File' or 'Delta File' download, be sure to identify and discount any test ISINs that may be included in the data extract.



Mitigating data quality challenges

- Reconcile published data back to originating source.
- Report TV/SI reference data quality issues to your local NCA only after internally investigating as per FCA guidance: (See page 3 in MarketWatch 59 report for further detail - <https://www.fca.org.uk/publication/newsletters/market-watch-59.pdf>).



Multi-way reconciliation for best available ISIN data set

- Perform a multi-way reconciliation which leverages: i) commercially available data; ii) data extract by FIRDS; and iii) the firm's own internal data to derive the most complete view of a instrument's reporting eligibility.



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INDUSTRY RECOMMENDATIONS



Outlined below are a series of recommendations to enhance FIRDS data and accessibility.

Known issues list (including fix dates and times)

- Transparency over known issues would provide firms with clarity over whether issues are industry wide or firm-specific, mitigating resource investment into root cause analysis and providing insights into other processes that may require investigation.
- Clarity over fix scheduling would enable firms to have a clearer view of functionality not available from FIRDS and more accurate planning over manual processes or workarounds.
- Notification alerts from ESMA, when publication SLAs are not met, would facilitate better decision making over transaction reporting submissions and exception management.

Enhanced data submission validations

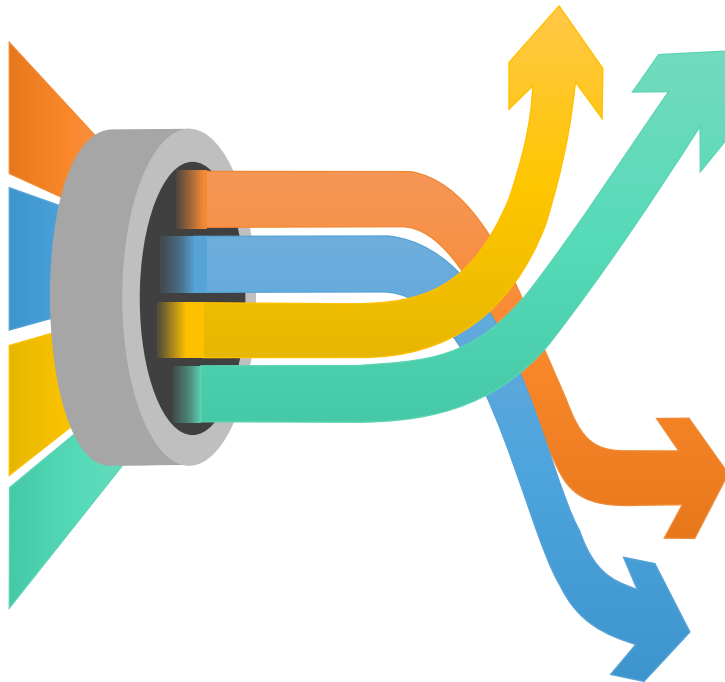
- Enhancements over reference data submission validations would improve data quality and reduce the volume of data quality issues highlighted in 'FIRDS Industry Challenges: User Guidance'.
- Consider updates to the validation logic for ToTV to ToSTV, as the combination of MIC and ISIN must be in FIRDS.

Trading Venue obligations monitoring

- Greater monitoring of TV obligations through enhanced data validation checks and warnings of incorrect instrument data submitted. This would enable firms to address data quality issues impacting effective usage of FIRDS.
- Consider developing a collation point for the identification of TV reference data exceptions and where data has not been supplied on time. This would enable ESMA and NCAs to identify data quality issues in TV submissions.

Web interface updates and API connectivity

- Areas to consider:
 - Developing API access to enable firms to perform real time checks of reference data. This is currently available within ANNA DSB.
 - Enhancing configurability of FIRDS data extracts beyond the existing Delta vs Full File optionality, for example by venue or instrument classification.
 - Updates to web interface for firms to identify the type of firm submitting reference data, i.e. TV vs SI.
 - The ability to search for ISINs that are delisted/expired/terminated for a period of more than six months.



APPENDIX

FURTHER INFORMATION



1. **ESMA (2017) *Financial Instruments Reference Data System (FIRDS) Instructions on access and download of full and delta reference data files***. Available: [https://www.esma.europa.eu/sites/default/files/library/esma65-8-5014_firds - instructions for download of full and delta reference files.pdf](https://www.esma.europa.eu/sites/default/files/library/esma65-8-5014_firds_-_instructions_for_download_of_full_and_delta_reference_files.pdf)
2. **ESMA (2018) *Reporting Instructions FIRDS Reference Data System***. Available: https://www.esma.europa.eu/sites/default/files/library/esma65-11-1193_firds_reference_data_reporting_instructions_v2.0.pdf
3. **ESMA (2018) *Reporting Instructions FIRDS Transparency System***. Available: https://www.esma.europa.eu/sites/default/files/library/esma65-11-1183_firds_transparency_reporting_instructions_v2.0.pdf