ESEF XBRL Taxonomy Documentation

Structure and content of the XBRL Taxonomy for the European Single Electronic Format

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Introduction

The European Securities and Markets Authority [ESMA] empowered by Article 4(7) of the Amended Transparency Directive specifies in the regulatory technical standard [RTS] a European Single Electronic Format [ESEF] in which the annual financial reports [ARFs] have to be prepared. It requires that all AFRs have to be prepared in XHTML format. Moreover, AFRs containing IFRS consolidated financial statements have to be marked-up with XBRL tags embedded in XHTML using the Inline XBRL technology. A set of XBRL tags to be used by issuers is provided by ESMA in a form of an XBRL taxonomy.

This document explains the design and architecture decisions as well as describes the structure and content of the ESEF XBRL Taxonomy. It also provides information about applied and not used XBRL features.

IFRS Taxonomy

According to the RTS, annual financial reports containing IFRS consolidated financial statements have to be marked-up with XBRL tags according to the ESMA adaptation of the IFRS Taxonomy[1].

The IFRS Taxonomy is created and maintained by the International Financial Reporting Standards Foundation[2]. A new version is released at least every year, to reflect the current set of standards published in the IFRS Bound Volume.

The definition of concepts in the IFRS Taxonomy is split between four sets of files:
- The full [FULL] IFRS application items;
- Items for the application of the IFRSs by Small and Medium Enterprises [SMEs];
- The Management Commentary [MC] items; and
- The depreciated items (i.e., those that are no longer applicable in the most current version of the IFRS Taxonomy but used in previous releases).

Each of these components is associated with human readable labels in English language[3], references to the IFRS Bound Volume, and structures for navigation purposes. These structures document also possible arithmetic relations between concepts and inform on dimensional breakdowns that may be applied to detail classification of certain items.

IFRS Taxonomy folders, files and relationships between concepts are arranged standard by standard (i.e., IAS 1, IAS 2, … IFRS 1, IFRS 2, …). This arrangement shall facilitate discovery of taxonomy content in case the tagging is prepared by accountants who are in general familiar with the structure of the IFRSs.

Additionally, the content of the IFRS Taxonomy is split in sections declaring components of a financial statement defined by a given standard in form of:
- hierarchies of concepts, where parent (upper-level element) concepts provide context to the (usually) more specific concepts identified as their children (lower level elements);
- tables, which use hierarchies as described in the bullet point above and a breakdown or breakdowns that further detail concepts;
- a set of general breakdowns applicable for any hierarchy or table (this does not limit breakdowns already applied in tables to be used in other places of a report).

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[1] http://www.ifrs.org/issued-standards/ifrs-taxonomy/
[2] http://www.ifrs.org/
[3] Other languages may also be provided on the IFRS Taxonomy website.

These navigation structures provided in the IFRS Taxonomy are merely targeted to aid browsing the taxonomy content and do not provide semantically binding dependencies, neither they restrict the definition of the participating concepts. At the same time, these relationships should not be treated as a template of how an IFRS report must look as items can be freely reused in various places in a financial report. In particular, the concepts from the IFRS Taxonomy notes may be applied on the face of the financial statement and vice versa. Moreover, concepts can be moved up or down in the level of nesting of any hierarchy so IFRS Taxonomy classifications can be freely rearranged. This also concerns the basic arithmetic dependencies provided in the IFRS Taxonomy calculation linkbase which are not intended to define the strict rules but are meaningful and should be respected where relevant. If the filer's extension significantly violates the base taxonomy calculations, such cases can be detected and additional steps may be taken to investigate the reasons behind.

Separately from the IFRS Taxonomy package files, the IFRS Foundation additionally publishes a set of exemplary assertions (i.e. tests defined according to the XBRL Formula specification) that provide further documentation for identical concepts but expressed using different syntax (line items and dimension members), indicate potential arithmetical checks (e.g. cross period validations or aggregation across dimensional breakdowns) or suggest the desired sign of a reported value (positive or negative). These assertions constitute another set of useful guidelines for issuers when deciding on the IFRS concept to apply or creating their extension elements and arranging them in hierarchical structures of XBRL linkbases.

ESMA ESEF XBRL Taxonomy (in the following called ESEF Taxonomy) is based on the FULL[4] IFRS Taxonomy. It follows the IFRS Taxonomy architecture, design principles and naming convention as defined in the IFRS Taxonomy Architecture documentation, which can be found on the IFRS Foundation's website. The few amendments ESMA made to the FULL IFRS Taxonomy are explained in the next sections of this document.

ESEF Taxonomy

Scope

As the IFRSs are principle based and preparers therefore have a degree of freedom how to present their financial statements, it is very difficult for a taxonomy such as the IFRS Taxonomy to foresee all possible way of presentation by preparers. Therefore, ESMA considered how either ESMA or the preparers themselves could extend the taxonomy.

An option in which preparers would not have to define extensions is to provide in the ESEF Taxonomy a set of technical constructs allowing tagging of data using extensible containers (in addition to tags provided in the IFRS Taxonomy). There are various technical approaches for representation of these extensible constructs. These could be, for example, typed dimensions serving as unique identifiers to group concepts representing extended item's label, value and relation to existing ESEF Taxonomy elements (e.g. by means of an extensible enumerations element dropdown listing ESEF Taxonomy items). In such case, ESMA would have to indicate places where these constructs would be applied in the taxonomy structures, which however is subjective and may still be insufficient to enable flexible tagging.

Having analysed the effort required to include these extensible mechanisms in the ESEF extension to the IFRS Taxonomy (as well as the potential coverage of such tagging) it was decided that enabling filers to create extension in a controlled manner (which is an alternative) is a preferred approach.

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[4] I.e., not SME nor the Managements Commentary

Therefore, the ESEF Taxonomy would not contain any extensible constructs. Instead, it would be used purely as a reference with minimum changes to the IFRS Taxonomy and filers would be expected to provide their extension as explained in the RTS on ESEF[5] and the ESEF Reporting Manual[6].

Relation to other taxonomies

IFRS Taxonomy

For the reasons described above, the ESEF Taxonomy merely imports the IFRS Taxonomy elements, references and labels (standard and documentation). The IFRS Taxonomy relationships however are recreated in the ESEF Taxonomy rather than directly reused. This is due to legal restrictions (IFRS copyrights and ownership of potential modifications), operational reasons (e.g., the ESEF Taxonomy should reflect the endorsement status of IFRSs)[7] and business needs to enable required modifications (e.g., rearrangement of taxonomy content, minor changes in naming extended link roles, or inclusion of guidance and other elements).

LEI taxonomy

It is required that issuers identify themselves in the XBRL reports using the Legal Entity Identifier [LEI]. Therefore, once approved, the XBRL International LEI taxonomy[8] will be referred by the ESMA taxonomy to provide means to report and verify the validity of the LEI used by the issuer to identify itself in the Inline XBRL document.

Location and namespaces URI

The root URI applied to folder path and XML namespaces is *http://www.esma.europa.eu/taxonomy* followed by a taxonomy version date (*{date}*) component.

Technical file

Technical schema file *technical.xsd* is defined in *http://www.esma.europa.eu/taxonomy/ext/* folder. It contains, amongst other, definition of arcrole to be used when anchoring extension concepts against the ESEF Taxonomy concepts (*http://www.esma.europa.eu/xbrl/esef/arcrole/wider-narrower*) as explained in the RTS on ESEF and the ESEF Reporting Manual.

It also defines required data types and constructs that can be used to increase means of XBRL dimensional validation of exchanged XBRL instance documents.

This technical file is imported and its content is applied in the ESEF Taxonomy files described in the next sections of this document.

Files' structure and content

The full IFRS Taxonomy consists of a large number of files whose names follow a specified nomenclature. The ESEF Taxonomy is simplified from this perspective without impact on the actual content, which, as described in the previous sections, is structured by standards and by statements/notes according to the original IFRS Taxonomy.

The list of ESEF Taxonomy files, their role and content, are presented in Table 1.

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[5] COMMISSION DELEGATED REGULATION (EU) …/… of […] supplementing Directive 2004/109/EC of the European Parliament and of the Council with regard to regulatory technical standards on the specification of a single electronic reporting format

[6] ESMA32-60-254, ESEF Reporting Manual: Preparation of annual financial reports in Inline XBRL

[7] Consequently, the ESEF taxonomy may reuse the IFRS Taxonomy deprecated concepts should they still be relevant according to European regulations.

[8] https://taxonomies.xbrl.org/taxonomy/5909aa8cbc180d68739ac316

File name	Content and role
esef_cor.xsd	▪ Imports IFRS core schema containing FULL IFRS Taxonomy concepts declaration; ▪ Imports ESEF Taxonomy technical schema file (technical.xsd); ▪ Defines ESEF extension concepts (guidance elements, placeholders, etc.) and extended link roles used in refereed definition linkbase; ▪ Refers to a definition linkbase file *esef_dim.xml* ▪ Serves as an entry point importing the necessary IFRS and ESEF Taxonomy content to be applied as a starting point for issuers' extension;
esef_all.xsd	▪ Defines roles to be applied on extended links of the ESEF Taxonomy linkbases documenting relationships between elements and supporting browsing of the taxonomy content; ▪ Refers to ESEF Taxonomy linkbases: presentation (*esef_pre.xml*), calculation (*esef_cal.xml*), definition (*esef_def.xml*) and formula (*esef_for.xml*); ▪ Serves as a reference entry point to be used by issuers' or the supporting software for browsing the entire content of the ESEF Taxonomy;
esef_lab-{lg}.xml	▪ Contains labels of ESEF Taxonomy concepts defined in *esef_cor.xsd* schema file; ▪ Referenced indirectly by means of XBRL Taxonomy Packages specification; ▪ *{lg}* is ISO 639-1 language code (e.g. *"en"* for English); it is foreseen that standard and documentation labels are available in all official EU languages;
esef_cor_gen-{lg}.xml	▪ Contains labels of ESEF Taxonomy role types defined in *esef_cor.xsd* schema file and applied in *esef_dim.xml* linkbase; ▪ Referenced indirectly by means of XBRL Taxonomy Packages specification; ▪ *{lg}* is ISO 639-1 language code (e.g. *"en"* for English); it is foreseen that standard and documentation labels are available in all official EU languages;
esef_all_gen-{lg}.xml	▪ Contains labels of ESEF Taxonomy role types defined in *esef_all.xsd* schema file and used on extended links in presentation (*esef_pre.xml*), definition (*esef_def.xml*), calculation (*esef_cal.xml*) and formula (*esef_for.xml*) linkbases; ▪ Referenced indirectly by means of XBRL Taxonomy Packages specification; ▪ *{lg}* is ISO 639-1 language code (e.g. *"en"* for English); it is foreseen that standard and documentation labels are available in all official EU languages;
esef_dim.xml	▪ Referenced from *esef_cor.xsd*; ▪ Contains an extended link role defining default members for dimensions; ▪ Contains extended link roles preventing all non-abstract items from being reported (unless dimensionally qualified in the extension taxonomy) by linking them to a hypercube referring to an empty dimension for scenario and segment container; ▪ Provides a placeholder to attach in the filer's extension taxonomy all line items used to tag data and not dimensionally qualified;

File name	Content and role
esef_pre.xml, esef_cal.xml, esef_def.xml	▪ Referenced from *esef_all.xsd*; ▪ Contain relationships - counterparts of the IFRS linkbases with application of guidance concepts and any other ESMA extension concepts; ▪ *esef_pre.xml* includes a section (extended link role) identifying elements that must be used in tagging when corresponding data is present in the report;
esef_for.xml	▪ Referenced from *esef_all.xsd*; ▪ Assertions providing additional documentation on relations between taxonomy concepts as per the IFRS Taxonomy formulas.

Table 1. ESEF Taxonomy files, their role and content.

The structure of the ESEF Taxonomy files, dependencies between them and the relation to IFRS and other taxonomy files is presented on Figure 1.
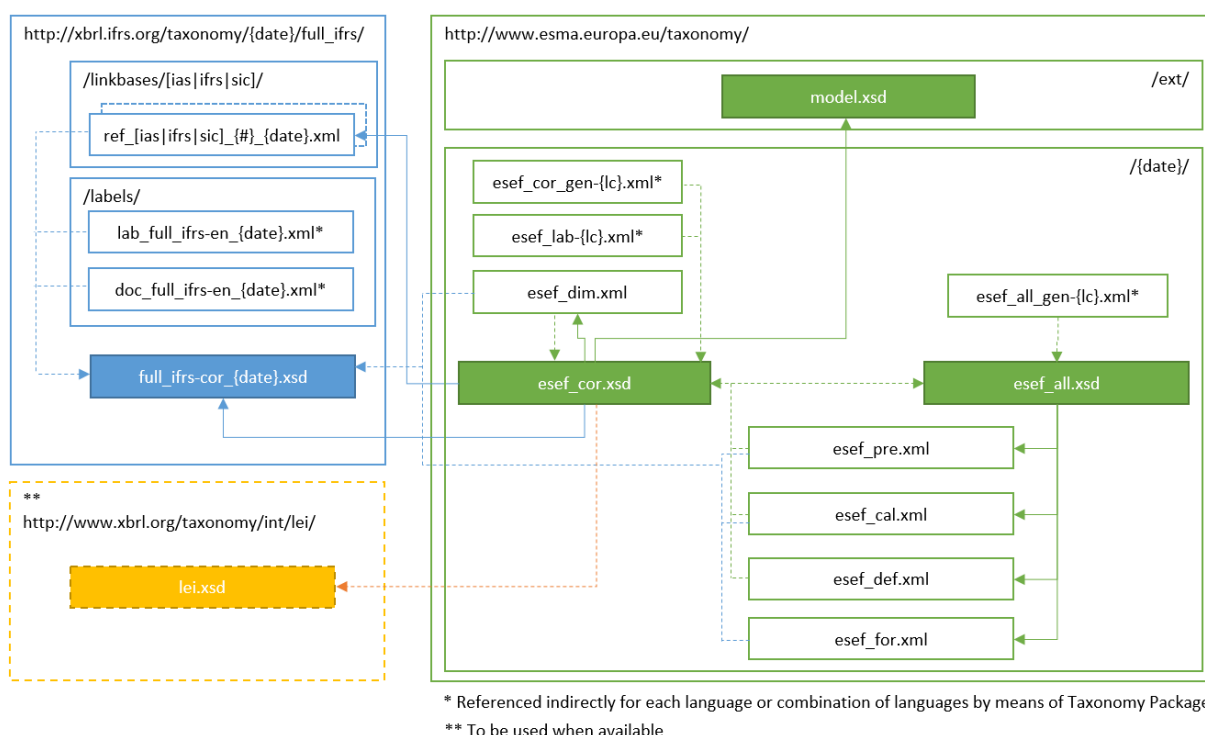

* Referenced indirectly for each language or combination of languages by means of Taxonomy Packages
** To be used when available

Figure 1. Structure of the ESEF Taxonomy files, dependencies between them and the relation to IFRS Taxonomy files.

Element declarations

All elements are defined in *esef_cor.xsd* schema file in namespace *http://www.esma.europa.eu/taxonomy/{publicaton date}/esef_cor* with canonical prefix *esef_cor*. Naming patterns and application of attributes follow the IFRS Taxonomy element definition conventions. Labels are defined in *esef_lab-{lg}.xml* where *{lg}* is ISO 639-1 language code.

Definition of relationships

Majority of roles used on extended links [ELRs] in presentation, calculation, definition and formula linkbases are defined in *esef_all.xsd* schema file. Two roles are defined in *esef_cor.xsd*. They are applied to:

- store information on default members of dimensions,
- provide a placeholder to attach in the filer's extension taxonomy all line items used to tag data and not dimensionally qualified to a *"Line items not dimensionally qualified"* hypercube lining

to *"Consolidated [member]"* of *"Consolidated and separate financial statement [axis]"* dimension.

The role URIs (apart from those used for technical purposes and in the formula linkbase) are defined according to the following pattern: *http://www.esma.europa.eu/xbrl/esef/role/{origin}_role-NNNNNN* where *NNNNNN* is a number used to support ordering display of ELRs and *{origin}* identifies the source standard (e.g. ias_10, ifrs_7).

Generic labels of ELRs are defined in *esef_cor-gen-{lg}.xml* and *esef_all-gen-{lg}.xml* here *{lg}* is ISO 639-1 language code.

Modifications comparing to the IFRS Taxonomy

To summarise, the modifications implemented in the ESEF Taxonomy comparing to the IFRS Taxonomy according to files content described in Table 1 are the following:
- simplification of the structure by limiting the number of files;
- inclusion of guidance concepts to help browsing the taxonomy content by providing hints on where similar and more detailing concepts could be found;
- addition of a section identifying concepts that must be tagged (if present) in a report;
- definition of technical constructs such as an arc role to be used for the anchoring mechanism or prohibition of reporting of all ESEF Taxonomy elements unless applied in extension taxonomy of a preparer.

Entry points

As described in Table 1 and presented on Figure 1, the ESEF Taxonomy has two entry points:
- *esef_cor.xsd* that shall be imported by filers' extension schema files; it enables to discover definitions for all base taxonomy concepts as well as the list of dimension default members and a placeholder to attach to a dedicated hypercube primary items not dimensionally qualified in issuer's extension;
- *esef_all.xsd* to be used to view the full content of the taxonomy; it imports or refers to all ESEF Taxonomy files including presentation, calculation, definition and formula linkbases.

Creation process

The production of the ESEF Taxonomy is semi-automated based on the IFRS Taxonomy content and requires only relevant business inputs. These include (but are not limited to):
- the creation of a section listing the concepts identified by the ESMA ESEF Task Force, and those ones that must be tagged if present in a report.
- declaration of guidance elements informing, for example, about placeholders for particular components of a filer's financial statement extension, or the provision of additional hints to the links in the taxonomy structures (in this way making it easier to browse).

Publication

ESEF Taxonomy files will be available in their canonical location and published as a package according to the XBRL Taxonomy Packages specification.

Versioning

Taxonomy releases are distinguished using a publication date component on the root folder and in the taxonomy namespace.

Content

The output of the ESEF Taxonomy presentation linkbase is included in the Annex of the RTS on ESEF.