# Financial Instruments Reference Data System (FIRDS)
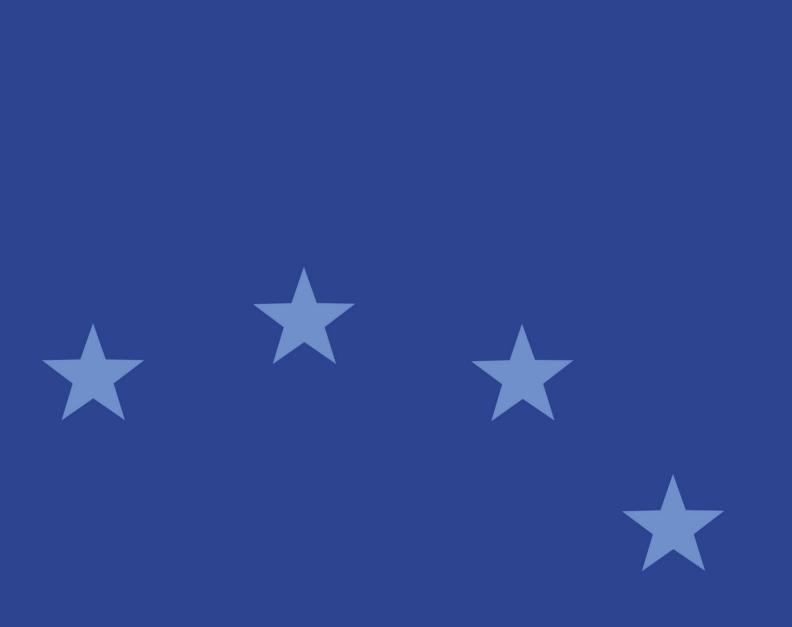
**Instructions on access and download of full and delta reference data files**

## Document control:

| Version | Date | Author | Comments |
|---|---|---|---|
| 1 | 06/10/2017 | ESMA | For publication |

## Reference documents:

| Ref | Title | Version | Author | Date |
|---|---|---|---|---|
| **RTS23** | COMMISSION DELEGATED REGULATION (EU) 2017/585 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the data standards and formats for financial instrument reference data and technical measures in relation to arrangements to be made by the European Securities and Markets Authority and competent authorities | 1 | European Commission / ESMA | 31/03/2017 |
| **Reporting Instructions** | FIRDS Reference Data System – Reporting Instructions | 1.1 | ESMA | 12/06/2017 |

# Table of Contents

# 1 Introduction

## 1.1 Purpose and intended audience of this document

1. The purpose of this document is to provide details on the reference data files that ESMA will be publishing and how to access them.

2. The intended audience are the EU market participants that need to make use of the instrument reference data for the purpose of MiFIR.

## 1.2 Scope

3. The scope of this document is the instruments reference data files.

## 1.3 Abreviations

| Acronym | Definition |
|---------|------------|
| **RM** | Regulated Market |
| **MTF** | Multilateral Trading Facility |
| **OTF** | Organised Trading Facility |
| **SI** | Systematic Internaliser |

# 2 Description of the reference data files generated by the FIRDS system

4. The system makes reference data available in the form of machine-readable files:

    a. **Full file**: the 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, including where a request for admission to trading has been made, or that are traded on a MTF, OTF, or SI.

    b. **Delta file**: the delta file contains all records for which a change has occurred (addition, modification, deletion) since the generation of the last set of files, e.g. in the following situations

        i. An instrument starts being traded on a trading venue: new (ISIN, MIC) - <NewRcrd>

        ii. An instrument ceases being traded on a trading venue: the (ISIN, MIC) is terminated - <TermntdRcrd>

        iii. A modification has been made in the reference data fields or in the relevant competent authority for the instrument - <ModfdRcrd>

        iv. Note that in exceptional cases, some of these records may relate to instruments that were already terminated, e.g. it may be that an ISIN-MIC is reported for the first time very late, after it was terminated, or may undergo a correction in its reference data, after it was terminated. In these cases the corresponding record will only be available in the Delta file and will not appear in the Full file.

5. The list of reference data fields published by the system are:

    a. Fields described in Tables 1, 2 and 3 of the Annex of the Regulatory Technical Standard 23;

    b. The country of the Relevant Competent Authority for the instrument;

6. Given the high volume of data, the files are split in several, in particular when they exceed 500,000 records, or based on the first letter of the CFI code in the case of the full file.

# 3 Instructions to download full and delta reference data files from ESMA website

## 3.1 Timing of generation

7. The files published by ESMA on its website are generated:

    a. on a weekly basis for the Full File – on Sunday morning by 09:00 CET;

    b. on a daily basis for the Delta File – every morning by 09:00 CET.

## 3.2 XML Format

8. The reference data files produced by FIRDS are structured as follows:

    a. Encapsulation of a Business Application Header (BAH), and a Payload as per XML Schema head.003.001.01.xsd;

    b. The Business Application Header is generated as per XML Schema head.001.001.01_ESMAUG_1.0.0.xsd;

    c. The payload is generated as per XML Schema DRAFT13auth.017.001.01_ESMAUG_FULINS_1.0.0.xsd for Full Files and DRAFT6auth.036.001.01_ESMAUG_DLTINS_1.0.0.xsd for Delta Files.

9. Link to XML Schema: https://www.esma.europa.eu/sites/default/files/library/2016-_annex_6_firds_reference_data_xml_schema.zip.

## 3.3 File naming conventions

10. The full file will follow the following naming convention:

    FULINS_<CFI 1st letter>_<Date>_<Key1>of<Key2>.zip;

    Where:

    <Date> =YYYYMMDD;
    <Key1> = The number of the file in the range produced for that day and that CFI 1st letter;
    <Key2> = The total number of files produced for that day and that CFI 1st letter.

    Examples:

    FULINS_C_20170625_01of01.zip
    FULINS_D_20170625_01of02.zip
    FULINS_D_20170625_02of02.zip
    FULINS_E_20170625_01of02.zip
    FULINS_E_20170625_02of02.zip
    FULINS_F_20170625_01of01.zip
    FULINS_H_20170625_01of01.zip
    FULINS_J_20170625_01of01.zip

11. The delta file will follow the following naming convention:

    DLTINS_<Date>_<Key1>of<Key2>.zip;

    Where:

    <Date> =YYYYMMDD;
    <Key1> = The number of the file within the range produced for that day;
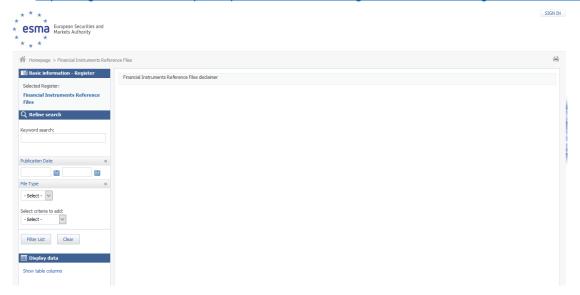
<Key2> = The total number of files produced for that day.
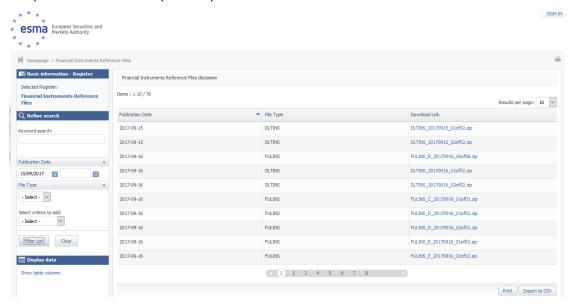
Examples:

DLTINS_20170624_01of01.zip.

## 3.4 Access to the files published (human interface)

12. Go to https://registers.esma.europa.eu/publication/ select the register "Financial Instrument Reference Data System" then click on "Financial Instruments Reference Files"; or go directly to
https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_firds_files



13. Use the Publication Date filter on the left hand side and click on "Filter list" to list all files published within the specified period:



14. Click on the Download Link for any of the files returned, in order to download the corresponding file.

## 3.5 Access to the files published (machine-to-machine interface)

15. To support automated download of the files, it is possible to list the files published on a specific date by sending an HTTP request.

16. The following HTTP request will return the list of the files published by ESMA on 25 August 2017.

https://registers.esma.europa.eu/solr/esma_registers_firds_files/select?q=*&fq=publication_date:%5B2017-08-25T00:00:00Z+TO+2017-08-25T23:59:59Z%5D&wt=xml&indent=true&start=0&rows=100

17. The below table explains each aspect of the above query so that it can be modified as required to meet necessary usage requirements

| Query component | Description |
|---|---|
| q=* | This is the general query part of the request and tells the response to return all columns for a given result if one exists |
| fq=publication_date:%5B2017-08-25T00:00:00Z+TO+2017-08-25T23:59:59Z%5D | fq means the filtered query and supports restricting the data that is being search for. For the filtered query here, we are restricting by date – note both the latest date and earliest date are present and follow the ISO date format. Change the date to look for files from a different day or range of days |
| wt=xml | Response type e.g. xml, json |
| indent=true | Not necessary but assists to make the output more readable |
| start=0 | The result to start outputting from. 0 works best but any number can be here and corresponds to which set of records to start outputting from |
| rows=100 | The number of results to return. Default is 10 |

18. The combination of start and row is used to assist cycling over the results when multiple results are returned e.g. more than 100. To read a secondary list (100+) change start to 100 and leave rows as 100. The number of records that the query returns is given by attributes of the resultsFound list.

19. The response is an XML document. The URL to the files are located under the following XPath:

/response/result/doc/str[@name='download_link']

20. Note that the number of returned files returned will usually be greater than 1 for a given date.